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FIND THE BEST SOLUTION FOR YOUR APPLICATION

Workholding Application Chart		Single Station						Multi Station				Specialty						
		"D" Series	HD Series	PT Series	XL Series	SCD Series	3400 Series	3600 Series	DoubleLock	HD Series Cluster Tower	HD Series	ClusterLock	MoveLock	5 Axis	MiniLock	WedgeLock	ToolBox Tombstones	Power Drawbar
MACHINERY TYPES	5 Axis												•					
	CNC Mills	•	•	•		•	•	•		•			•		•	•		
	CNC, Horizontal Machining Center/FMS	•			•	•	•	•	•	•	•	•			•	•	•	
	CNC, Vertical Machining Center	•	•	•	•	•	•	•	•	•	•	•			•	•		
	Knee Type Mills	•	•	•			•	•							•		•	
	Manual Mills	•	•	•			•	•	•						•		•	
	Pallet Changers for HMC's									•	•						•	
	Pallet Changers For VMC's	•		•	•	•	•	•	•		•	•			•			
Surface Grinders	•													•				
VISE TYPES	Double Vise							•		•	•	•						
	Edge Clamp														•			
	Modular Vise											•			•	•		
	Pallet Vise										•							
	Self Centering																	
	Single Vise	•	•	•	•	•	•	•				•	•					
	Tower Vise								•		•							
TYPE OF WORK	General Purpose Machining	•	•									•		•	•			
	High Horsepower Machining	•	•	•	•		•	•	•	•			•					
	High Precision Machining		•	•	•	•	•	•	•	•					•			
	Large Parts	•	•	•	•	•	•	•	•	•		•	•					
	Small Parts	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
FEATURES	"Pull-Type" Jaw Clamping		•	•	•		•						•					
	80,000 PSI Ductile Iron Base	•	•	•	•	•	•	•	•	•	•	•	•					
	Air Operated				•			•									•	
	Clamps Dissimilar Size Parts							•	•	•	•							
	Hydraulic Operation (Hand or Foot Actuated)			•	•	•	•	•	•	•		•						
	Internal Hex Available	•	•	•	•	•	•	•	•	•	•	•	•		•			
	Machinable Jaw Available	•	•	•	•	•	•	•	•	•	•		•	•	•			
	Manual Operation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•
	Metric Version Available	•						•	•	•	•				•			
	Quick Change Jaw		•						•	•								
Reverse Screw Available				•		•	•											
JAW WIDTH	1.5"															•		
	2"										•							
	2.5"												•					
	3"																	
	3.5"											•						
	4"	•				•	•			•	•			•				
	5"																	
	6"	•	•		•	•		•		•	•							
	8"	•		•	•			•										
	10"	•							•									
APPROXIMATE CLAMPING RANGE (LBS FORCE)	200																	
	300																	
	350																	
	700																	
	900	•	•															
	1,000	•	•															
	1,400	•	•															
	1,500	•	•															
	2,600	•	•															
	3,000	•	•															
	5,700	•	•															
	6,900	•	•															
	7,400	•	•															
	7,800	•	•															
	9,400	•	•															
12,600	•	•																
20,000	•	•																
26,000	•	•																
MAXIMUM JAW OPENING IN STANDARD JAW POSITION (INCHES)		10	9	7.375	21	8	6	6	6x2	4x8	4x2	N/A	N/A	N/A	N/A	N/A	N/A	



Rotary Table Workholding
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Custom Workholding
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PinLock Mounting System
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Swing Clamps
Request Catalog



Pneumatic/Hydraulic Pumps
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Model: SDW25 SideWinder



The Kurt SideWinder is a vise that mounts vertically to the back of any Kurt 6" vise. The SideWinder includes a stabilization leg that will mount to the table on the movable end of the vise and a workstop to position the height of the part.

Purpose:

For doing 2nd op work holding the part vertically rather than horizontally.

Advantage:

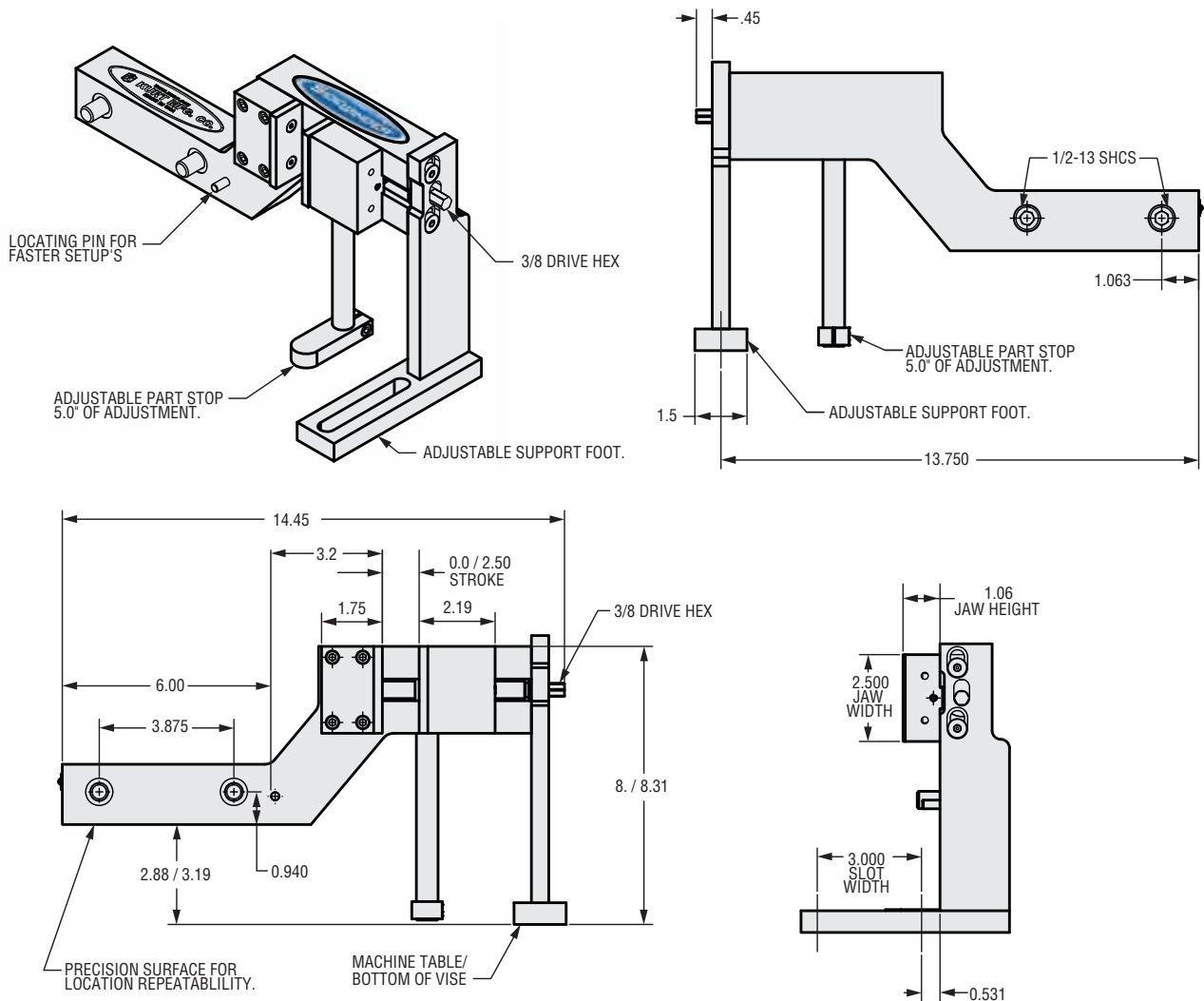
- Saves set up time for 2nd op vertical work
- Machining can be done on both vises in the same setup
- Vise is at an elevated position which is more conducive to longer reach machining
- Has a stabilizer foot for vibration control
- Can be mounted to any Kurt industry standard 6" vise
- Has a round nut which controls deflection to a greater degree
- Does not interfere with the host vise
- Pull type vise
- AngLock design

Features:

- Jaw Width: 2.500"
- Jaw Height: 1.063"
- Max Opening: 2.500"
- Max Clamping Force: 2,450 Lbs.
- Adjustment Range of Workstop: 0"- 4.313"
- Hex Size: 0.375"
- Overall Bracket Width: 14.000"
- Hex Length: 0.453"
- Weight: 19lbs
- Patent Pending

Torque-Ft. Lbs.	Clamping Force-Lbs.
4	580
6	880
8	1,120
10	1,540
12	2,450







PINLOCK™ MOUNTING SYSTEM

PATENT PENDING

NEW

Locating and Clamping Shanks:

The PinLock system is designed to reduce time spent accurately positioning and clamping fixture plates and subplates. A system requires a minimum of two PinLock locators, a primary and a secondary locator. Or two primary bushings can be used to achieve higher accuracy. Liner bushings are used to reduce wear on fixture plates. Receiver bushings are used with the PinLock for locating and clamping. For larger subplates additional PinLocks may be used where higher holding force is required. Additional clearance is required on these PinLocks so as not to influence the primary and secondary locators.

Features

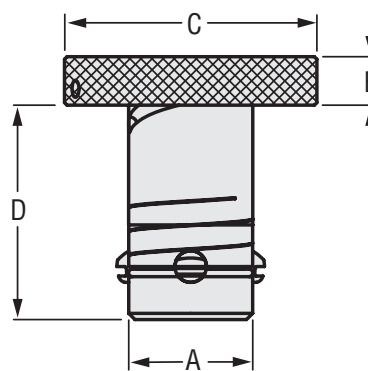
- Extraction assist for side load conditions.
- Pins provide stronger holding forces.
- Compatible with existing systems.
- Material : Shank/Bushing, high strength alloy steel
- Finish: Black Oxide
- Heat Treat: Shanks, RC 46-50
Bushings, RC 46-50
Liners, RC 46-50
Pins, RC 56-60
- Operating Temperature Range
-49° to 400°F
- Patent Pending



PinLock pin assembly engages and creates a locking force with line contact as opposed to other competitive systems that use point contact



PinLock features a helical extraction design. This feature aids in overcoming binding in side load conditions and enhances the removal of the PinLock in any application.



Locating and Clamping Shank Dimensions

Part Number	Shank Diameter (mm) A	Fixture Plate Thickness ±0.005	Head of Shank		Length Under Head D	Hex Wrench Size for Set Screw	Hex Wrench Size for Removal	Recommended	
			Height B	Diameter C				Screw Torque (In/Lbs)	Hold-Down Force (lbs)
PL13-050	13	0.50	0.25	1.06	1.08	3/32	1/4	12	750
PL13-075		0.75			1.33				
PL16-050	16	0.50	0.31	1.38	1.15	5/32	3/8	24	1,200
PL16-075		0.75			1.40				
PL20-075	20	0.75	0.38	1.75	1.53	5/32	3/8	55	2,250
PL20-100		1.00			1.78				
PL25-075	25	0.75	0.38	2.00	1.70	5/32	3/8	200	5,444
PL25-100		1.00			1.95				
PL30-075	30	0.75	0.44	2.13	1.88	5/32	3/8	200	8,000
PL30-100		1.00			2.13				
PL35-075	35	0.75	0.50	2.25	1.97	1/4	9/16	400	11,780
PL35-100		1.00			2.22				
PL35-150		1.50			2.72				
PL35-200		2.00			3.22				
PL50-075	50	0.75	0.63	3.00	2.45	1/4	9/16	700	15,200
PL50-100		1.00			2.70				
PL50-150		1.50			3.20				
PL50-200		2.00			3.70				

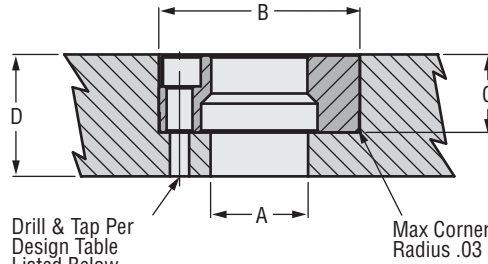


Back Mount



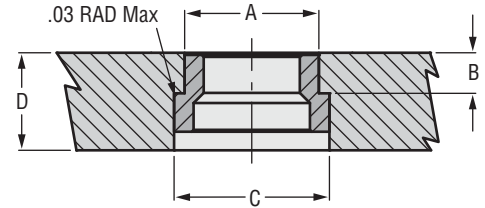
Face Mount

Back Mount and Face Mount styles of receiver bushings are available. Generally, the Face Mount receiver bushing is utilized in blind hole applications (Slip Fit). The Back Mount receiver bushing is used in applications for through hole (Light Press Fit).



Face Mount Bushing Installation Instructions

Note: Both type of bushings should be installed approximately 0.012" below subplate surface.



Back Mount Bushing Installation Instructions

Installation Dimension

Face Mount

Part Number	Shank Dia. (mm)	Actual O.D. +0.0000 -0.0004	Clearance Drill Diameter A	Bore +0.0005 -0.0000 B	Depth +0.002 -0.000 C	Tap Size & Depth ¹ H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
PL13RBF	13	1.3750	11/16	1.3750	0.467	8-32x5/16	0.984	13/16
PL16RBF	16	1.4370	13/16	1.4370	0.470	8-32x5/16	1.125	13/16
PL20RBF	20	1.6873	13/16	1.6873	0.637	10-32x3/8	1.362	1-1/8
PL25RBF	25	2.0623	1	2.0623	0.799	1/4-28x1/2	1.644	1-1/4
PL30RBF	30	2.2654	1 3/16	2.2654	0.871	1/4-28x3/4	1.876	1-3/8
PL35RBF	35	2.6873	1 9/16	2.6873	0.904	5/16-24x7/8	2.178	1-1/2
PL50RBF	50	3.4998	2 5/32	3.4998	1.239	3/8-24x1	2.916	2

Back Mount

Part Number	Shank Dia. (mm)	Actual O.D. +0.0000 -0.0004 A	Depth +0.000 -0.002 B	C-Bore ±0.006 C	Min. Subplate Thickness D
PL13RBB	13	0.7870	0.270	1.000	3/4
PL16RBB	16	0.8760	0.281	1.156	3/4
PL20RBB	20	1.0950	0.345	1.280	7/8
PL25RBB	25	1.3763	0.416	1.593	1
PL30RBB	30	1.6264	0.432	1.906	1-1/4
PL35RBB	35	1.8764	0.493	2.155	1-5/16
PL50RBB	50	2.6269	0.621	2.988	1-3/4

Liner Bushings



Determining if one primary and one secondary or two primary liners are needed will depend on the locating repeatability. With two primary liners, repeatability of ±0.0005" will be maintained if the two holes for receiver bushings are held to a centerline distance of ±0.0002" tolerance.

NOTE ON INSTALLATION OF PRESS FIT LINERS & BACK MOUNT STYLE RECEIVER BUSHINGS:

To alleviate the possibility of binding the shank in the bore, the maximum interference fit between bore bushing O.D. should not exceed 0.0005".

Fixture Plate Thickness ±0.005"	Shank Diameter (mm)	Primary Liner Part Number	Secondary Liner Part Number	Liner O.D. +0.0000" -0.0004"
0.50	13	PL13LBP-050	PL13LBS-050	0.7518
0.75	13	PL13LBP-075	PL13LBS-075	0.7518
0.50	16	PL16LBP-050	PL16LBS-050	1.0018
0.75	16	PL16LBP-075	PL16LBS-075	1.0018
0.75	20	PL20LBP-075	PL20LBS-075	1.3772
1.00	20	PL20LBP-100	PL20LBS-100	1.3772
0.75	25	PL25LBP-075	PL25LBS-075	1.3772
1.00	25	PL25LBP-100	PL25LBS-100	1.3772
0.75	30	PL30LBP-075	PL30LBS-075	1.7523
1.00	30	PL30LBP-100	PL30LBS-100	1.7523
0.75	35	PL35LBP-075	PL35LBS-075	1.7523
1.00	35	PL35LBP-100	PL35LBS-100	1.7523
1.50	35	PL35LBP-150	PL35LBS-150	1.7523
2.00	35	PL35LBP-200	PL35LBS-200	1.7523
0.75	50	PL50LBP-075	PL50LBS-075	2.5025
1.00	50	PL50LBP-100	PL50LBS-100	2.5025
1.50	50	PL50LBP-150	PL50LBS-150	2.5025
2.00	50	PL50LBP-200	PL50LBS-200	2.5025

PinLock Repair Kits

Shank Diameter	Kurt Part Number
13mm	PL13-Kit
16mm	PL16-Kit
20mm	PL20-Kit
25mm	PL25-Kit
30mm	PL30-Kit
35mm	PL35-Kit
50mm	PL50-Kit



PLHT2 PinLock hex tool
Fold up hex key set for all 20-50mm PinLock Clamping Assemblies



MaxLock™ 350 MULTI-AXIS AngLock® VISE

NEW

Model: MX350

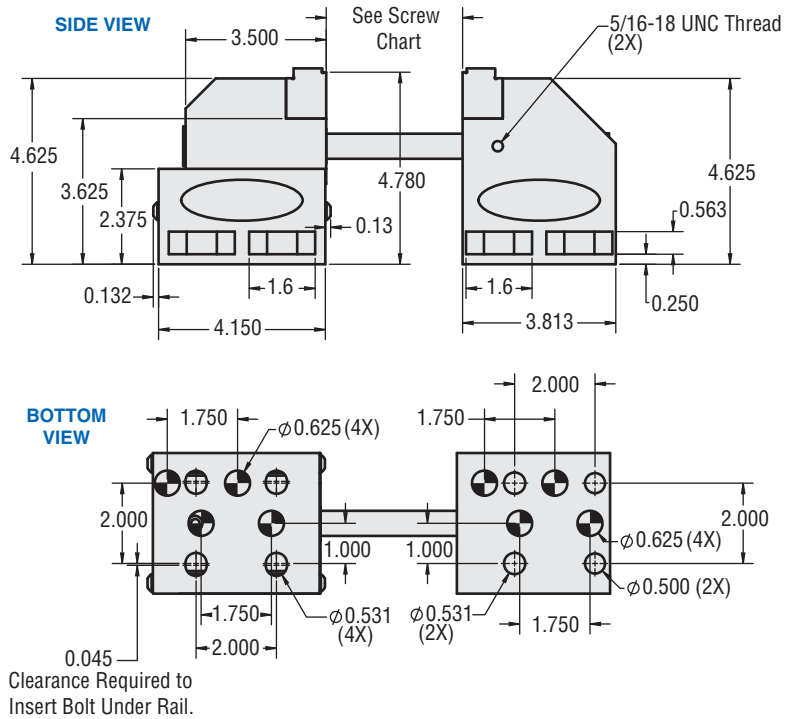
- Kurt AngLock Design pulls the part down.
- Pull Type feature decreases stationary deflection.
- 0.625" stroke – Allows for wider range of clamping before having to change setup.
- Modular Design – Mounts on two inch grid patterns when removed from the riser and "T" slots or center hole grids 100mm and under.
- When mounted in a two inch grid the vise comes with locator bolts for quick alignment.
- When mounted on the risers, precision 5/8 holes have been added so Kurt sine keys can be used for quick alignment.
- Auxiliary clamping slots – allows the customer more flexibility in mounting the vise.
- The customer will finish machine the horizontal surface of the jaw plate for higher accuracy, eliminating the need for parallels
- Optional jaws:
 - Double step 40 RC jaws with CDN coating on the vertical position of the step Part No. MX350-236-1
 - Machinable semi-hard steel jaws available in 3 lengths
- Chip guard – the fully chip guarded design allows for faster load times and a smoother operating vise.
- The screw is easily manufactured and changed, by the customer, to allow a broad range of part sizes.
- Kurt workstop is an available option (Part No. 6AWS-Kit)
- Maximum of 40 Ft. Lbs. provides up to 7,000 Lbs. clamping force
- Ship Weight: 31lbs.



Screw Selection Chart

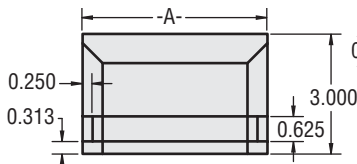
Part Number	Screw Length	Minimum Jaw Opening	Maximum Jaw Opening
MX350-5-8	8.00	0.15	3.5
MX350-5-12	12.00	3.5	7.5
MX350-5-18	18.00	7.5	11.5
MX350-5-24	24.00	11.5	15.5

MX350-5-8 is the standard screw that is supplied with the vise

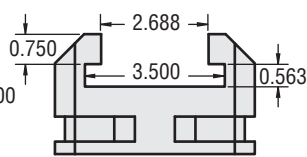


OPTIONAL RISERS Part No MX350RL and MX350RS

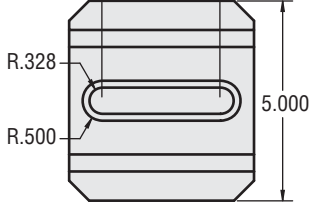
SIDE VIEW



END VIEW

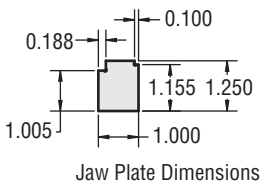


BOTTOM VIEW



Part Number	A	B
MX350RS	4.625	2.95
MX350RL	5.650	3.97

MX350-236 JAWPLATE

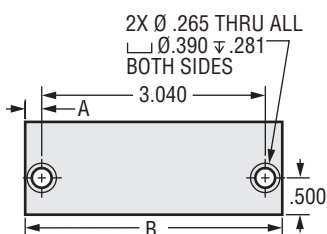


OPTIONS:

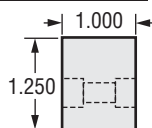
MX350-236
Double Step Jawplate

MX350-236-1
Double Step Jawplate w/CBN Coating

MACHINABLE JAW SEMI-HARD STEEL



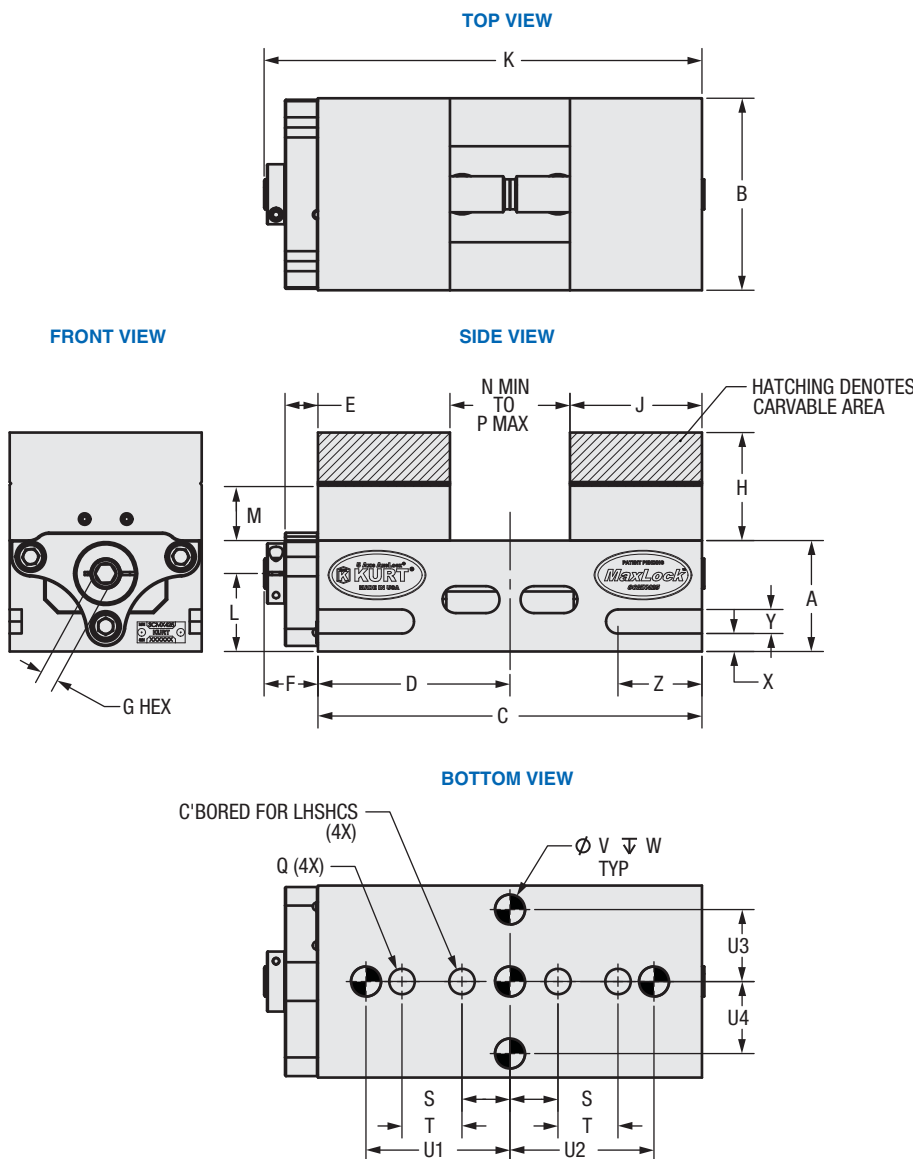
Part Number	A	B
MX350-235-35	0.230	3.50
MX350-235-45	0.730	4.50
MX350-235-55	1.230	5.50



Models: SCMX425 and SCMX250

Features:

- Self-centering vise for five axis machining
- ±0.0002" repeatability
- Adjustable Center Line
- Machinable Jaws
- The customer will machine in a step for higher accuracy eliminating the need for parallels
- Hold up to a 6-1/2" long parts with model SCMX425
- Clamp both OD and ID
- Kurt AngLock design pulls the part down
- 2-1/2" & 4" jaw widths
- Tall jaws for increased spindle clearance
- Jaws are reversible
- Flexible mounting options
- Hex keys required for jaw removal:
SCMX250: 5/64", 3/32"
SCMX425: 3/32", 1/8"



SCMX425 CLAMPING FORCE LBS.	
Ft. Lbs	Lbs Force
10	500
20	1,000
30	1,500
40	2,000
50	2,500
60	3,000

SCMX250 CLAMPING FORCE LBS.	
Ft. Lbs	Lbs Force
10	350
20	750
30	1,300
40	1,800

DIMENSIONAL DATA		
	SCMX425	SCMX250
A	2.313	2.000
B	4.000	2.500
C	8.000	5.000
D	4.000	2.500
E	0.69	0.69
F	1.12	1.11
G	3/8	5/16
H	2.25	1.50
J	2.75	2.00
K	9.12	6.11
L	1.625	1.344
M	1.125	0.940
N	0.000	0.000
P	2.500	1.000
Q	0.531 Ø	0.406 Ø
S	1.000	1.000
T	1.250	-
U1	3.000	-
U2	3.000	2.000
U3	1.500	-
U4	1.500	-
V	0.625	0.375
W	0.688	0.500
X	0.375	-
Y	0.500	-
Z	1.750	-
Est Ship Weight	30 lbs	10 lbs

HD690 Vise Features:

- A full 9 inch opening between jaws when using standard hard jaw plates.
- Less deflection of stationary jaw. Wider more stable stationary jaw equals less deflection.
- Stationary jaw bolts down from top. No need to remove from table to disassemble vise. Bolting the stationary from the top reduces the stress in the body and will stay flatter after assembly.
- Narrower body width allows more vises in the same work envelope.
- Taller body design equals less deflection under clamping loads.
- Bolts and locates directly on standard grid plates: 40mm, 50mm or 2 inch.
- Pull type body design reduces stress in the body resulting in more accurate clamping.
- Quick change movable jaw. The HD platform movable jaw allows for quick change and carvability to hold that odd shaped part.
- Groove Lock jaw and workstop included.
- Uses sine keys for alignment.
- Swivel base available. Part No. D50-4-SA
- Bed height matched $\pm 0.0005"$
- Ship weight: HD690/HDM690 (75lbs.), HDH690 (80lbs.)

Model:
HDH690



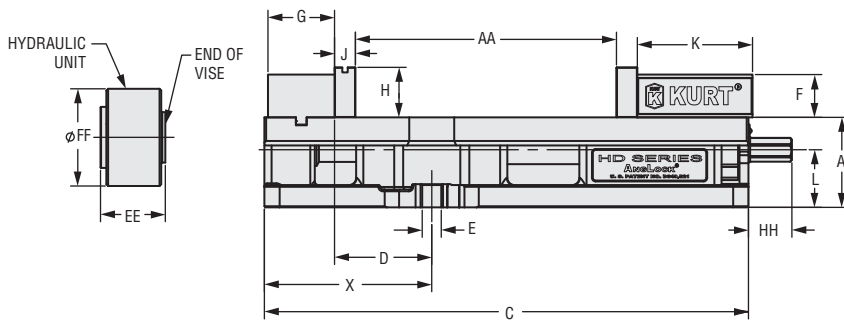
Model:
HD690
HDM690



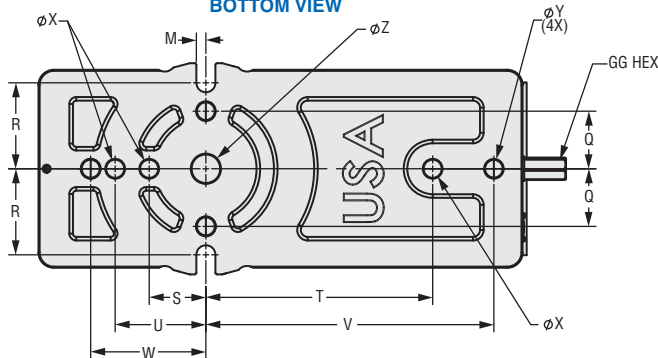
JAW POSITION



SIDE VIEW



BOTTOM VIEW



VISE CLAMPING FORCE-LBS.	
Manual Torque Ft.-Lbs.	HD690 HDM690
10	975
20	1,625
30	2,400
40	3,250
50	3,700
60	4,275
70	4,700
80	5,250

VISE CLAMPING FORCE-LBS.	
Hydraulic PSI	HDH690
400	1,575
800	3,150
1,200	4,725
1,600	6,300
2,000	7,875
2,400	9,450
2,800	11,025
3,200	12,600
Hydraulic Displacement cu. In.	1.18

DIMENSIONAL DATA	
	HD690/HDM690 HDH690
A	3.125
B	6.000
C	16.810
D	3.375
E	0.6600
F	1.485
G	2.312
H	1.735
I	7.338
J	0.725
K	4.000
L	2.000
M	0.330
N	0.940
O	3.875
P	1/2-13
P METRIC	M12
Q	2.000
R	2.986
S	50 MM
T	200 MM
U	80 MM
V	10.000
W	4.000
X	16 MM
Y	0.625
Z	0.992
AA	9.062
BB	12.099
CC	13.787
DD	16.824
EE	2.250
FF	3.375
GG	3/4
HH	1.508

HD690 ALUMINUM MACHINABLE KIT Part No. HD690AL-JAWKIT



Jaw #	Used
XJAB6A-318	STATIONARY JAW
HD6AL-2	MOVABLE JAW

HD691 Vise Features:

- Easier programming in the "Y" axis positive direction
- Reduces "reach-over" distance making part loading safer and easier
- A full 9 inch opening between jaws when using standard hard jaw plates.
- Less deflection of stationary jaw. Wider more stable stationary jaw equals less deflection.
- Stationary jaw bolts down from top. No need to remove from table to disassemble vise. Bolting the stationary from the top reduces the stress in the body and will stay flatter after assembly.
- Narrower body width allows more vises in the same work envelope.
- Taller body design equals less deflection under clamping loads.
- Bolts and locates directly on standard grid plates: 40mm, 50mm or 2 inch.
- Pull type body design reduces stress in the body resulting in more accurate clamping.
- Quick change movable jaw. The HD platform movable jaw allows for quick change and carvability to hold that odd shaped part.
- Groove Lock jaw and workstop included.
- Uses sine keys for alignment.
- Swivel base available. Part No. D50-4-SA
- Bed height matched $\pm 0.0005"$
- Ship weight: HD691 (75lbs.), HDH691 (80lbs.)

**Model:
HDH691**



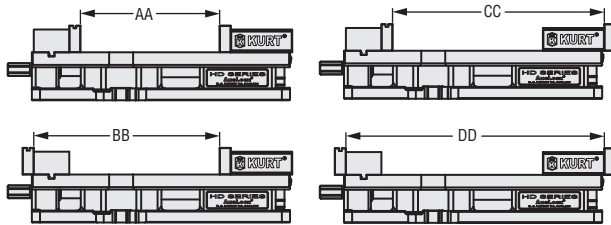
**Model:
HD691**

VISE CLAMPING FORCE-LBS.	
Manual Torque Ft.-Lbs.	HD691
10	975
20	1,625
30	2,400
40	3,250
50	3,700
60	4,275
70	4,700
80	5,250

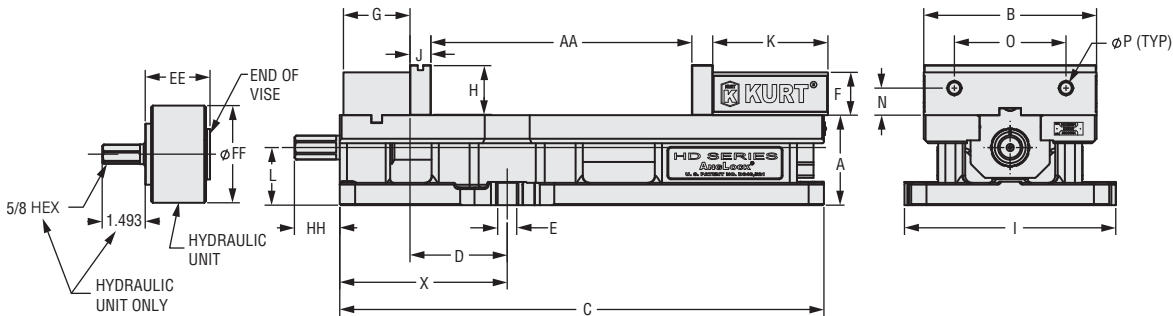
VISE CLAMPING FORCE-LBS.	
Hydraulic PSI	HDH691
400	1,575
800	3,150
1,200	4,725
1,600	6,300
2,000	7,875
2,400	9,450
2,800	11,025
3,200	12,600
Hydraulic Displacement cu. In.	1.18

DIMENSIONAL DATA	
	HD691 HDH691
A	3.125
B	6.000
C	16.810
D	3.375
E	0.6600
F	1.485
G	2.312
H	1.735
I	7.338
J	0.725
K	4.000
L	2.000
M	0.330
N	0.940
O	3.875
P	1/2-13
P METRIC	M12
Q	2.000
R	2.986
S	50 MM
T	200 MM
U	80 MM
V	10.000
W	4.000
X	16 MM
Y	0.625
Z	0.992
AA	9.062
BB	12.099
CC	13.787
DD	16.824
EE	2.250
FF	3.375
GG	3/4
HH	1.575

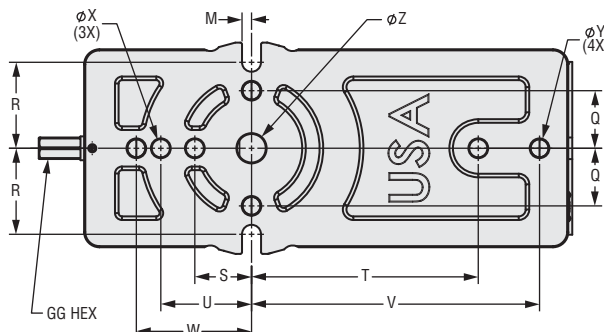
JAW POSITION



SIDE VIEW



BOTTOM VIEW





HDL AngLock® VISES (4&6 Inch)

Manual & Hydraulic

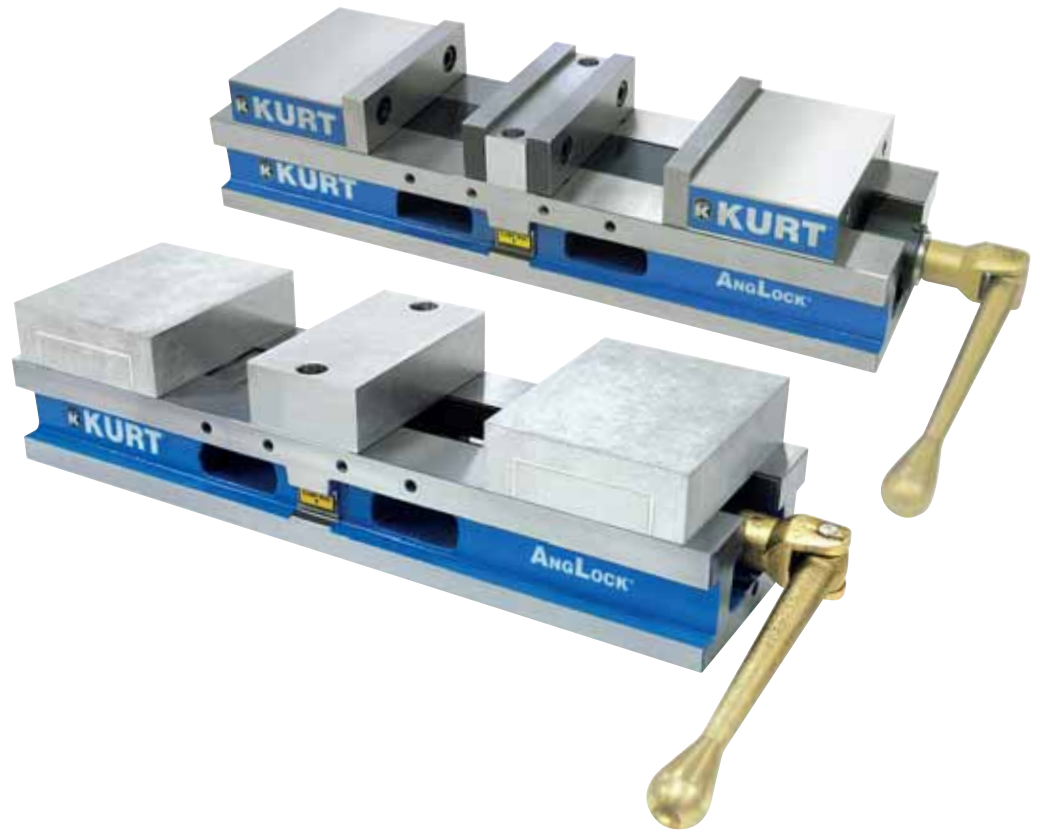
4 Inch Models:

- HDL4 Manual English – PATENTED**
- HDHL4 Hydraulic – PATENTED**
- HDLM4 Manual Metric – PATENTED**
- HDHLM4 Hydraulic – PATENTED**

6 Inch Models:

- HDL6 Manual English – PATENTED**
- HDHL6 Hydraulic – PATENTED**
- HDLM6 Manual Metric – PATENTED**
- HDHLM6 Hydraulic – PATENTED**

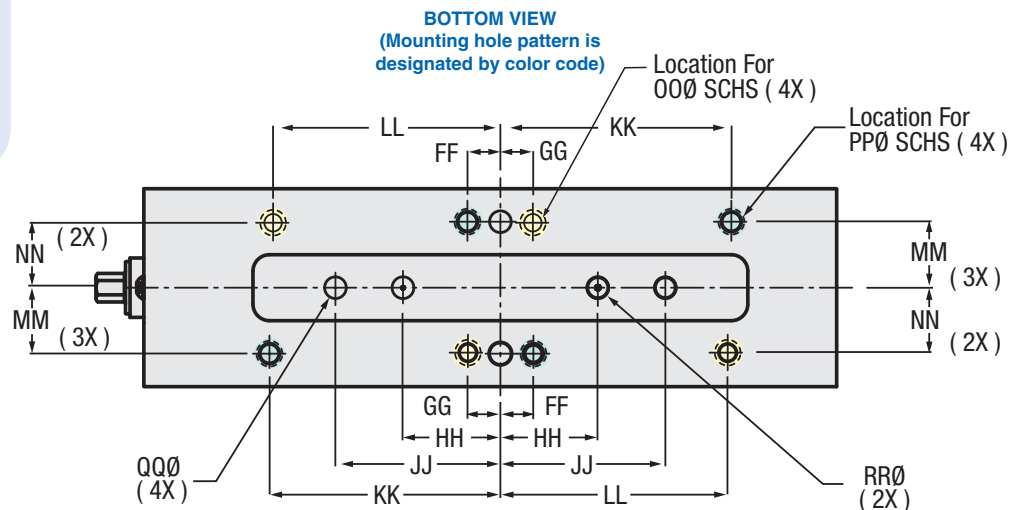
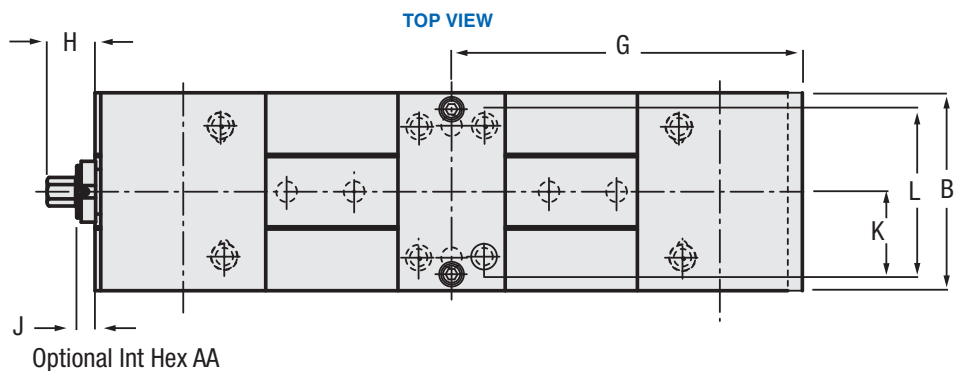
For specific model numbers see page 23.



The HDL AngLock Vises are high density long vises with two clamping stations. They provide repeatable clamping to 0.0002" and combine high density with heavy duty features. Designed on a rugged 80,000 PSI ductile iron body with steel components, both models provide strength, rigidity and long term accuracy while absorbing machining vibration.

Features:

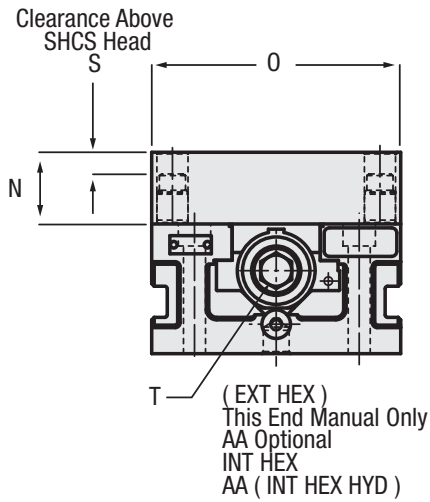
- Two clamping stations – repeatable clamping to 0.0002".
- Full 3 and 4 inch opening in each station with standard hard jaw system.
- Jaws are indexable 180 degrees.
- Manual and hydraulic models available.
- Fast easy conversion between manual and hydraulic models.
Part #HDHLM4-3-SA-KIT (4 inch) & #HDHLM6-3-SA-KIT (6 inch)
- Maximizes the number of parts in the work envelope.
- Adjustable pre-load feature allows you to minimize pre-load range thus reducing the turns of the handle to open or close the vise (manual version).
- Holding block features the ability to clamp same or dissimilar sized parts and provides pre-loading ability in the front or back jaw (manual version).
- Lifetime Iron Clad Warranty.
- Bed height tolerance ± 0.001 ".



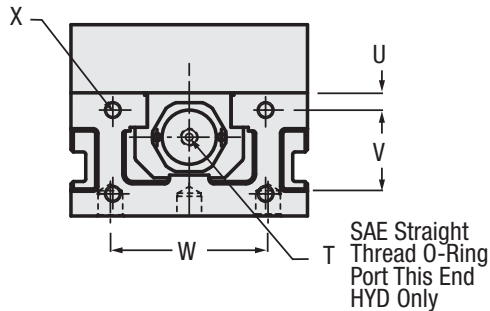
HDL AngLock® VISES (4&6 Inch)

Manual & Hydraulic

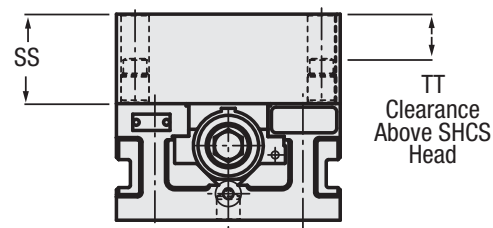
FRONT VIEW



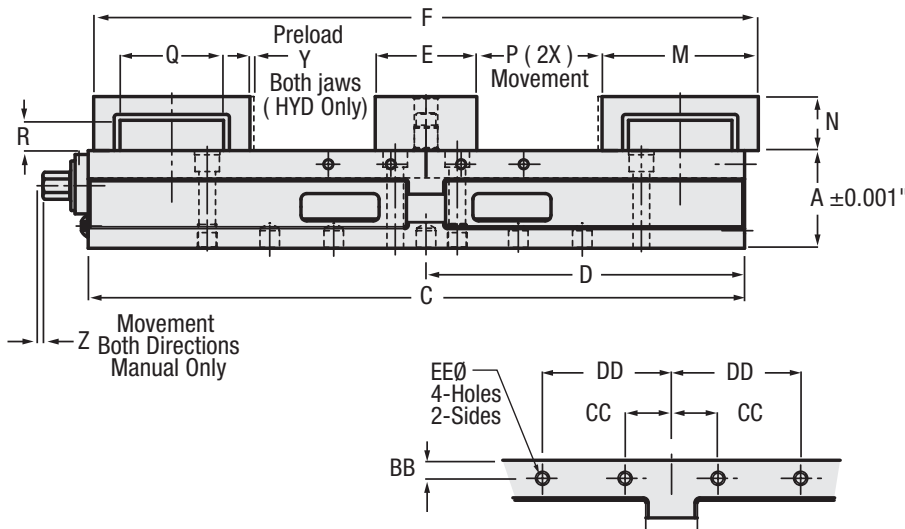
REAR VIEW OF STANDARD HEIGHT JAW



OPTIONAL JAW KIT 1.9 HEIGHT JAW (4 Inch) or 2.5 HEIGHT JAW (6 Inch)



SIDE VIEW



Dimensional Data High Density 4" & 6" Full OpenVise HDL Manual & Hydraulic								
	HDLM4 / HDL4		HDHLM4 / HDHL4		HDLM6 / HDL6		HDHLM6 / HDHL6	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A	60.325	2.375	60.325	2.375	79.375	3.125	79.375	3.125
B	101.600	4.000	101.600	4.000	152.400	6.000	152.400	6.000
C	415.925	16.375	415.925	16.375	533.400	21.000	533.400	21.000
D	200.025	7.875	200.025	7.875	258.877	10.192	258.877	10.192
E	63.500	2.500	63.500	2.500	82.550	3.250	82.550	3.250
F	418.287	16.468	418.287	16.468	539.750	21.250	539.750	21.250
G	209.144	8.234	209.144	8.234	269.875	10.625	269.875	10.625
H	33.680	1.326	-	-	36.830	1.450	-	-
J	9.855	0.388	-	-	21.844	0.860	-	-
K	41.275	1.625	41.275	1.625	63.500	2.500	63.500	2.500
L	82.550	3.250	82.550	3.250	127.000	5.000	127.000	5.000
M	101.600	4.000	101.600	4.000	127.000	5.000	127.000	5.000
N	35.560	1.400	35.560	1.400	43.891	1.728	43.891	1.728
O	101.600	4.000	101.600	4.000	152.400	6.000	152.400	6.000
P	75.794	2.984	75.794	2.984	101.600	4.000	101.600	4.000
Q	65.075	2.562	65.075	2.562	84.125	3.312	84.125	3.312
R	20.625	0.812	20.625	0.812	24.613	0.969	24.613	0.969
S	7.722	0.304	7.722	0.304	13.259	0.522	13.259	0.522
T	14.275 EXT HEX	0.562 EXT HEX	7/16 - 20 UNF O-RING PORT	7/16 - 20 UNF O-RING PORT	19.050 EXT HEX	0.750 EXT HEX	7/16-20 UNF O-RING PORT	7/16-20 UNF O-RING PORT
U	9.525	0.375	9.525	0.375	11.125	0.438	11.125	0.438
V	42.875	1.688	42.875	1.688	53.975	2.125	53.975	2.125
W	63.500	2.500	63.500	2.500	98.425	3.875	98.425	3.875
X	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25	M10 x 1.5	M10 x 1.5	M10 x 1.5	M10 x 1.5
Y	-	-	3.175	0.125	-	-	3.175	0.125
Z	3.048	0.120	-	-	3.962	0.156	-	-
AA	11.099 INT HEX	0.437 INT HEX	11.900 INT HEX	0.437 INT HEX	15.875 INT HEX	0.625 INT HEX	15.875 INT HEX	0.625 INT HEX
BB	9.525	0.375	9.525	0.375	11.125	0.438	11.125	0.438
CC	34.325	1.375	34.325	1.375	28.575	1.125	28.575	1.125
DD	65.100	2.563	65.100	2.563	79.375	3.125	79.375	3.125
EE	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25
FF	-	0.750	-	0.750	-	1.000	-	1.000
GG	20.000	-	20.000	-	25.000	-	25.000	-
HH	100.000	-	100.000	-	75.000	-	75.000	-
JJ	-	5.250	-	5.250	-	5.000	-	5.000
KK	-	5.250	-	5.250	-	7.000	-	7.000
LL	100.000	-	100.000	-	175.000	-	175.000	-
MM	-	1.500	-	1.500	-	2.000	-	2.000
NN	40.000	-	40.000	-	50.000	-	50.000	-
OO	M8 SHCS	-	M8 SHCS	-	M12 SHCS	-	M12 SHCS	-
PP	-	5/16 SHCS	-	5/16 SHCS	-	1/2 SHCS	-	1/2 SHCS
QQ	-	0.625	-	0.625	-	0.625	-	0.625
RR	16.000	-	16.000	-	16.000	-	16.000	-
SS	48.260	1.900	48.260	1.900	60.960	2.400	60.960	2.400
TT	20.422	0.804	20.422	0.804	30.328	1.194	30.328	1.194
	34 lbs/15.42 kgs		33 lbs/14.96 kgs		32.21 kgs/71 lbs		31.75 kgs/70 lbs	

Estimated Shipping Weight of Vise Body Only

CLAMPING FORCE LBS.						
Torque- Ft. Lbs.	HDL4 HDL4	Hydraulic PSI	HDHLM4 HDHL4	HDL6 HDL6	Hydraulic PSI	HDHLM6 HDHL6
10	1,040	1,000	775	1,540	500	875
20	2,125	1,500	1,450	2,520	1,000	1,600
30	3,140	2,000	1,900	3,350	1,500	2,330
40	4,040	2,500	2,550	4,310	2,000	3,130
50	4,980	3,000	3,100	5,750	2,500	3,950
60	5,870	3,500	3,700	6,860	3,000	4,750
70	-	4,000	4,200	7,460	3,500	5,475
		4,500	4,800		4,000	6,350
					4,500	7,100
					Hyd. Displacement 0.414 cubic inches	
						Hyd. Displacement 1.08 cubic inches

**HD & HDL Jaw Kits & Fixture
PLATES SEE PAGES 24-27**

Model: HDM6 Manual

For specific model numbers see page 23.

The HD CarvLock Vises are High-Density and Heavy-Duty. The overall vise is very compact, making possible maximum density workholding across the full range of today's machining centers. The HD Vise can be equipped with quick change jaws in aluminum, cast iron or with a fixture plate.

Features:

- Compact size. Overall length of just 13.750" and overall width of only 6".
- Clamping power/accuracy - produces up to 7,800 lbs of clamping force with repeatable clamping to 0.0002".
- Durability - 80,000 PSI ductile iron vise body for rugged strength, rigidity and long-term accuracy while absorbing machining vibration.
- Enclosed vise body keeps out chips and contaminants - makes cleanup fast and easy.
- Fast, easy conversion from manual to hydraulic. Easy to switch between both styles. Part No. HDHM6-3-SA-KIT.
- Jaws are indexable 180 degrees.
- Lifetime Iron Clad Warranty.

The HDM6 Manual vise body has optional jaw systems which include a set of 7075 T-6 aluminum jaw blocks or a set of ductile iron jaw blocks (1.73" standard thickness, 2.40" optional thickness) or fixture plate. Screw and nut assemblies are reversible with the vise body. One jaw kit will handle two different parts.



(shown with optional machinable aluminum jaws)



(shown with optional machinable aluminum jaws)

Model: HDHM6-DA Double Acting Hydraulic

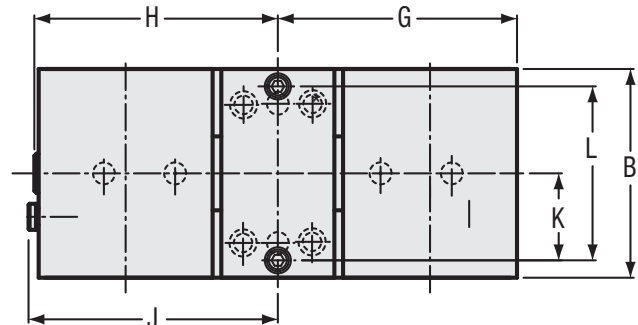
Double acting hydraulic vise uses hydraulic pressure to clamp and unclamp. Extremely reliable operation compared to other vises using mechanical operation for unclamping. Designed for automated systems.

Features:

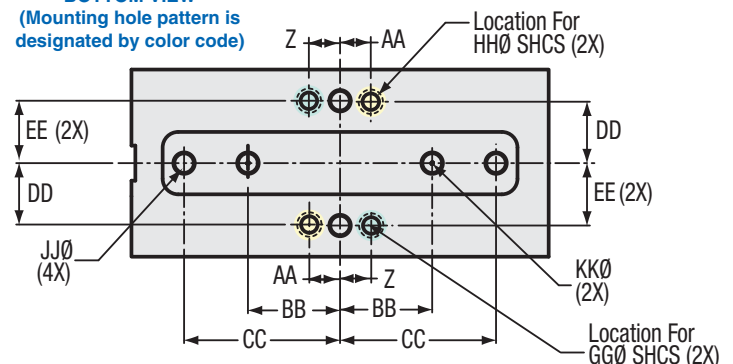
- Well suited for automation.
- Fast, positive open/close cycle.
- Compact size - overall length of just 13.750" and overall width of only 6".
- Clamping power/accuracy - produces up to 7,800 lbs clamping force @ 5,000 PSI of hydraulic pressure with repeatable clamping to 0.0002".
- Durability - 80,000 PSI ductile iron vise body for rugged strength, rigidity and long-term accuracy while absorbing machining vibration.
- Enclosed vise body keeps out chips and contaminants - makes cleanup fast and easy.
- Jaws are indexable 180 degrees.
- Lifetime Iron Clad Warranty.

The HDHM6 Hydraulic vise body has optional jaw systems which include a set of 7075 T-6 aluminum jaw blocks or a set of ductile iron jaw blocks (1.73" standard thickness, 2.40" optional thickness) or fixture plate. Screw and nut assemblies are reversible with the vise body. One jaw kit will handle two different parts.

TOP VIEW



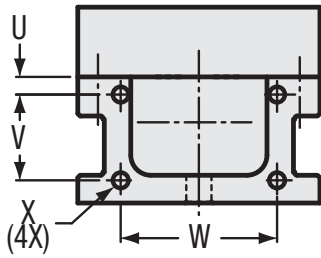
BOTTOM VIEW
(Mounting hole pattern is designated by color code)



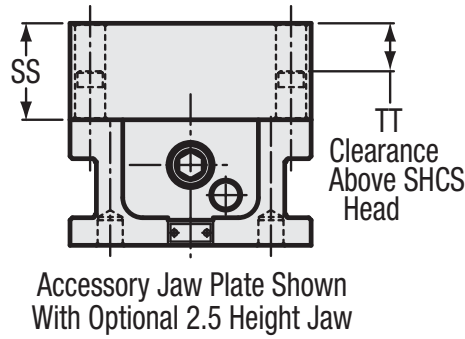
HD CARVLOCK® SHORT VISES

Manual & Hydraulic

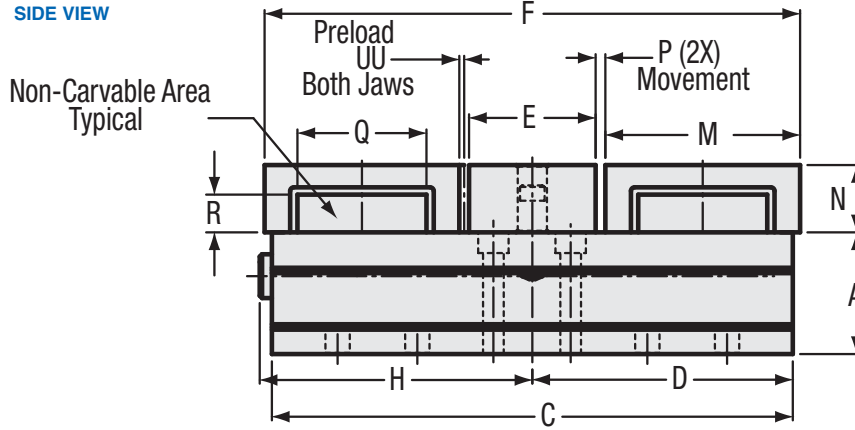
REAR VIEW



FRONT VIEW

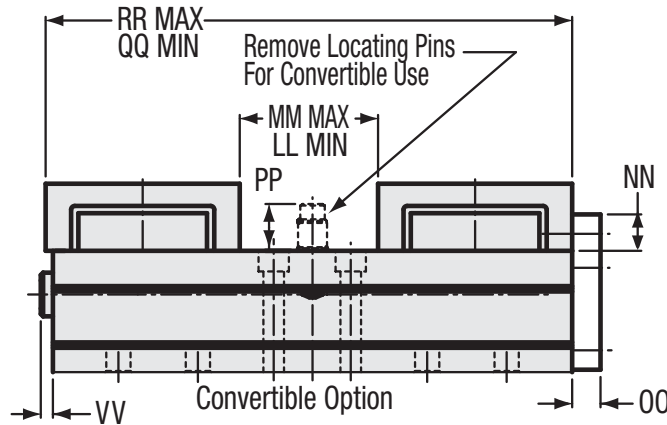


SIDE VIEW

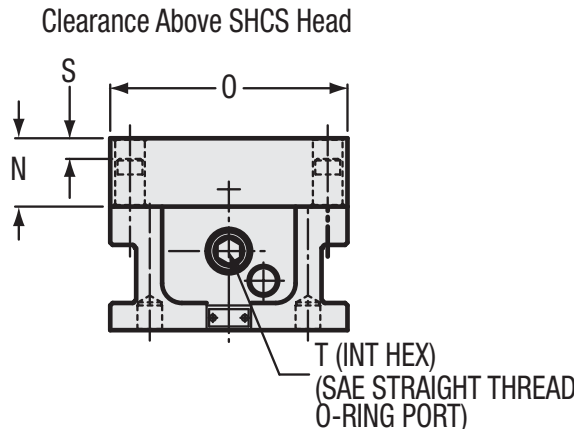


Convertible Kits for Optional Machinable Jaws – Part Number HDM6-CONVKIT

SIDE VIEW



FRONT VIEW



Dimensional Data High Density 6" HD Vise Manual & Hydraulic				
	HDM6		HDHM6	
	MM	Inch	MM	Inch
A	79.375	3.125	79.375	3.125
B	152.400	6.000	152.400	6.000
C	339.725	13.375	339.725	13.375
D	169.875	6.688	169.875	6.688
E	82.550	3.250	82.550	3.250
F	349.250	13.750	349.250	13.750
G	174.625	6.875	174.625	6.875
H	177.800	7.000	174.630	6.875
J	182.040	7.167	-	-
K	63.500	2.500	63.500	2.500
L	127.000	5.000	127.000	5.000
M	127.000	5.000	127.000	5.000
N	43.891	1.728	43.891	1.728
O	152.400	6.000	152.400	6.000
P	6.350	0.250	6.350	0.250
Q	84.120	3.312	84.120	3.312
R	24.610	0.969	24.610	0.969
S	13.260	0.522	13.260	0.522
T	15.875 INT. HEX	0.625 INT. HEX	7/16-20 UNF O-RING PORT	7/16-20 UNF O-RING PORT
U	11.125	0.438	11.125	0.438
V	53.975	2.125	53.975	2.125
W	98.43	3.875	98.43	3.875
X	M10 x 1.5	M10 x 1.5	M10 x 1.5	M10 x 1.5
Z	-	1.000	-	1.000
AA	25.000	-	25.000	-
BB	75.000	2.953	75.000	2.953
CC	127.000	5.000	127.000	5.000
DD	50.000	-	50.000	-
EE	-	2.000	-	2.000
GG	-	1/2	-	1/2
HH	M12	-	M12	-
JJ	15.875	0.625	15.875	0.625
KK	16.000	0.630	16.000	0.630
LL	77.770	3.062	82.550	3.250
MM	90.470	3.562	95.250	3.750
NN	23.830	0.938	23.830	0.938
OO	18.540	0.730	18.540	0.730
PP	30.630	1.206	30.630	1.206
QQ	331.770	13.062	336.550	13.250
RR	344.470	13.562	349.250	13.750
SS	60.960	2.400	60.960	2.400
TT	30.330	1.190	30.330	1.190
UU	-	-	3.180	0.125
VV	7.92	0.312	4.78	0.188

Estimated Shipping Weight of Vise Body Only 21.8 Kgs (48 lbs)

Clamping Force LBS.			
Torque-Ft. Lbs.	HDM6	Hydraulic PSI	HDHM6
10	883	500	875
20	1,684	1,000	1,600
30	2,503	1,500	2,330
40	3,187	2,000	3,130
50	3,963	2,500	3,950
60	4,837	3,000	4,750
70	5,556	3,500	5,475
		4,000	6,350
		4,500	7,100
		5,000	7,800
		Hyd. Displacement 1.08 cubic inches	

HD & HDL Jaw Kits & Fixture Plates SEE PAGES 24-27

4 Inch Models:

- CTHDL443 English** **CTHDLM443 Metric**
- CTHDL444 English** **CTHDLM444 Metric**
- CTHDL445 English** **CTHDLM445 Metric**

6 Inch Models:

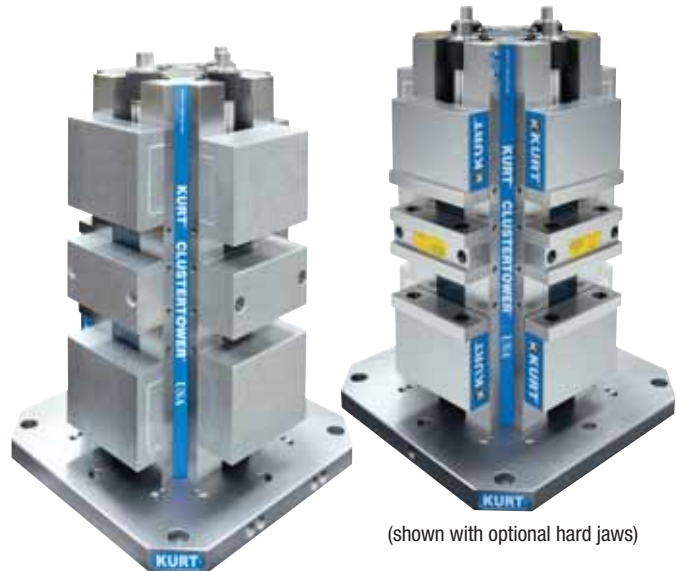
- CTHDL644 English** **CTHDLM644 Metric**
- CTHDL645 English** **CTHDLM645 Metric**
- CTHDL646 English** **CTHDLM646 Metric**

For specific model numbers see page 23.

Manually or Hydraulically operated, eight station HDL Cluster Tower system features a ductile iron integral vise tower. Designed for use on mid-size and larger machining centers including horizontal and vertical machining centers with a fourth axis and indexable tables. This workholding system achieves workpiece immobility while damping cutter induced vibration.

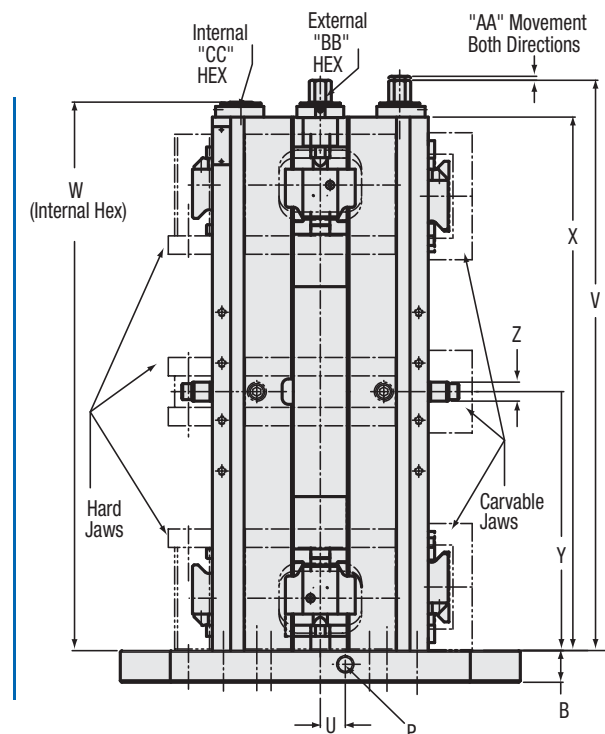
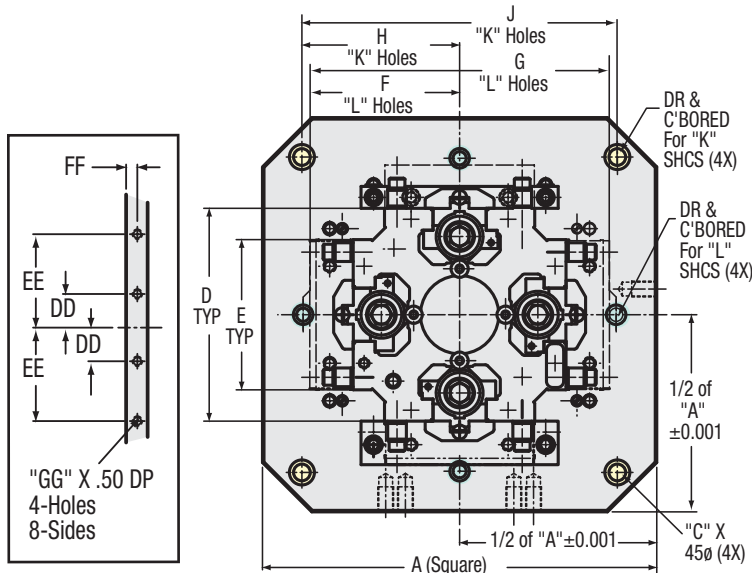
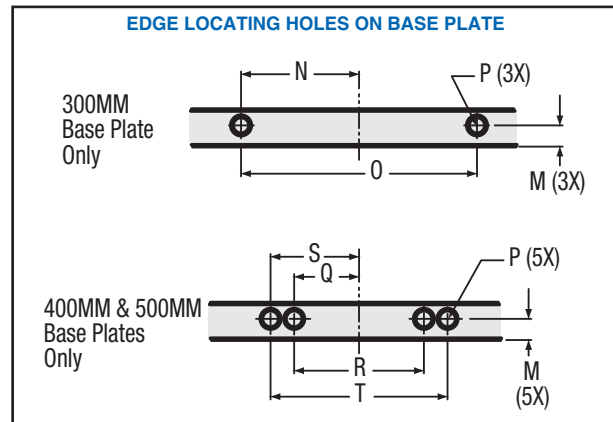
Features:

- High density vise tower system. Hold multiple parts in eight clamping stations. Increase part volume.
- Repeatability clamping to 0.0002". 4 inch model delivers up to 5,870 lbs. each station at 60 ft lbs of torque. 6 inch model delivers up to 7,460 lbs. of clamping force at 70 ft lbs of torque.
- Self-adjusting holding block of either front or back jaw for clamping the same or dissimilar sized parts. To further enhance fast operation, an adjustable pre-load feature reduces handle turns for opening and closing clamping stations.
- Ductile iron column insures strength, rigidity and long term accuracy.
- Jaw options available to fit your application. Select from Hard jaws, Machinable aluminum jaws, Machinable ductile Iron jaws. See page 27.
- Jaws are indexable 180 degrees.
- Aluminum fixture plate available. See page 26.
- Elevated column makes clearing chips and contaminants fast and easy.
- Lifetime Iron Clad Warranty.



(shown with optional aluminum jaws)

(shown with optional hard jaws)



Base Dimensional Data HDL Long Cluster Tower												
	CTHDL(M)44		CTHDL(M)64		300MM Base		400MM Base		500MM Base		630MM Base	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A					300	11.811	400	15.748	500	19.685	630	24.803
B					25.4	1	31.75	1.25	31.75	1.25	38.1	1.5
C					20	0.79	50	1.97	60	2.36	70	2.76
D					158.75	6.25	158.75	6.25	158.75	6.25	215.9	8.5
E					101.6	4	101.6	4	101.6	4	152.4	6
F					-	-	158.75	6.25	203.2	8	254	10
G					-	-	317.5	12.5	406.4	16	508	20
H					127	5	160	6.299	200	7.874	250	9.842
J					254	10	320	12.598	400	15.748	500	19.685
K					M12 SHCS	-	M16 SHCS	-	M16 SHCS	-	M16 SHCS	-
L					-	1/2 SHCS	-	1/2 SHCS	-	1/2 SHCS	-	1/2 SHCS
M					15	0.59	18	0.709	18	0.709	18	0.790
N					40	1.575	-	-	-	-	200	3.937
O					80	3.15	-	-	-	-	100	7.874
P					M12 x 1.75	-	M16 x 2.0	-	M16 x 2.0	-	M16 x 2.0	-
Q					-	-	55	2.165	55	2.165	-	-
R					-	-	110	4.33	110	4.33	-	-
S					-	-	75	2.953	75	2.953	-	-
T					-	-	150	5.906	150	5.906	-	-
U					-	-	25	0.984	25	0.984	25	0.984
V	449.6	17.701	570.23	22.45								
W	425.78	16.763	548.38	21.59								
X	415.92	16.375	533.4	21								
Y	200.03	7.875	258.88	10.192								
Z	15	0.59	19.05	0.75								
AA	3.05	0.12	3.95	0.156								
BB	14.28	0.562	19.05	0.750								
CC	11.1	0.437	15.87	0.625								
DD	34.92	1.375	28.58	1.125								
EE	65.1	2.563	79.38	3.125								
FF	9.53	0.375	9.53	0.375								
GG	M8 x 1.25	M8 x 1.25	M8 x 1.25	M8 x 1.25								
Base Weight		119 lbs		270 lbs		39 lbs		85 lbs		133 lbs		255 lbs

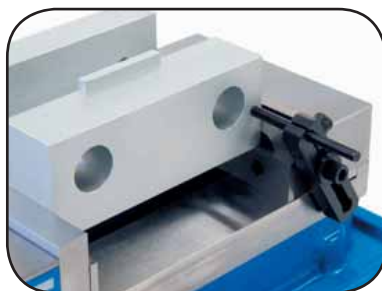
CLAMPING FORCE LBS.					
Torque-Ft. Lbs.	HDL(M)4	HDL(M)6	Hydraulic PSI	HDHL(M)4	HDHL(M)6
10	1,040	1,540	500		875
20	2,125	2,520	1,000	775	1,600
30	3,140	3,350	1,500	1,450	2,330
40	4,040	4,310	2,000	1,900	3,130
50	4,980	5,750	2,500	2,550	3,950
60	5,870	6,860	3,000	3,100	4,750
70		7,460	3,500	3,700	5,475
			4,000	4,200	6,350
			4,500	4,800	7,100
	Hyd. Displacement .414 cubic inches			Hyd. Displacement 1.08 cubic inches	

Ask about our
12 Station HD
CarvLock Towers



6AWS and 6AWSM Workstop, p.68

Spanner Wrench, p.69
Model No. DL430-307-SA – 4"
Model No. DL640-307A-SA – 6"



HD & HDL JAW KITS & FIXTURE PLATES SEE PAGES 24-27

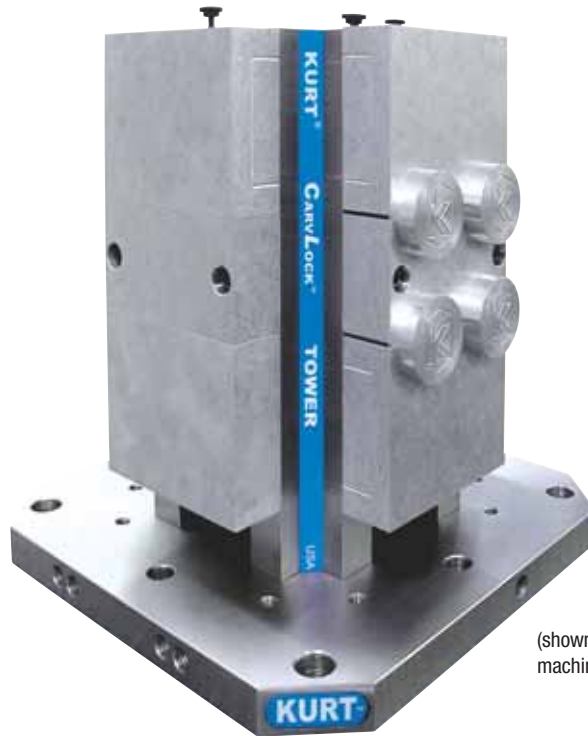
Model: CTHDM64

For specific model numbers see page 23.

This manually operated, eight station HD Cluster Tower system features a cast iron integral vise tower. Ideal for horizontal machining centers or vertical machining centers with indexable tables. This workholding system achieves workpiece immobility while damping cutter induced vibration.

Features:

- Most compact, high density vise tower system in the industry.
- Hold multiple parts in eight clamping stations. Increase part volume.
- Small footprint which reduces spindle travel, part to part, maximizing throughput without compromising holding accuracy.
- Ductile iron column insures strength, rigidity and long term accuracy.
- Jaw options available to fit your application. Select from Machinable aluminum jaws, Machinable ductile Iron jaws and Aluminum fixture plate.
- Jaws are indexable 180 degrees.
- Base sizes available include: 300mm, 400mm, 500mm, 630mm.
- Elevated column makes clearing chips and contaminants fast and easy.
- Lifetime Iron Clad Warranty.



(shown with optional machinable aluminum jaws)

Model: CTHDHM64

For specific model numbers see page 23.

Identical in capacity and features as the manual HD CarvLock Tower system, this system is actuated hydraulically. Hydraulic piston is an integral part of the vise nut within the vise and tower body to conserve valuable space on the machine table. This hydraulic version also shares all of the jaw options and other accessories which are available in the manual version. Hydraulic pump and hose not included.

Features:

- Up to 7,100 pounds of clamping force.
- Jaw options available to fit your application. Select from Machinable aluminum jaws, Machinable ductile Iron jaws and Aluminum fixture plate.
- Jaws are indexable 180 degrees.
- Elevated column makes clearing chips and contaminants fast and easy.
- Base sizes available include: 300mm, 400mm, 500mm, 630mm.
- Lifetime Iron Clad Warranty.

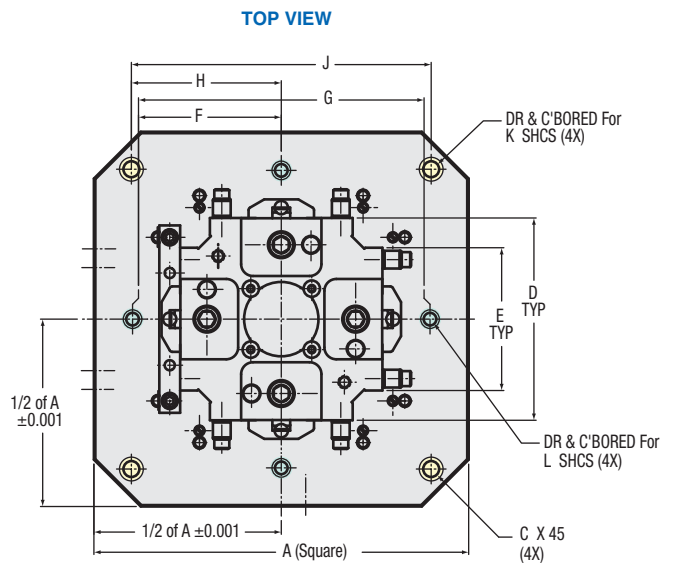
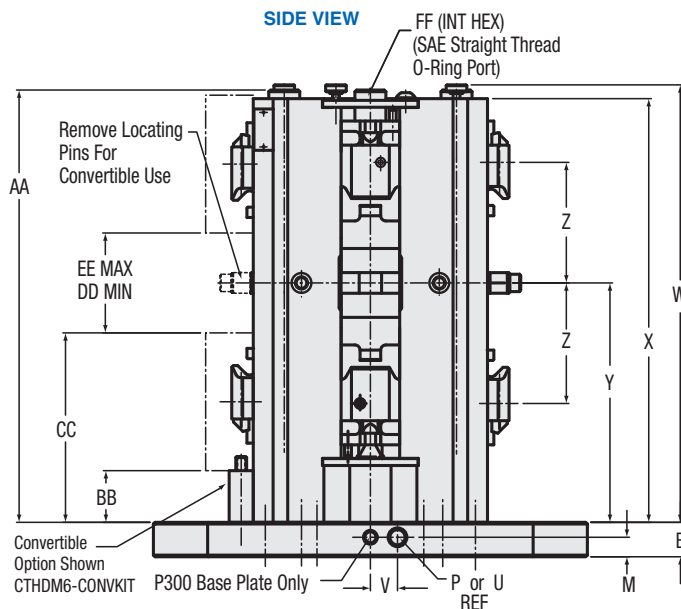
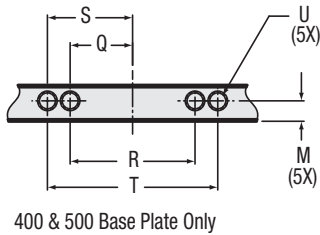
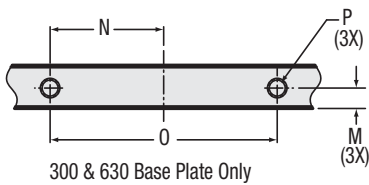


(shown with optional machinable aluminum jaws)

CTHDHM64 SPECIFICATIONS SEE PAGE 20

CLAMPING FORCE LBS.	
Torque-Ft. Lbs.	HDM6
10	883
20	1,684
30	2,503
40	3,187
50	3,963
60	4,837
70	5,556

	HD MANUAL TOWER DIMENSIONS							
	CTHDM643		CTHDM644		CTHDM645		CTHDM646	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A	300.000	11.811	400.000	15.748	500.000	19.685	630.000	24.803
B	25.400	1.000	31.750	1.250	31.750	1.250	38.100	1.500
C	20.000	0.787	50.000	1.969	60.000	2.362	70.100	2.760
D	215.900	8.500	215.900	8.500	215.900	8.500	215.900	8.500
E	152.400	6.000	152.400	6.000	152.400	6.000	152.400	6.000
F	-	-	158.750	6.250	203.200	8.000	254.000	10.000
G	-	-	317.500	12.500	406.400	16.000	508.000	20.000
H	127.000	5.000	160.000	6.299	200.000	7.874	250.000	9.843
J	254.000	10.000	320.000	12.598	400.000	15.748	500.000	19.685
K	M12	M12	M16	M16	M16	M16	M16	M16
L	-	-	M12	M12	M12	M12	M12	M12
M	15.000	0.591	18.000	0.709	18.000	0.709	18.000	0.709
N	40.000	1.575	-	-	-	-	100.000	3.937
O	80.000	3.150	-	-	-	-	200.000	7.874
P	M12 x 1.75	M12 x 1.75	-	-	-	-	M16 x 2.0	M16 x 2.0
Q	-	-	55.000	2.165	55.000	2.165	-	-
R	-	-	110.000	4.331	110.000	4.331	-	-
S	-	-	75.000	2.953	75.000	2.953	-	-
T	-	-	150.000	5.906	150.000	5.906	-	-
U	-	-	M16 x 2.0	M16 x 2.0	M16 x 2.0	M16 x 2.0	-	-
V	-	-	25.000	0.984	25.000	0.984	25.000	0.984
W	403.230	15.875	403.230	15.875	403.230	15.875	403.230	15.875
X	390.520	15.375	390.520	15.375	390.520	15.375	390.520	15.375
Y	220.680	8.688	220.680	8.688	220.680	8.688	220.680	8.688
Z	111.130	4.375	111.130	4.375	111.130	4.375	111.130	4.375
AA	398.480	15.688	398.480	15.688	398.480	15.688	398.480	15.688
BB	47.625	1.875	47.625	1.875	47.625	1.875	47.625	1.875
CC	174.625	6.875	174.625	6.875	174.625	6.875	174.625	6.875
DD	82.550	3.250	82.550	3.250	82.550	3.250	82.550	3.250
EE	92.080	3.625	92.080	3.625	92.080	3.625	92.080	3.625
FF	15.875 INT. HEX	0.625 INT. HEX	15.875 INT. HEX	0.625 INT. HEX	15.875 INT. HEX	0.625 INT. HEX	15.875 INT. HEX	0.625 INT. HEX
Approx. Ship weight Kgs/Lbs without jaw sets	139.7	308	161.0	355	183.7	405	239.5	528



HD & HDL Jaw Kits & Fixture Plates SEE PAGES 24-27



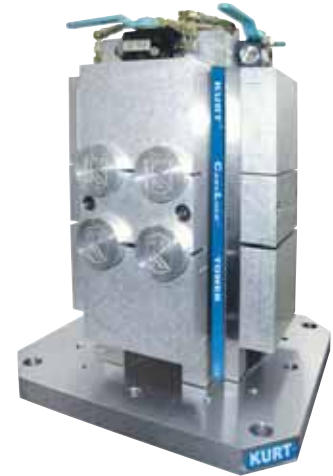
HD CARVLOCK® TOWERS

Hydraulic

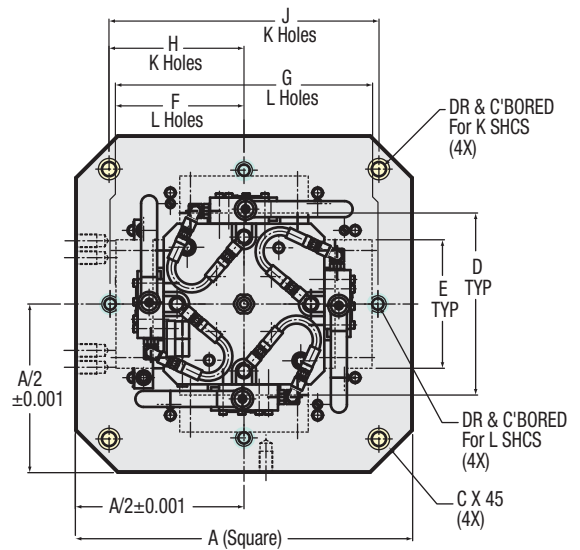
CTHDHM64 Specifications

HD HYDRAULIC TOWER DIMENSIONS								
	CTHDHM643		CTHDHM644		CTHDHM645		CTHDHM646	
	MM	Inch	MM	Inch	MM	Inch	MM	Inch
A	300.000	11.811	400.000	15.748	500.000	19.685	630.000	24.803
B	25.400	1.000	31.750	1.250	31.750	1.250	38.100	1.500
C	20.000	0.787	50.000	1.969	60.000	2.362	70.100	2.760
D	215.900	8.500	215.900	8.500	215.900	8.500	215.900	8.500
E	152.400	6.000	152.400	6.000	152.400	6.000	152.400	6.000
F	-	-	158.750	6.250	203.200	8.000	254.000	10.000
G	-	-	317.500	12.500	406.400	16.000	508.000	20.000
H	127.000	5.000	160.000	6.299	200.000	7.874	250.000	9.843
J	254.000	10.000	320.000	12.598	400.000	15.748	500.000	19.685
K	M12	M12	M16	M16	M16	M16	M16	M16
L	-	-	M12	M12	M12	M12	M12	M12
M	15.000	0.591	18.000	0.709	18.000	0.709	18.000	0.709
N	40.000	1.575	-	-	-	-	100.000	3.937
O	80.000	3.150	-	-	-	-	200.000	7.874
P	M12 x 1.75	M12 x 1.75	-	-	-	-	M16 x 2.0	M16 x 2.0
Q	-	-	55.000	2.165	55.000	2.165	-	-
R	-	-	110.000	4.331	110.000	4.331	-	-
S	-	-	75.000	2.953	75.000	2.953	-	-
T	-	-	150.000	5.906	150.000	5.906	-	-
U	-	-	M16 x 2.0	M16 x 2.0	M16 x 2.0	M16 x 2.0	-	-
V	-	-	25.000	0.984	25.000	0.984	25.000	0.984
W	487.170	19.180	487.170	19.180	487.170	19.180	487.170	19.180
X	390.520	15.375	390.520	15.375	390.520	15.375	390.520	15.375
Y	220.680	8.688	220.680	8.688	220.680	8.688	220.680	8.688
Z	127.000	5.000	127.000	5.000	127.000	5.000	127.000	5.000
AA	6.350	0.250	6.350	0.250	6.350	0.250	6.350	0.250
BB	47.625	1.875	47.625	1.875	47.625	1.875	47.625	1.875
CC	174.625	6.875	174.625	6.875	174.625	6.875	174.625	6.875
DD	82.550	3.250	82.550	3.250	82.550	3.250	82.550	3.250
EE	95.250	3.750	95.250	3.750	95.250	3.750	95.250	3.750
FF	82.550	3.250	82.550	3.250	82.550	3.250	82.550	3.250
Approx. Ship weight Kgs/Lbs without jaw sets	148.8	328	170.1	375	192.8	425	248.6	548

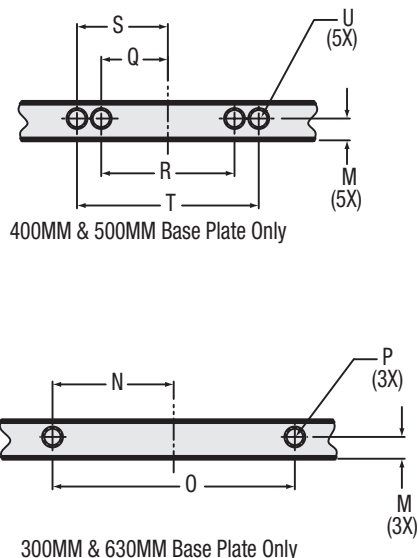
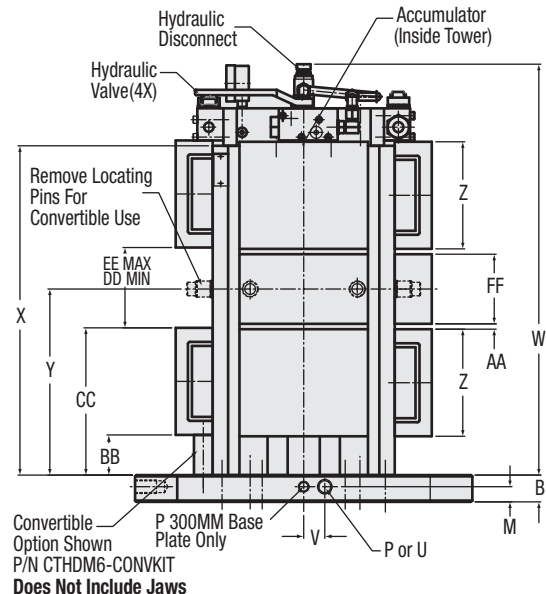
CLAMPING FORCE LBS.	
Hydraulic PSI	HDHM6
500	875
1,000	1,600
1,500	2,330
2,000	3,130
2,500	3,950
3,000	4,750
3,500	5,475
4,000	6,350
4,500	7,100
5,000	7,800
Hyd. Displacement cu. in.	1.08



TOP VIEW



SIDE VIEW



HD CARVLOCK® TOWERS

CTHDHL64 Hydraulic Tower – English CTHDHLM64 Hydraulic Tower – Metric

This hydraulically operated eight station tower features all-new design for fast loading of parts. All internalized hydraulic piston/nut saves valuable space. Includes all original KURT AngLock precision clamping and iron clad rigid construction for damping vibration.

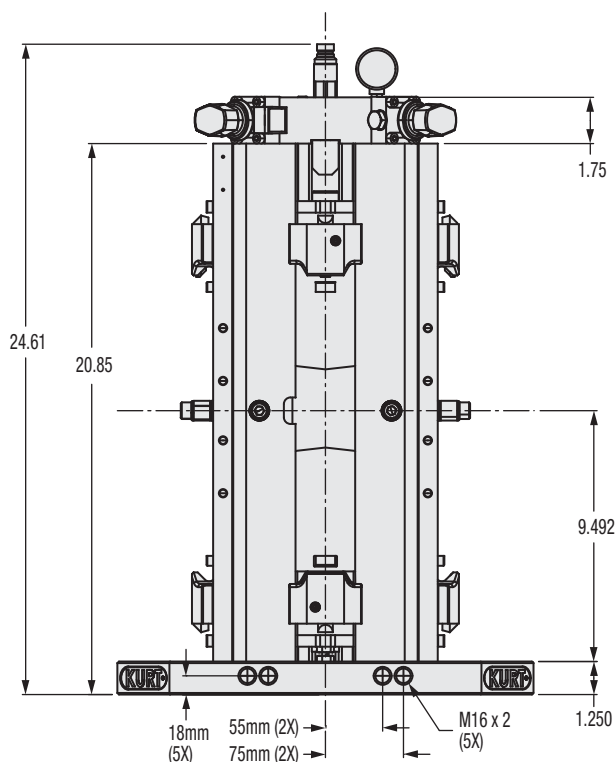
Features:

- Hydraulically operated eight station CTHDHL64 Cluster Tower.
- Utilizes an all internal hydraulic piston nut to conserve space. Pressure is maintained until released by operator or triggering device. Easy disconnect for pallet shuttle.
- Repeatable clamping to 0.0002". Each station delivers up to 7,100 lbs. of clamping force at 4,500 PSI.
- Each face is controlled separately for convenient part loading and removal.
- Jaw opening is 4" per station.
- Each face has a maximum total stroke of 1/4" (1/8" per station).
- Jaw options available: Hard jaws, machinable aluminum. machinable ductile iron. See pg.27
- Base sizes available: 400mm, 500mm, 630mm.
- Lifetime Iron Clad Warranty

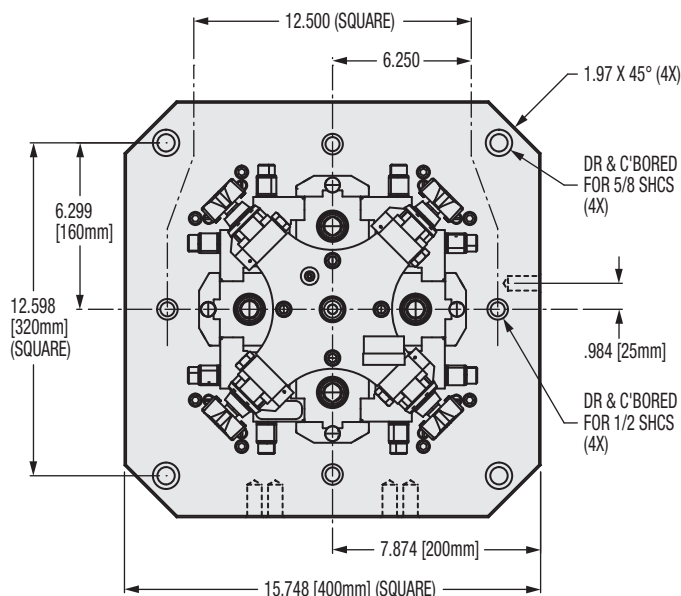


(shown with optional hard jaws)

SIDE VIEW



TOP VIEW



HD & HDL JAW KITS & FIXTURE PLATES SEE PAGES 24-27



KURT ROTARY TABLE WORKHOLDING SYSTEMS

Features:

- High density vise tower system. Hold multiple parts in eight clamping stations. Increase part volume.
- Repeatable clamping to 0.0002". Each station delivers up to 7,460 lbs. of clamping force at 70 ft lbs of torque.
- Self-adjusting holding block of either front or back jaw for clamping the same or dissimilar sized parts. To further enhance fast operation, an adjustable pre-load feature reduces handle turns for opening and closing clamping stations.
- Ductile iron column insures strength, rigidity and long term accuracy.
- Jaw options available to fit your application. Select from hard jaws, machinable aluminum jaws, machinable ductile iron jaws and aluminum fixture plate.
- Jaws are indexable 180 degrees.
- Lifetime Iron Clad Warranty.
- Optional single-station convertible kit available for machinable jaws (CTHDLM4-CONVKIT) and hard jaws (CTHDLM4J-CONVKIT).

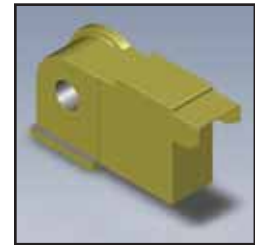
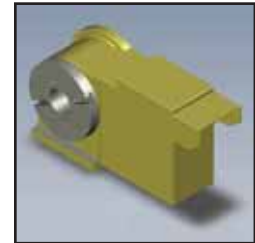
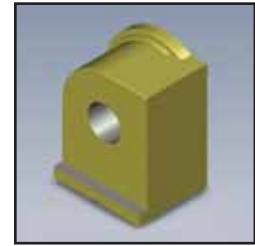
What comes with the kit:

- Four-sided column with jaw kits
- End Support Assembly
- Indexer Locator
- T-Nuts
- Face Plate
- Locating Pin
- Screws

*Sub-plates not included.
Can be quoted separately.



Add this tower to your indexer or have Kurt provide a turnkey solution.



Kits are available for the following models:

CENTROID (GOLDEN SUN)	HAAS	NIKKEN		SMW	TROYKE	TSUDAKOMA		YUASA	YUKIWA
RT-150 (CNC-151R)	HRT210	CNC180	CNC302	RT-225	DL-9	RN-150 (FP)	RNCM-301	DMNC-220	JNC170 (FP)
RT-200 (CNC-201R)	HRT310	CNC180B	CNC302B	RT-275	DL-10	RN-200 (FP)	RNCM-401	DMNC-280	JNC200 (FP)
RT-250 (CNC-251R)		CNC202	CNC320		DL-12	RN-250	RB-250	DMNC-320	JNC250 (FP)
RT-320 (CNC-321R)		CNC202B	CNC321			RN-300	RB-300	DRFT-220	YNC170 (FP)
		CNC200	CNC321B			RNCV-401	RZ-160 (FP)	DRFT-280	YNC200 (FP)
		CNC250	CNC400			RNCM-251	RZ-200 (FP)	DRFT-320	YNC250 (FP)
		CNC260	CNC401						
		CNC260B	CNC401B						

HARDINGE
GD160
GD210

Available jaw and fixture options:

- Aluminum, cast iron, steel, and fixture plate.
See pages 24-27



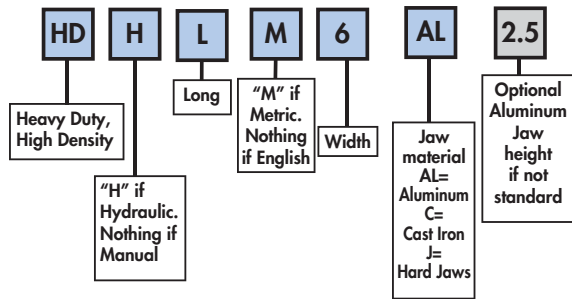
HDLM6J (Manual 6" vise with hard jaws.)
 HDLHM6AL2.5 (Hydraulic vise with optional height aluminum jaws.)



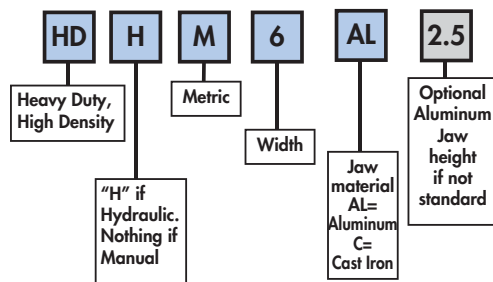
HDM6AL (Manual 6" vise with standard aluminum jaws.)
 HDHM6AL2.5 (Hydraulic vise with optional height aluminum jaws.)



HDL Double Station Vise Examples:



HD Double Station Vise Examples:



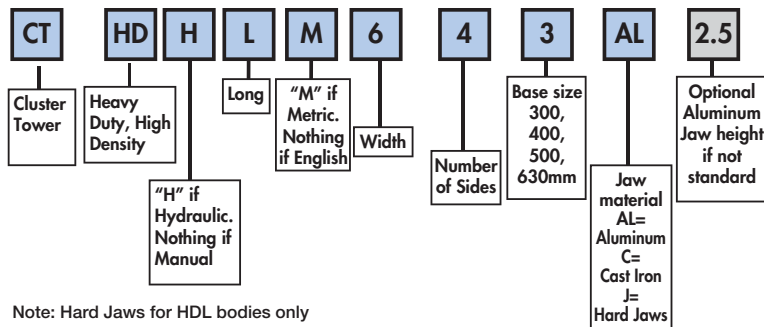
CTHDM643AL (Manual 6" short tower with 4 sides, 300mm base with standard height aluminum jaws.)
 CTHDHM645AL2.5 (Hydraulic 6" tower with 4 sides, 500mm base with optional height aluminum jaws.)



THDM63AL (Manual 6" short back-to-back vise, 300mm base with standard height aluminum jaws.)
 THDHM66AL2.5 (Hydraulic 6" short back-to-back vise, 630mm base with optional height aluminum jaws.)

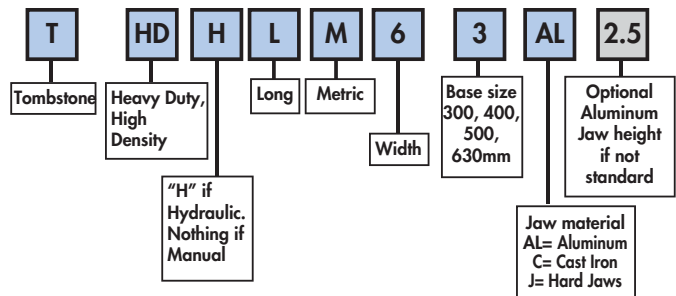


HD and HDL Cluster Tower Examples:



Note: Hard Jaws for HDL bodies only

HD Back-To-Back Visers Examples:



Back-to-back mounting option.
 HD vises mount easily back-to-back, providing a new way to achieve a multiple clamping station tower. Contact factory for details.
 Estimated shipping weight: 88.9Kgs/196Lbs



Fixture Plate (HD6ALP620-239) For HD Short Body

Ultra high density loads of small parts can be accommodated in a single setup by mounting various off-the-shelf clamping station modules to this fixture plate.

To utilize this system's components, the movable and stationary vise jaws are removed and the fixture plate is positioned and then clamped by normal actuation of the vise.

HD Vise design utilizes fewer working components. Faster changeovers. Fewer problems.



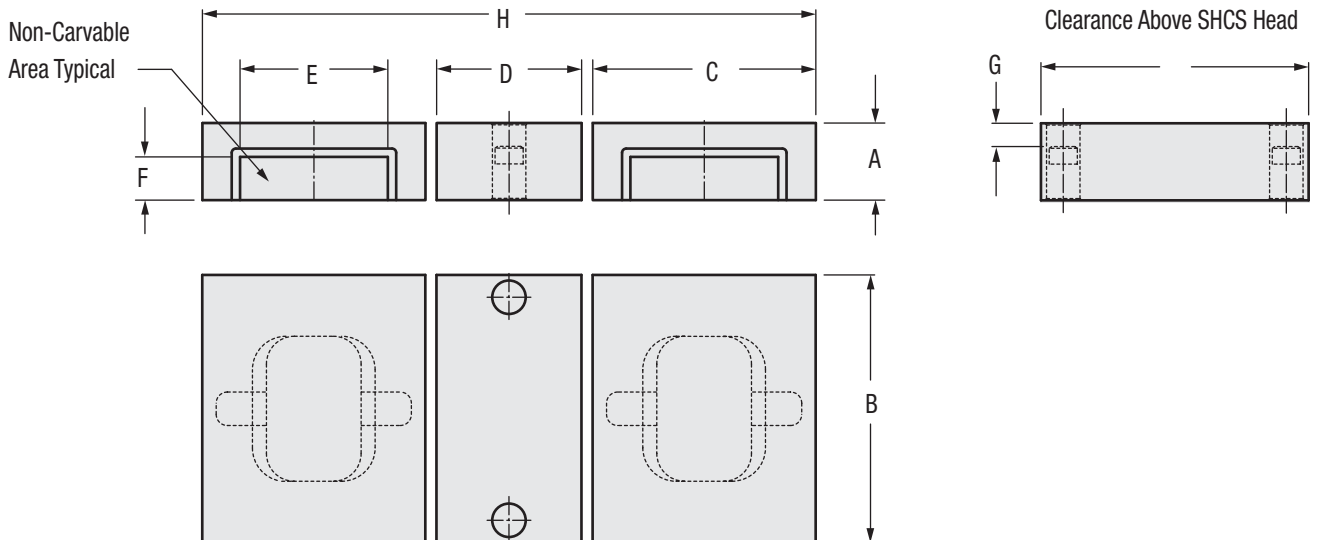
HD & HDL JAW KITS & FIXTURE PLATES SEE PAGES 24-27



HD & HDL Jaw Kits

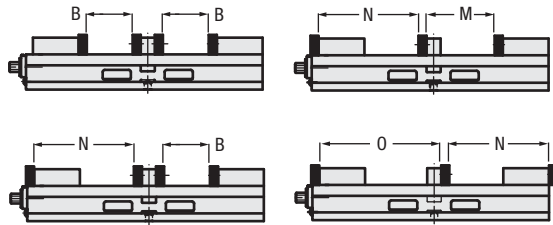


ALUMINUM AND CAST IRON MACHINABLE JAWS Jaw Kit Dimensional Data for High Density 6" HD & HDL Vises						
	HD6AL Jaw Kit		HD6AL2.5 Jaw Kit		HD6C Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	43.891	1.728	60.960	2.400	43.891	1.728
B	152.400	6.000	152.400	6.000	152.400	6.000
C	127.000	5.000	127.000	5.000	127.000	5.000
D	82.550	3.250	82.550	3.250	82.550	3.250
E	84.120	3.312	84.120	3.312	84.120	3.312
F	24.160	0.951	24.160	0.951	24.160	0.951
G	13.260	0.522	30.330	1.190	13.260	0.522
H	349.250	13.750	349.250	13.750	349.250	13.750
Est Ship Wt. Kgs/Lbs.	5.4	12	8.6	19	17.7	39



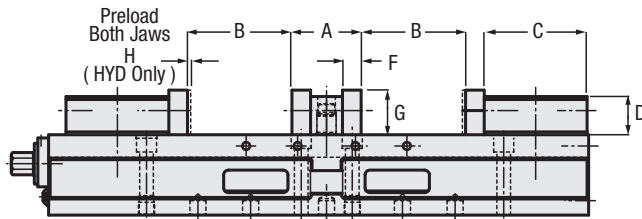
HD & HDL JAW KITS

HARDENED JAW POSITIONS (MANUAL VISE SHOWN)

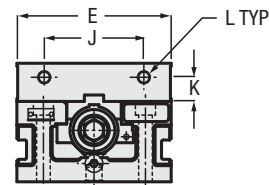


Hard Jaw Kit Part Numbers				
PART NO.	DESCRIPTION	LBS	KGS	
HDL4J-JAWKIT	INCH J STYLE HARD JAW KIT	10	5	
HDLM4J-JAWKIT	METRIC J STYLE HARD JAW KIT	10	5	
HDL6J-JAWKIT	INCH J STYLE HARD JAW KIT	27	13	
HDLM6J-JAWKIT	METRIC J STYLE HARD JAW KIT	27	13	

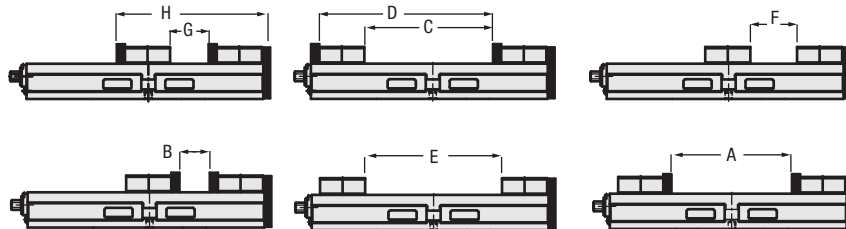
HARD JAWS (MANUAL VISE SHOWN)



FRONT VIEW



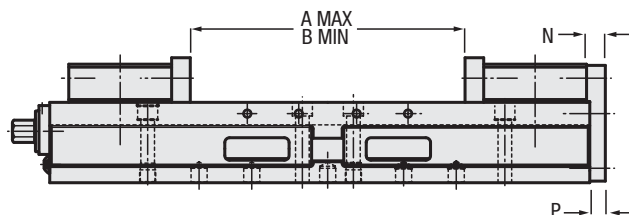
HARDENED JAW POSITIONS (MANUAL VISE SHOWN)



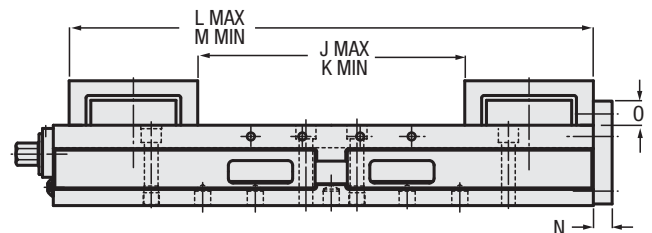
Machinable Jaw Kit Part Numbers				
PART NO.	DESCRIPTION	LBS	KGS	
HDLM4AL-JAWKIT	1.40 HIGH ALUMINUM JAW KIT	6	3	
HDLM4AL1.9-JAWKIT	1.90 HIGH ALUMINUM JAW KIT	8	4	
HDLM4C-JAWKIT	1.40 HIGH IRON JAW KIT	14	7	
HD6AL-JAWKIT	1.73 HIGH ALUMINUM JAW KIT	14	7	
HD6AL2.5-JAWKIT	2.4 HIGH ALUMINUM JAW KIT	19	9	
HD6C-JAWKIT	1.73 HIGH IRON JAW KIT	33	15	

CONVERTIBLE OPTIONS – DIMENSIONAL DATA FOR HARD AND CARVABLE JAWS				
	4" MANUAL HYDRAULIC		6" MANUAL HYDRAULIC	
	MM	Inch	MM	Inch
A	211.938	8.344	271.526	10.690
B	59.538	2.344	68.326	2.690
C	225.831	8.891	289.941	11.415
D	299.644	11.797	391.541	15.415
E	239.725	9.438	308.356	12.140
F	87.325	3.438	105.156	4.140
G	73.431	2.891	86.741	3.415
H	147.244	5.797	188.341	7.415
J	205.968	8.109	274.574	10.810
K	55.880	2.200	77.775	3.062
L	409.168	16.109	528.574	20.810
M	259.080	10.200	331.775	13.062
N	20.625	Hard Jaws Only 0.812	18.542	0.730
O	18.262	0.719	23.825	0.938
P	15.240	Hard & Soft Jaws 0.600	15.367	0.605

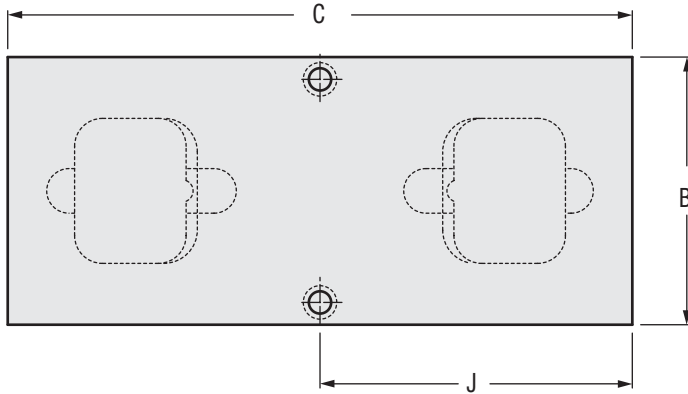
CONVERTIBLE OPTION FOR HARD JAWS HDLM4J-CONVKIT & HDLM6J-CONVKIT (MANUAL VISE)



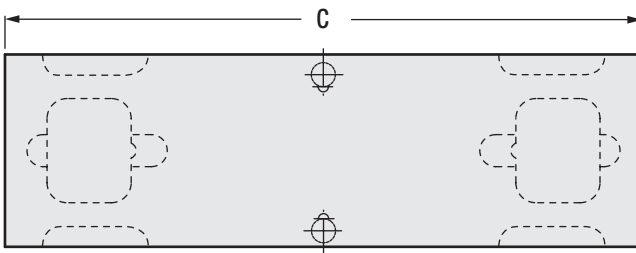
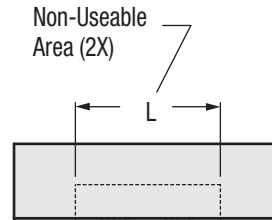
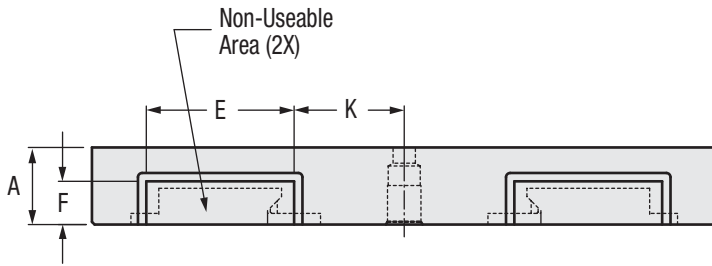
CONVERTIBLE OPTION FOR CARVABLE JAWS (MANUAL VISE SHOWN) HDLM4-CONVKIT AND HDLM6-CONVKIT



HD & HDL FIXTURE PLATES

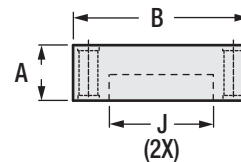
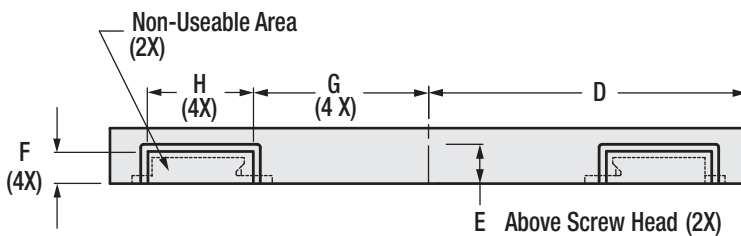


HD6ALP620-239 Fixture Plate		
	MM	Inch
A	50.290	1.980
B	152.400	6.000
C	355.600	14.000
E	84.120	3.312
F	24.610	0.969
J	177.800	7.000
K	62.710	2.469
L	82.550	3.250
Est Ship Wt. Kgs/ Lbs.	6.4	14



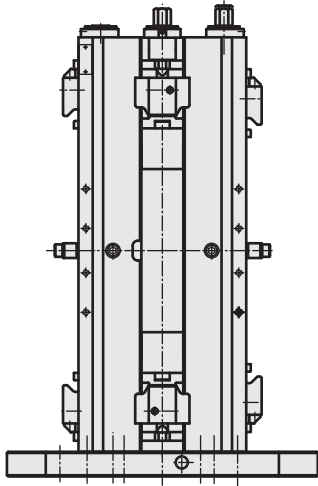
Aluminum Fixture Plate Accessory for HDLM Vise & CTHDLM Tower 4"		
HDLM4ALP419		
	MM	Inch
A	48.26	1.900
B	101.60	4.00
C	393.70	15.500
D	196.85	7.750
E	40.54	1.596
H	20.57	0.810
J	65.07	2.562
K	100.84	3.970
L	65.02	2.560

Aluminum Fixture Plate Accessory for HDLM Vise & CTHDLM Tower 6"		
HDL6ALP619		
	MM	Inch
A	48.260	1.900
B	152.400	6.000
C	508.000	20.000
D	254.000	10.000
E	30.988	1.220
F	24.613	0.969
G	138.938	5.470
H	84.125	3.312
J	82.550	3.250



HD & HDL CARVLOCK® TOWERS (4/6 INCH)

Manual & Hydraulic

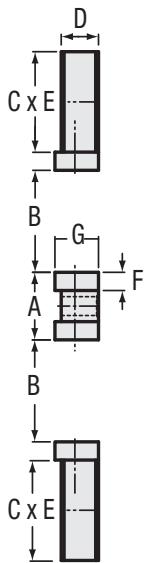
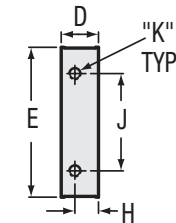


4 Inch Jaw Accessories						
	HARD JAWS		MACHINABLE JAWS			
	HDLM4J-Jaw Kit		HDLM4AL-Jaw Kit HDLM4C-Jaw Kit		HDLM4AL1.9-Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	59.538	2.344	63.500	2.500	63.500	2.500
B	76.200	3.000	66.675	2.625	66.675	2.625
C	73.812	2.906	101.600	4.000	101.600	4.000
D	28.321	1.115	35.560	1.400	48.260	1.900
E	101.600	4.000	101.600	4.000	101.600	4.000
F	13.894	0.547	-	-	-	-
G	31.369	1.235	-	-	-	-
H	17.450	0.687	-	-	-	-
J	63.500	2.500	-	-	-	-
K	M10 x 1.50	3/8 - 16	-	-	-	-
L	-	-	-	-	-	-
M	-	-	-	-	-	-
N	-	-	-	-	-	-
O	-	-	-	-	-	-
P	-	-	7.722	0.304	20.422	0.804
Q	-	-	20.625	0.812	20.625	0.812
R	-	-	65.075	2.562	65.075	2.562

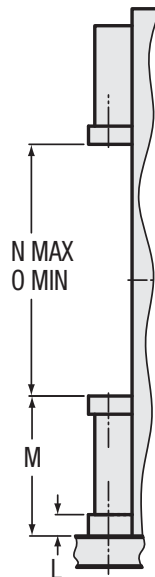
6 inch Jaw Accessories						
	HARD JAWS		MACHINABLE JAWS			
	HDLM6J-Jaw Kit		HD6AL-Jaw Kit HD6C-Jaw Kit		HD6AL2.5-Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	68.326	2.690	82.550	3.250	82.550	3.250
B	103.170	4.062	90.630	3.568	90.630	3.568
C	101.600	4.000	127.000	5.000	127.000	5.000
D	37.719	1.485	43.890	1.728	60.960	2.400
E	151.610	5.968	152.400	6.000	152.400	6.000
F	18.415	0.725	-	-	-	-
G	44.069	1.735	-	-	-	-
H	23.876	0.940	-	-	-	-
J	98.425	3.875	-	-	-	-
K	M12 x 1.75	1/2 - 13	-	-	-	-
L	-	-	-	-	-	-
M	-	-	-	-	-	-
N	-	-	-	-	-	-
O	-	-	-	-	-	-
P	-	-	13.260	0.522	30.330	1.194
Q	-	-	24.610	0.969	24.610	0.969
R	-	-	84.120	3.312	84.120	3.312

4 Inch Jaw Accessories Convertible Option				
	HARD JAWS		CARVABLE JAWS	
	CTHDLM4J-CONVKIT		CTHDLM4-CONVKIT	
	MM	Inch	MM	Inch
A	-	-	-	-
B	-	-	-	-
C	-	-	-	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-
L	13.894	0.547	13.874	0.547
M	101.600	4.000	115.494	4.547
N	196.850	7.750	169.060	6.656
O	57.150	2.250	57.150	2.250
P	-	-	-	-
Q	-	-	-	-
R	-	-	-	-

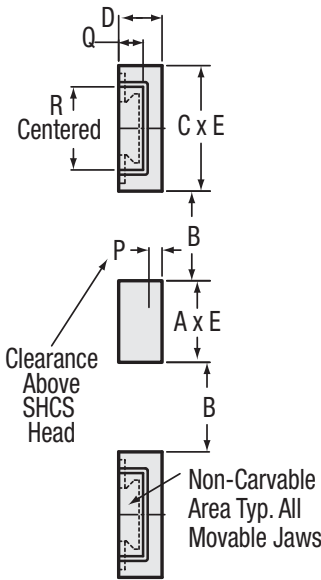
6 Inch Jaw Accessories Convertible Option				
	HARD JAWS		CARVABLE JAWS	
	CTHDLM6J-CONVKIT		CTHDLM6-CONVKIT	
	MM	Inch	MM	Inch
A	-	-	-	-
B	-	-	-	-
C	-	-	-	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-
L	21.590	0.850	18.415	0.725
M	141.605	5.575	145.415	5.725
N	254.640	10.025	256.540	10.100
O	68.326	2.690	79.760	3.140
P	-	-	-	-
Q	-	-	-	-
R	-	-	-	-



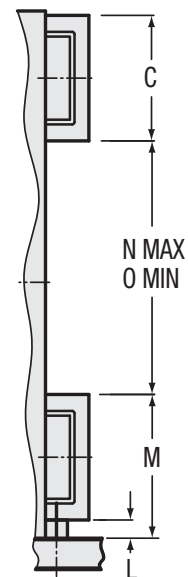
HARD JAWS TYP.



**CONVERTIBLE OPTION SHOWN
HARD JAWS DOES NOT INCLUDE JAWS**



ALUM. OR DUCTILE CARVABLE JAWS SHOWN TYP.



**CONVERTIBLE OPTION SHOWN
CARVABLE JAWS**



DOUBLELOCK® VISES

Manual & Hydraulic

PATENTED

Models:
DL800



Model:
DLH800

DL800 Features:

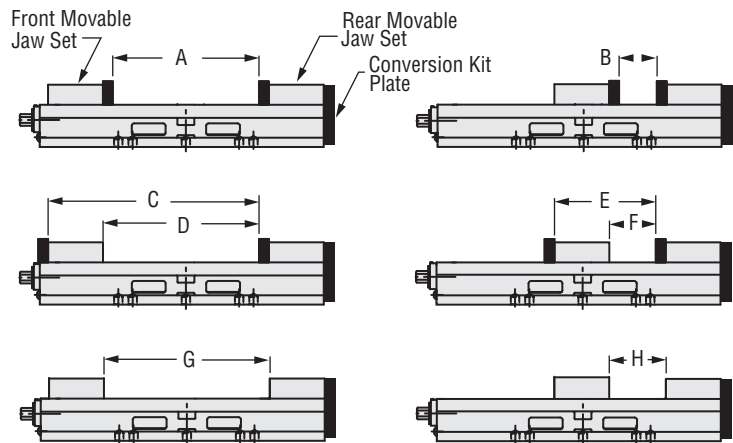
- Large Capacity -DL800 8" wide x 6" opening each station.
- Productivity – multiple part workholding for better spindle utilization, reduced tool change time, and reduced machine travel from part to part.
- Accuracy – repeatable clamping to 0.0002".
- Durability – 80,000-PSI ductile iron body and steel components provide strength, rigidity and long term accuracy while absorbing machining vibration.
- Self-adjusting holding block over the entire clamping range.
- Metric version available.
- Optional internal hex screw available.
- Pre-load is adjustable from 0.010" to 0.150".
- New holding block features the ability to clamp dissimilar sized parts and provides preloading ability in the front or back jaw.

Shown with optional convertible kit.

Use your DoubleLock vise to it's full capacity with the DoubleLock convertible kit. The kit is available for the DL800 vise. DLC800-KIT



OPTIONAL CONVERTIBLE KIT – JAW POSITIONS



DLH800 Features:

- Repeatable clamping (0.0002") for high accuracy machining and handles a higher horsepower cut than the manual version.
- Compact design features a wide range of clamping forces up to 9,450 lbs. 1/4" stroke - 1/8" per side.
- Productivity – multiple part workholding for better spindle utilization, reduced tool change time, and reduced machine travel from part to part.
- Durability – 80,000-PSI ductile iron body and steel components provide strength, rigidity and long term accuracy while absorbing machining vibration.

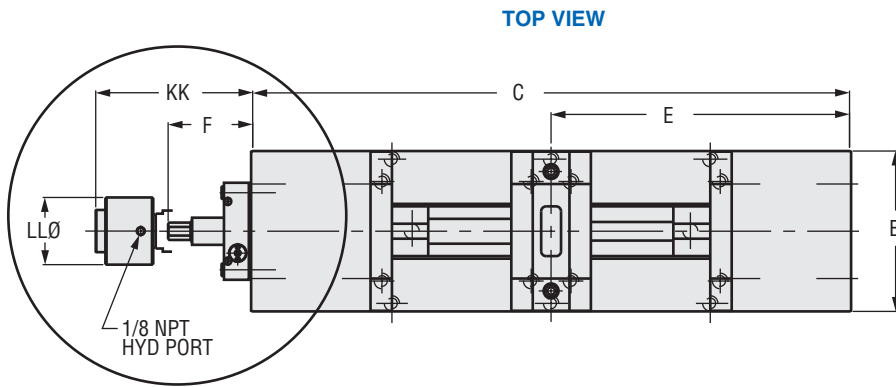
OPTIONAL CONVERTIBLE KIT - JAW OPENING POSITIONS									
Part #	A	B	C	D	E	F	G	H	Ship Wt. Lbs
DLC800 - KIT	16.000	12.000	23.000	17.000	19.000	13.000	18.000	14.000	20



KHP5000PF Pneumatic/
Hydraulic Pump, p.72



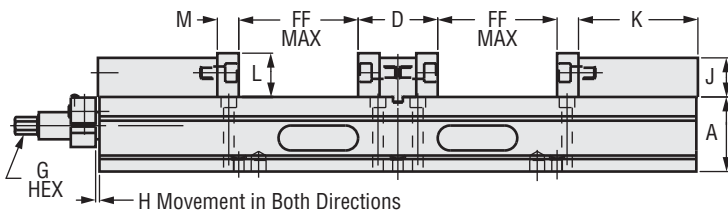
KHP5000 Hydraulic
Pump, p.73



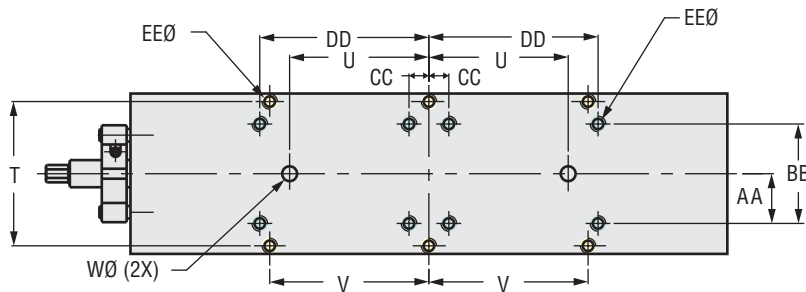
VISE CLAMPING FORCE-LBS	
Manual torque Ft.-lbs.	DL800
10	-
20	2,023
30	-
40	3,578
50	-
60	5,136
70	-
80	6,883
100	8,997

VISE CLAMPING FORCE-LBS.	
Hydraulic PSI Max.	DLH800
400	1,575
800	3,150
1,200	4,725
1,600	6,300
2,000	7,875
2,400	9,450

SIDE VIEW

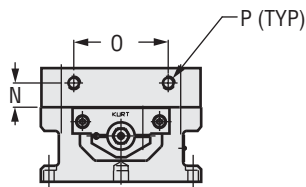


BOTTOM VIEW
(Mounting hole pattern is designated by color code)

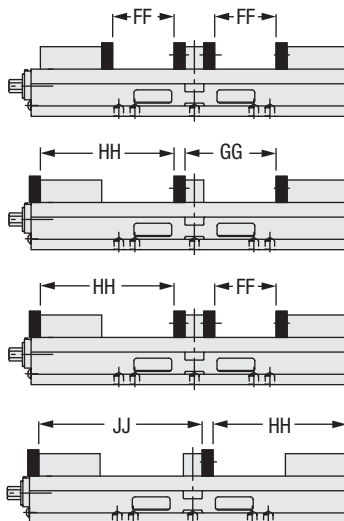


DIMENSIONAL DATA		
	DL800	DLH800
A	3.750	3.750
B	8.060	8.060
C	30.000	30.000
D	4.000	4.000
E	15.000	15.000
F	4.250	-
G	3/4	-
H	0.190	0.190
J	1.965	1.965
K	6.000	6.000
L	2.200	2.200
M	1.075	1.075
N	1.220	1.220
O	4.750	4.750
P	5/8-11	5/8-11
Q	0.750	0.750
R	2.375	2.375
S	1/2-13	1/2-13
S1	5/8-11	5/8-11
T	7.250	7.250
U	7.000	7.000
V	8.000	8.000
W	0.750	0.750
AA	2.500	2.500
BB	5.000	5.000
CC	1.000	1.000
DD	8.500	8.500
EE	1/2	1/2
FF	6.000	6.000
GG	8.925	8.925
HH	13.075	13.075
JJ	16.000	16.000
KK	-	6.49
Ship wt	250	360
Hyd Displacement cu. In.	-	2.36

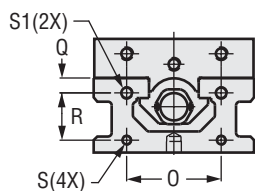
FRONT VIEW



JAW POSITIONS



REAR VIEW





CLUSTERLOCK CLUSTER TOWER®

Model:
CT2DC4B

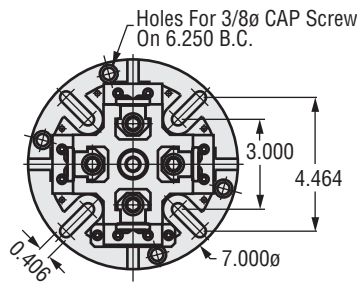


Features:

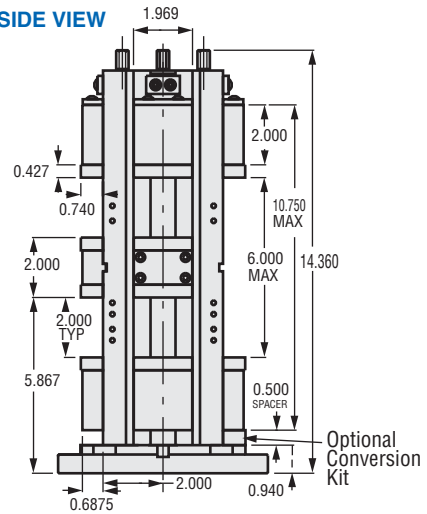
- Made from ductile iron and steel, a stiffness of 2.5 times aluminum is achieved. Vibration damping of ductile iron is 20 times higher than aluminum. Includes hardened bed and jaws.
- Four double vises with 50mm (1.968") wide jaw and 50mm (2") opening.
- Pilot (0.8768") in both ends. Four and six bolt mounting hole pattern fits all indexers. Has 60° center in outboard end.
- Convertible to single station large opening vise.
- Options include machinable jaws, tail support, workstops, and conversion kit.
- Chip guards included.
- 45 lbs.

CT2DC4B CLUSTER TOWER DOUBLE MANUAL VISE CLAMPING FORCE	
Torque- Ft. Lbs.	lbs.
9	1,000
14	1,500
19	2,000
25	3,000
Maximum Force	3,000

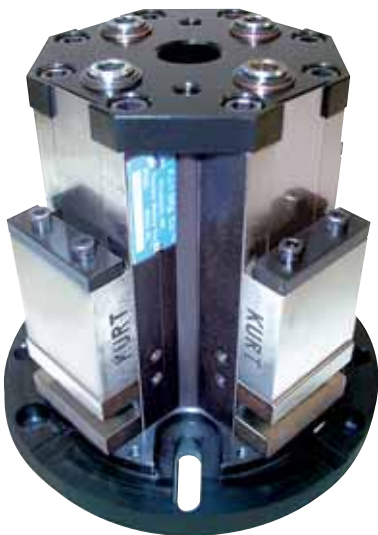
TOP VIEW



SIDE VIEW



Model:
CT2SH4A

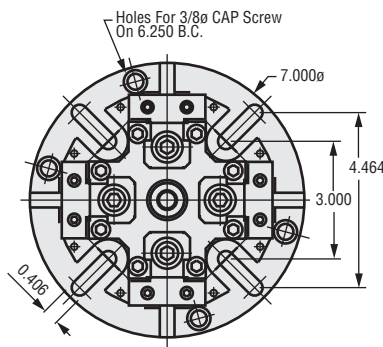


Features:

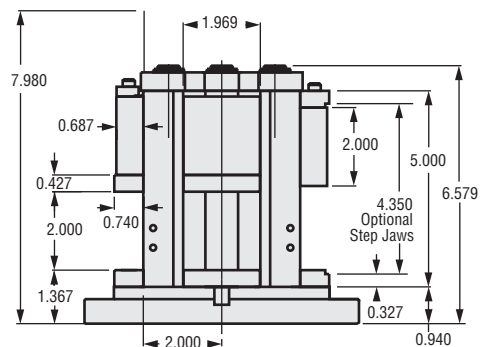
- Made from ductile iron and steel, a stiffness of 2.5 times aluminum is achieved. Vibration damping of ductile iron is 20 times higher than aluminum. Includes hardened bed and jaws.
- Four single vises with 50mm (1.968") jaws and 50mm (2") opening.
- Pilot (0.8768") in both ends. Four and six bolt mounting hole pattern fits all indexers. Has 60° center in outboard end.
- Options include machinable jaws, tail support, workstops.
- Does not require tail support.
- Chip guards included.
- Internal hex screw standard.
- 25 lbs.

CT2SH4A CLUSTER TOWER SINGLE MANUAL VISE CLAMPING FORCE	
Torque- Ft. Lbs.	lbs.
10	1,000
15	1,500
20	2,000
25	3,000
Maximum Force	3,000

TOP VIEW



SIDE VIEW



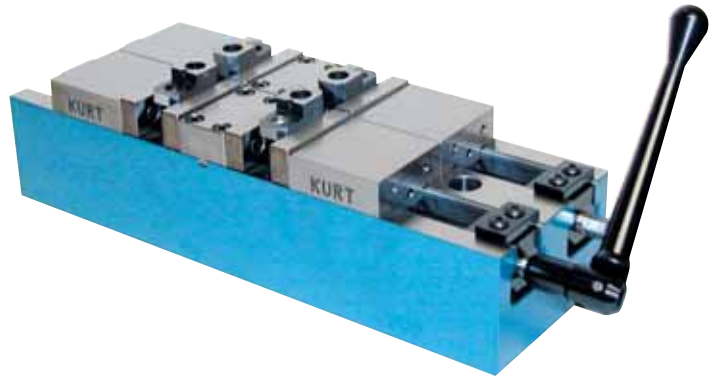
CLUSTERLOCK

Model:
CL2D2-2A

ClusterLock is a precision double vise, configured from 1 to 10 units in a common base. By using the famous AngLock principle assures that the movable jaw will not lift.

Features:

- 80,000-PSI ductile iron construction.
- Hardened bed ways and hardened steel jaw plates.
- Standard spacing is 1.968" (50mm). Consult the factory for other spacing.
- Vise bed surface is ground parallel to within 0.001".
- Ideal for small VMC's with pallet changers.
- Suitable for tombstone mounting on HMC's.
- Can be converted to single opening (6" maximum) with the optional convertible kit.

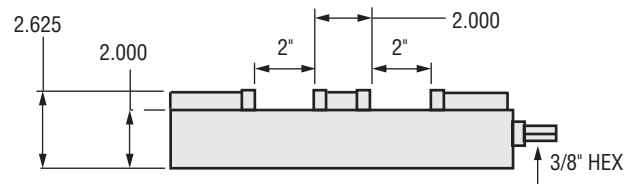


Part #	Ship Wt. Lbs.
CL2D1-2A	12
CL2D2-2A	24
CL2D4-2A	48
CL2D6-2A	72
CL2D8-2A	96
CL2D10-2A	120

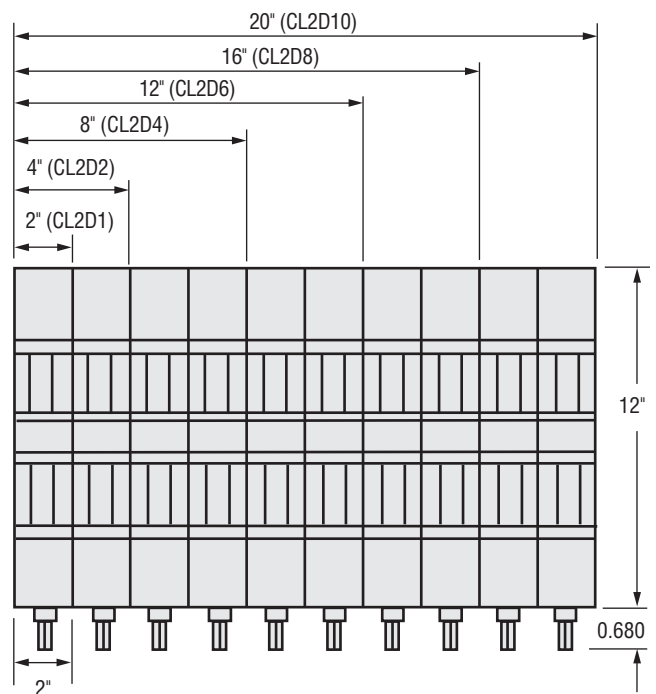
CLUSTERLOCK MANUAL VISE CLAMPING FORCE	
Torque- Ft. Lbs.	lbs.
9	1,000
14	1,500
19	2,000
25	3,000



TOP VIEW



SIDE VIEW





SERALOCK® FOUNDATIONS

SeraLock Tower Options

The SeraLock Towers, SeraLock Pallets, WedgeLock Module system and MoveLock Modular System are the latest innovation for achieving high density, highly repeatable part clamping.

SeraLock Towers and SeraLock Pallets are designed with interlocking "V" shaped serrated surfaces for precise and repeatable alignment of WedgeLock and MoveLock clamping modules.



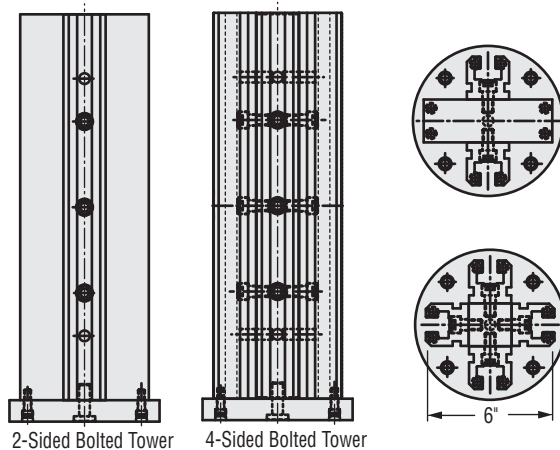
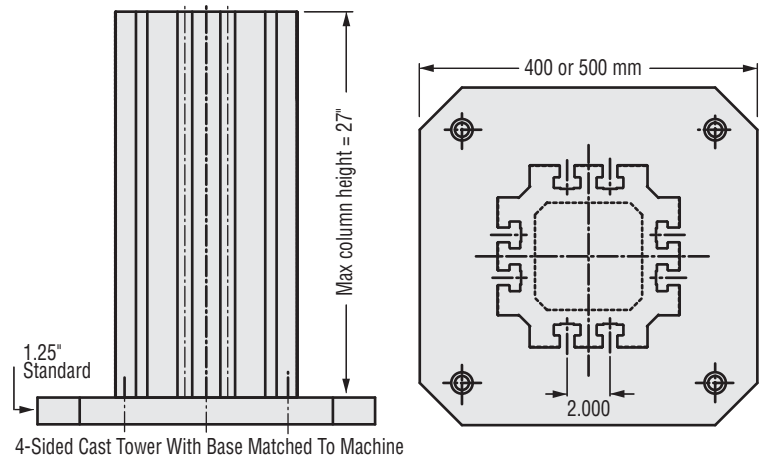
SeraLock Towers are available in four sided, two sided and single sided towers with a base that will mount to your HMC or an indexer for VMC applications. SeraLock pallets are available in sizes that will accommodate most vertical machining centers. A custom, high density workholding system can be configured quickly when our WedgeLock modular system of single and double sided clamping jaws are used with the SeraLock Tower or SeraLock Pallet.

SeraLock features:

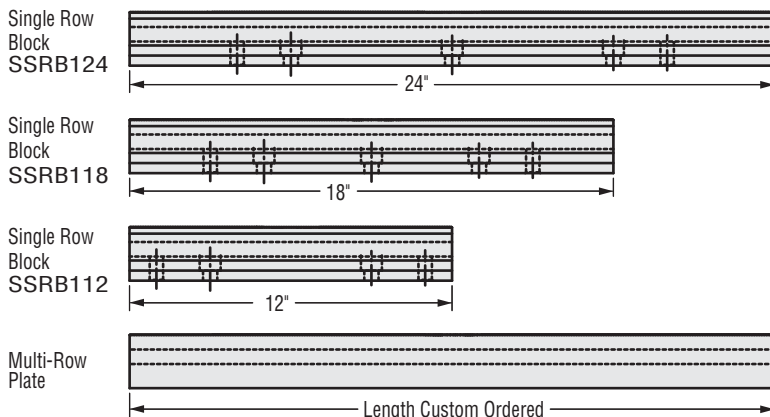
- Self-aligning.
- Multiple components may be used at the same time.
- Like and unlike workpieces may be machined all in the same setup.
- Mix and match components.
- Allows creation of the equivalent of a custom fixture in less time than the custom fixture can be designed.
- Modular components can be used over and over again.
- Very economical.



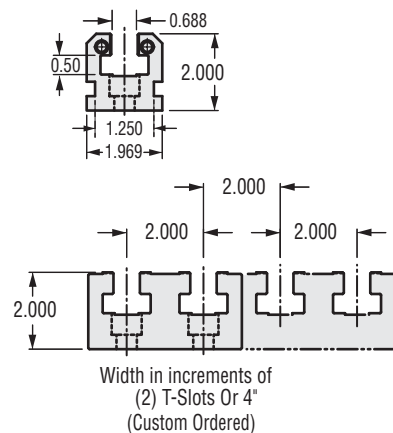
Tower & Base Options



Pallet length options



Pallet T-slot options

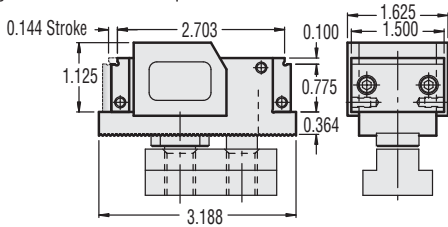


WEDGELock CLAMPING MODULES

WedgeLock Clamping Options

SINGLE CLAMP WITH STATIONARY JAW

Contains stationary jaw on one side and movable jaw on back side. Provides 5,000 lbs. clamping force at 70 ft. lbs. torque.

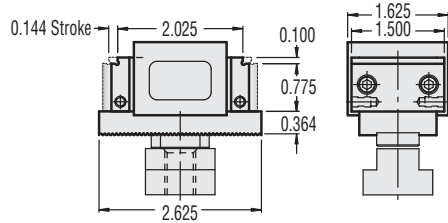


SWSC1



DOUBLE CLAMP

Contains two movable jaws. Used with stationary block to become a high density workholding solution. Clamp two parts with one screw. Provides 5,000 lbs. clamping force at 70 ft. lbs. torque.

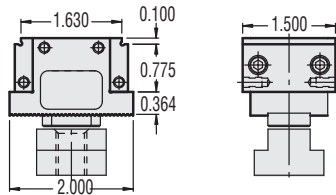


SWDC1



STATIONARY BLOCK

Used with single or double clamp.

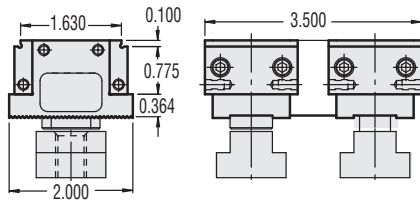


SWSB1



DOUBLE STATIONARY BLOCK

Use when double clamps are used side by side.

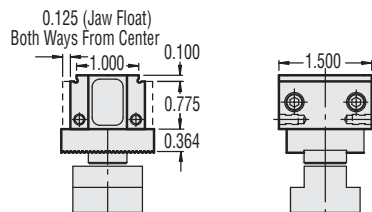


SWDSB1



DIVIDER JAW

Use in between movable and stationary jaw when milling several identical parts. Jaw floats to accommodate slight part difference. Allows several parts to be clamped with one movable jaw.

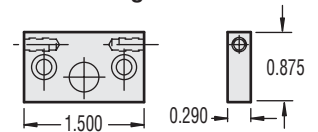


SWDJ1

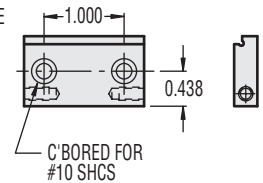


Jaw Plates Standard Length

Flat Jaw Plate
W/MAGNET
SW1-7-SAMAG



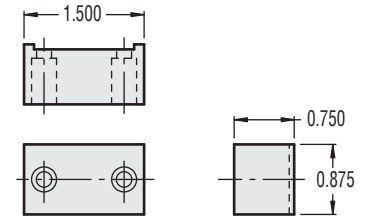
STEPPED/REVERSIBLE
Stepped/Reversible
Jaw Plate
SW1-32



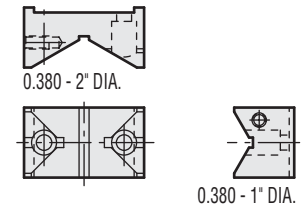
Serrated Jaw Plate
W/Magnet
SW1-47-SAMAG



Carvable/Reversible
Aluminum Jaw Plate
SW1-317



"V" Jaw Plate
SW1-237

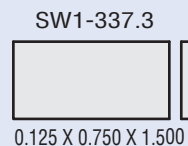
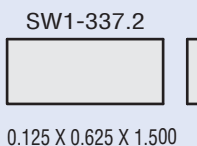
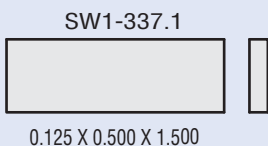


CLAMPING FORCE	
Ft. Lbs.	Lbs. Force
5	550
10	870
20	1,590
30	2,300
40	3,000

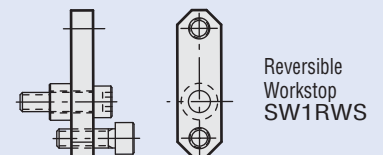


MoveLock System
SEE PAGE 48

PARALLELS STANDARD LENGTH



WORKSTOPS





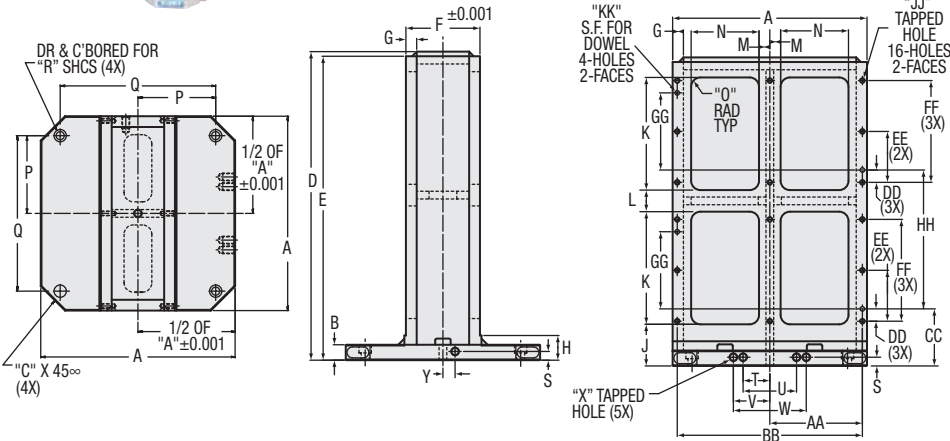
MODULAR TOOLBOX

2 Face and 4 Face Modular Toolbox, Sub-Plates



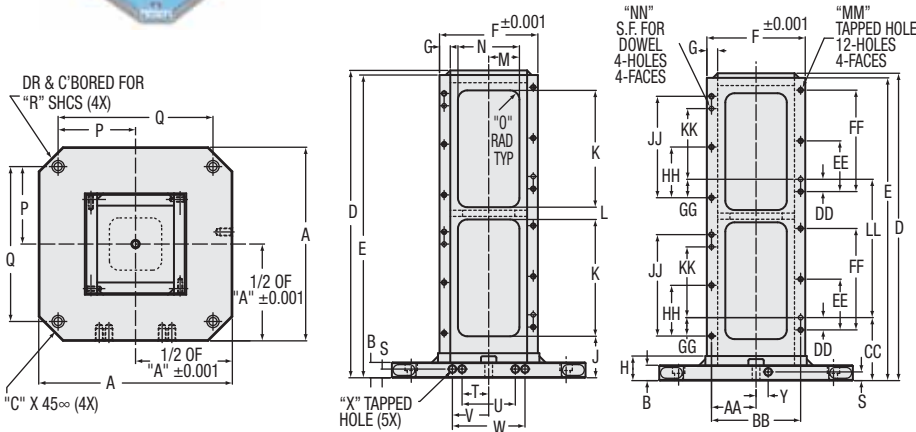
2 Face Modular Toolbox

Here's a new lighter weight building block module to add high density and versatility to most model horizontal machining centers. It is over 30% lighter than comparable size tombstones with aluminum sub-plates. Provides a lower cost alternative to dedicated fixtures. Features bolt holes and dowel pattern on each face for fast installation and removal of sub-plates and other workholding components. Class 30 Grey Iron.



4 Face Modular Toolbox

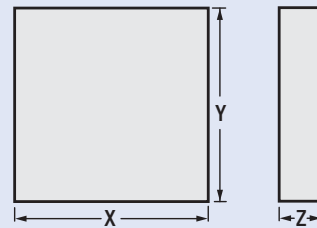
This 4 sided tombstone is another lower cost option over dedicated fixtures. It is over 30% lighter than comparable size tombstones with aluminum sub-plates and is designed to reduce setup time. Provides versatility for mounting manual and hydraulic vises and most clamping devices. Standard and custom sub-plates are also available. Class 30 Grey Iron.



	2-SIDED TOMBSTONE CAGE DIMENSIONAL DATA		4-SIDED TOMBSTONE CAGE DIMENSIONAL DATA	
	TC2C40616	TC2C50820	TC4C40808	TC4C51010
A	400mm	500mm	400mm	500mm
B	1.250	1.250	1.250	1.250
C	1.970	2.360	1.970	2.360
D	25.000	28.000	25.000	28.000
E	24.625	27.625	24.625	27.625
F	6.000	8.000	8.000	10.000
G	0.875	0.875	0.875	0.875
H	2.000	2.000	2.000	2.000
J	3.375	3.375	3.375	3.375
K	9.125	10.500	9.500	10.625
L	1.750	2.000	1.000	1.750
M	0.875	1.000	2.500	3.375
N	5.500	7.125	5.000	6.750
O	0.750	0.750	0.750	0.750
P	6.299	7.874	6.299	7.874
Q	12.598	15.748	12.598	15.748
R	5/8	5/8	5/8	5/8
S	0.709	0.709	0.709	0.709
T	2.165	2.165	2.165	2.165
U	4.330	4.330	4.330	4.330
V	2.953	2.953	2.953	2.953
W	5.906	5.906	5.906	5.906
X	5/8-11NC x 1" DP	5/8-11NC x 1" DP	5/8-11NC x 1" DP	5/8-11NC x 1" DP
Y	0.984	0.984	0.984	0.984
AA	7.500	9.4375	3.625	4.625
BB	15.000	18.875	7.250	9.250
CC	4.625	4.625	5.125	5.125
DD	1.000	1.000	1.000	1.000
EE	4.125	4.625	4.125	4.625
FF	8.250	9.250	8.250	9.250
GG	6.250	7.250	1.500	1.500
HH	11.250	12.750	4.125	4.625
JJ	3/8-16NC x 0.88 DP	3/8-16NC x 0.88 DP	8.250	9.250
KK	0.375ø x 0.75 DP	0.375ø x 0.75 DP	5.750	6.750
LL	-	-	11.250	12.750
MM	-	-	3/8-16NC x 0.88 DP	3/8-16NC x 0.88 DP
NN	-	-	0.375ø x 0.75 DP	0.375ø x 0.75 DP
Wt. Lbs.	326	546	245	361
Wt. Kgs.	148	248	112	164

Sub-Plates

- Kurt offers a variety of standard Toolbox sub-plates for your application.
- Please specify A36 HRS or 6061 T6 Aluminum.
- You may specify optional hole patterns and/or keyways.
- All Kurt Toolbox sub-plates are rotary ground to ±0.001" thick.
- All Kurt Toolbox sub-plates are doweled and bolted to the Kurt Modular Toolbox allowing the quickest change possible for dedicated fixtures with 0.0002" repeatability.
- You can permanently mount Kurt vises to the Toolbox sub-plates for fast, easy set-up changes on milling machines.



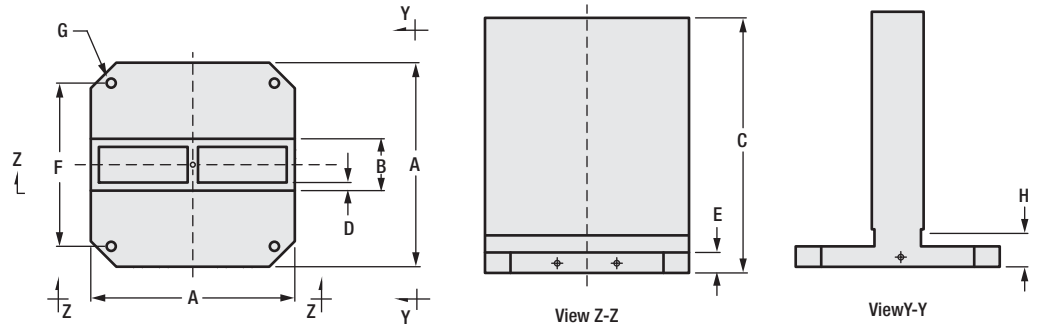
MODEL	TC2C40616	TC2C50820	TC4C40808	TC4C51010
X	15.700	19.600	8.000	10.000
Y	23.700	26.700	23.700	26.700
Z	0.940	0.940	0.940	0.940

Note: Outside dimensions of A36 steel or 6061 T6 aluminum plates are cut dimensions.



2 Face ToolBlox

The Kurt 2 face ToolBlox is ideal for mounting vises. Sub-plates may be bolted and doweled on either side for quick, easy set-up. All vises or collet chucks may be mounted directly on Kurt ToolBlox faces. Made of Class-35 cast iron. Consult our factory for other sizes.



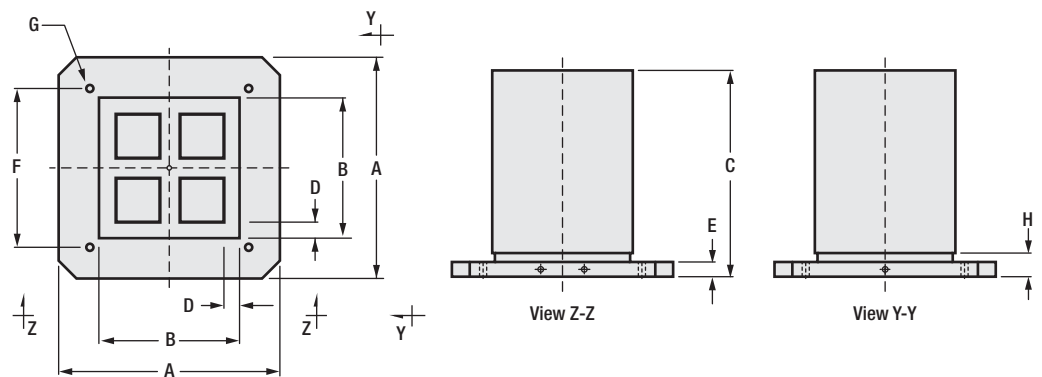
MODEL	A	B	C	D	E	F	G	H	Est. Wt Kgs/Lbs.	Surface Datum A Base Flatness	Face Perp. to Base	Edge Locator Perp	Face Dimension	Face Locator to Edge Parallelism
TB2C40616	400mm X 400mm	6	26	1.500	1.500	320mm	5/8" or M16	2.250	234.1 / 516	0.001	0.003	0.0015	6.000 ±0.002	0.001
TB2C50820	500mm X 500mm	8	34	1.500	1.750	400mm	5/8" or M16	2.500	411.9 / 908	0.001	0.003	0.0015	8.000 ±0.002	0.001
TB2C60825	630mm X 630mm	8	38	2.000	2.000	500mm	5/8" or M16	2.750	662.7 / 1461	0.001	0.003	0.0015	8.000 ±0.002	0.001

Note: ToolBlox can be cut down to any height.



4 Face ToolBlox

The Kurt 4 face ToolBlox is ideal for mounting vises of any size. Made of Class-35 cast iron. Consult our factory for other available sizes.



MODEL	A	B	C	D	E	F	G	H	Est. Wt Kgs/Lbs.	Surface Datum A Base Flatness	Face Perp. to Base	Edge Locator Perp	Face Dimension	Face Locator to Edge Parallelism
TB4C40606	400mm X 400mm	6	26	1.500	1.500	320mm	5/8" or M16	2.250	127.9 / 282	0.001	0.003	0.0015	6.000 ±0.002	0.002
TB4C40808	400mm X 400mm	8	26	1.500	1.500	320mm	5/8" or M16	2.250	162.8 / 359	0.001	0.003	0.0015	8.000 ±0.002	0.002
TB4C41010	400mm X 400mm	10	26	1.500	1.500	320mm	5/8" or M16	2.250	197.8 / 436	0.001	0.003	0.0015	10.000 ±0.002	0.002
TB4C50808	500mm X 500mm	8	34	1.500	1.750	400mm	5/8" or M16	2.500	236.8 / 522	0.001	0.003	0.0015	8.000 ±0.002	0.002
TB4C51010	500mm X 500mm	10	34	1.500	1.750	400mm	5/8" or M16	2.500	284.0 / 626	0.001	0.003	0.0015	10.000 ±0.002	0.002
TB4C51212	500mm X 500mm	12	34	1.500	1.750	400mm	5/8" or M16	2.500	333.0 / 734	0.001	0.003	0.0015	12.000 ±0.002	0.002
TB4C51414	500mm X 500mm	14	34	1.500	1.750	400mm	5/8" or M16	2.500	440.0 / 970	0.001	0.003	0.0015	14.000 ±0.002	0.002
TB4C61010	630mm X 630mm	10	38	1.500	2.000	500mm	5/8" or M16	2.750	368.3 / 812	0.001	0.003	0.0015	10.000 ±0.002	0.002
TB4C61818	630mm X 630mm	18	38	2.000	2.000	500mm	5/8" or M16	2.750	778.0 / 1715	0.001	0.003	0.0015	18.000 ±0.002	0.002

Note: ToolBlox can be cut down to any height.



VERSATILELOCK[®] VISES

Standard (3600) and Short (3620)

PATENTED

Models:
Manual
Hydraulic
Air



3600V
3600VM - (Metric)



3600H - Standard Hydraulic



3600A - Standard Air

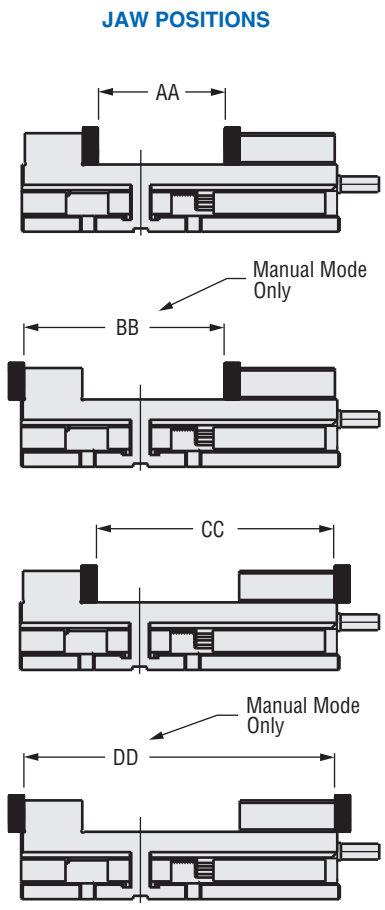
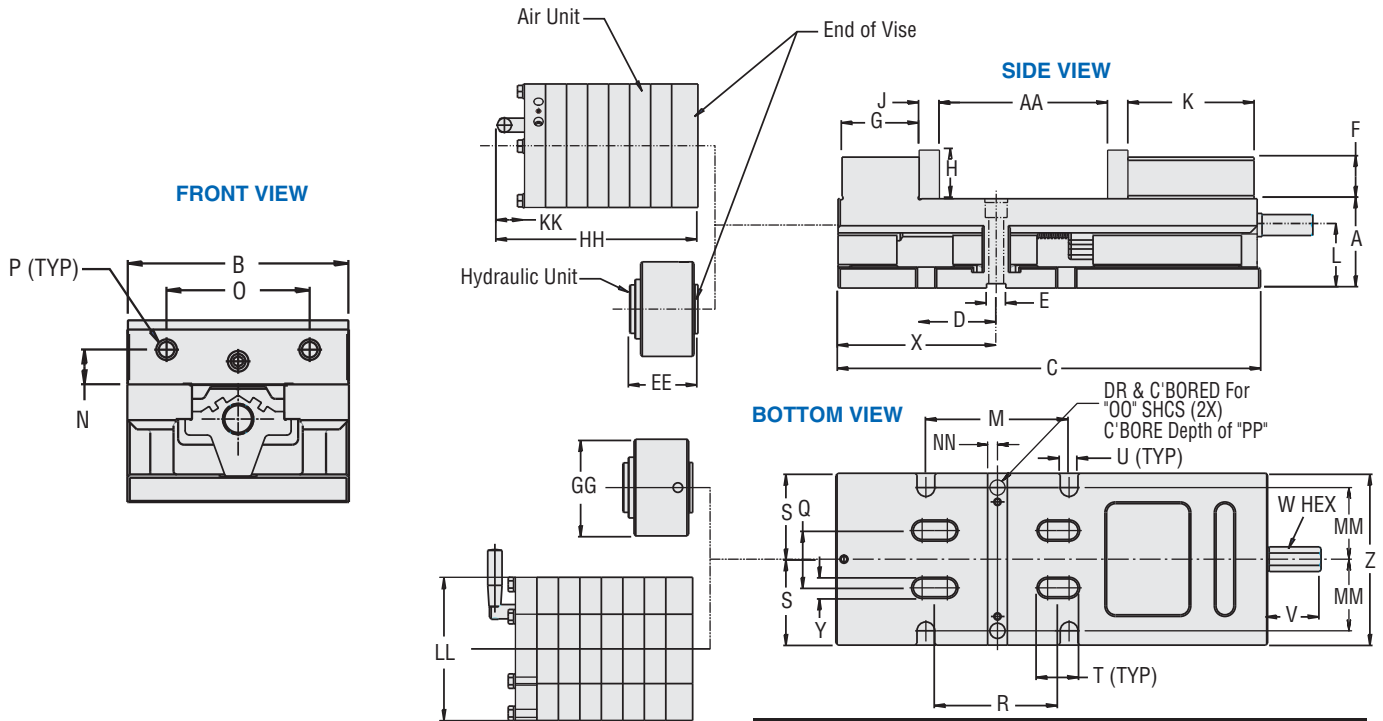
The VersatileLock vise is the industry's ultimate single station CNC vise. It offers ultra-precision function through these important design features: The original, time proven Kurt AngLock design prevents parts from lifting upward under heavy clamping loads. The "pull-type" jaw clamping reduces jaw stationary deflection by at least 80%. The one piece vise body and stationary jaw provide greater strength while reducing weight.

Features:

- Can be mounted upright or on either side.
- Matched stationary jaw to keyway including the body height ± 0.001 ".
- 0.0005" clamping repeatability.
- Footprint on the short version is 13". Ideal for the smallest machines.
- Hydraulic option is available. See pages 72-73 for KHP5000 hydraulic pumps.
- All air and hydraulic units feature a 1/4" vise stroke.
- Air vise has a precise and repeatable "gentle touch" for delicate parts.
- Optional internal hex available for 3600V only. (3600V-INT).



The 3600V shown mounted "back to back". Makes a fast, easy and economical vise tombstone. Bases can be tailored for most HMC's. See Page 47



VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	3600V	3620V
10	653	653
20	1,743	1743
30	2,234	2,234
40	3,015	3,015
50	3,833	3,833
60	4,438	4,438
70	5,528	5,528
80	6,356	6,356

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	3600H	3620H
400	1,575	1,575
800	3,150	3,150
1200	4,725	4,725
1600	6,300	6,300
2000	7,875	7,875
2400	9,450	9,450
2800	11,025	11,025
3200	12,600	12,600
Hydraulic Displacement cu. In.	1.18	1.18

VISE CLAMPING FORCE-LBS.		
Air PSI	Air	
	3600A	3620A
10	320	320
20	840	840
30	1,280	1,280
40	1,780	1,780
50	2,200	2,200
60	2,720	2,720
70	3,240	3,240
80	3,800	3,800
90	4,380	4,380
100	5,000	5,000

	DIMENSIONAL DATA							
	Manual		Hydraulic			Air		
	3600V	3600VM	3620V	3600H	3620H	3600A	3620A	
	Inch	MM	Inch	Inch	Inch	Inch	Inch	
A	3.187	80.949	3.187	3.187	3.187	3.187	3.187	
B	6.000	152.400	6.000	6.000	6.000	6.000	6.000	
C	15.060	382.524	12.940	15.060	12.940	15.060	12.940	
D	2.750	69.850	2.750	2.750	2.750	2.750	2.750	
E	0.688	17.475	0.688	0.688	0.688	0.688	0.688	
F	1.485	37.719	1.485	1.485	1.485	1.485	1.485	
G	2.750	69.850	2.750	2.750	2.750	2.750	2.750	
H	1.735	44.069	1.735	1.735	1.735	1.735	1.735	
J	0.725	18.415	0.725	0.725	0.725	0.725	0.725	
K	4.500	114.300	4.500	4.500	4.500	4.500	4.500	
L	2.250	57.150	2.250	2.250	2.250	2.250	2.250	
M	5.000	127.000	5.000	5.000	5.000	5.000	5.000	
N	0.937	23.800	0.937	0.937	0.937	0.937	0.937	
O	3.875	98.425	3.875	3.875	3.875	3.875	3.875	
P	1/2-13	M12 X 25	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13	
Q	2.000	50.800	2.000	2.000	2.000	2.000	2.000	
R	4.250	107.950	4.250	4.250	4.250	4.250	4.250	
S	3.000	76.200	3.000	3.000	3.000	3.000	3.000	
T	1.380	35.025	1.380	1.380	1.380	1.380	1.380	
U	0.630	16.002	0.630	0.630	0.630	0.630	0.630	
V	1.940	49.276	1.940	1.940	1.940	1.940	1.940	
W	3/4	19.050	3/4	3/4	3/4	3/4	3/4	
X	5.640	143.256	5.640	5.640	5.640	5.640	5.640	
Y	0.630	16.002	0.630	0.630	0.630	0.630	0.630	
Z	6.000	152.400	6.000	6.000	6.000	6.000	6.000	
AA	6.000	152.400	4.000	6.000	4.000	6.000	4.000	
BB	9.500	241.300	7.500	-	-	-	-	
CC	11.250	285.750	9.250	11.250	9.250	11.250	9.250	
DD	14.750	-	12.750	-	-	-	-	
EE	-	-	-	2.410	2.410	-	-	
GG	-	-	-	3.375	3.375	-	-	
HH	-	-	-	-	-	7.220	7.220	
KK	-	-	-	-	-	1.030	1.030	
LL	-	-	-	-	-	5.000	5.000	
MM	2.500	374.650	2.500	2.500	2.500	2.500	2.500	
NN	0.344	63.500	0.344	0.344	0.344	0.344	0.344	
OO	1/2	M12	1/2	1/2	1/2	1/2	1/2	
PP	0.671	17.043	0.671	0.671	0.671	0.671	0.671	
Est Ship Wt. Lbs. (Kgs)	69	(32)	64	74	69	75	70	

Repair Kits

MODEL	REPAIR KIT
3600V	*3600V-KIT

* = Same as Metric Vise



Models:
Manual
Hydraulic
Air



3610V

Use the VersatileLock in this configuration for the added benefit of easier part programming in "Y axis" positive direction. It also reduces the "reach-over" distance making part loading safer and easier for the operator.

Features:

- Can be mounted upright or on either side.
- Matched stationary jaw to the keyway including the body height ± 0.001 ".
- 0.0005" clamping repeatability.
- Footprint on the short version is 13". Ideal for the smallest machines.
- All air and hydraulic units feature a 1/4" vise stroke.
- Air vise has a precise and repeatable "gentle touch" for delicate parts.
- Some models available in metric.



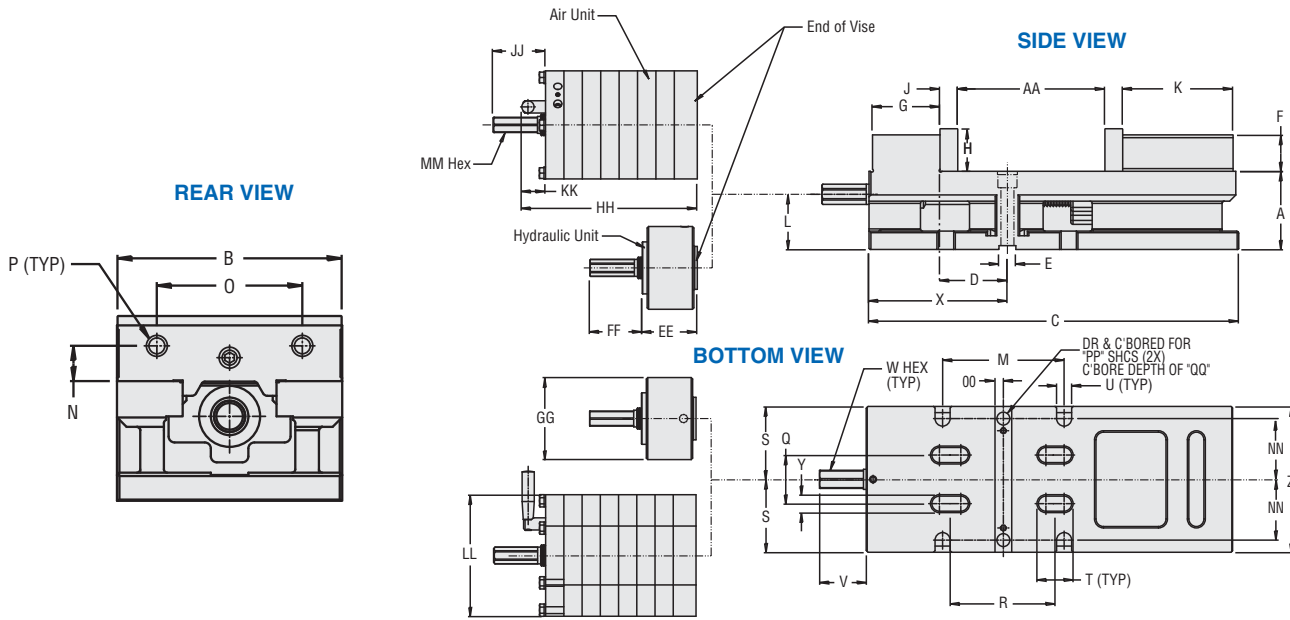
KHP5000 Hydraulic Pump, p.73



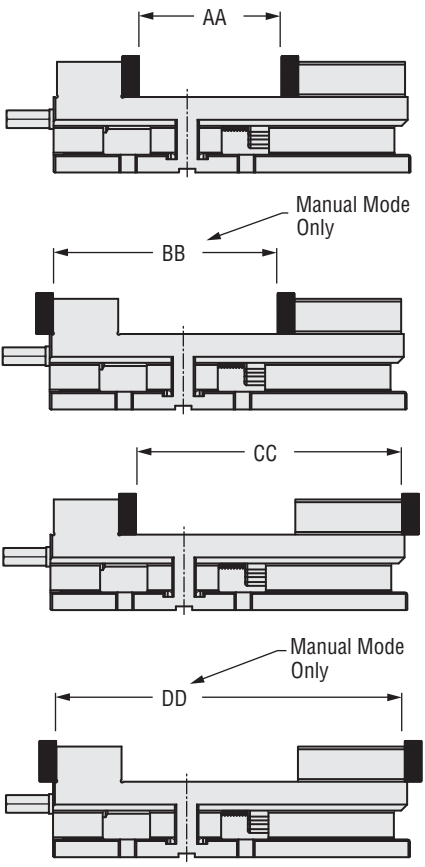
KHP5000PF Pneumatic/Hydraulic Pump, p.72



KHP5000PH Pneumatic/Hydraulic Pump, p.72



JAW POSITIONS



VISE CLAMPING FORCE-LBS.		
Manual torque Ft.-Lbs.	Manual	
	3610V	3630V
10	653	653
20	1,743	1,743
30	2,234	2,234
40	3,015	3,015
50	3,833	3,833
60	4,438	4,438
70	5,528	5,528
80	6,356	6,356

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	3610H	3630H
400	1,575	1,575
800	3,150	3,150
1,200	4,725	4,725
1,600	6,300	6,300
2,000	7,875	7,875
2,400	9,450	9,450
2,800	11,025	11,025
3,200	12,600	12,600
Hydraulic Displacement cu. In	1.18	1.18

VISE CLAMPING FORCE-LBS.		
Air PSI	Air	
	3610A	3630A
10	320	320
20	840	840
30	1,280	1,280
40	1,780	1,780
50	2,200	2,200
60	2,720	2,720
70	3,240	3,240
80	3,800	3,800
90	4,380	4,380
100	5,000	5,000

	Manual		Hydraulic		Air	
	3610V	3630V	3610H	3630H	3610A	3630A
A	3.187	3.187	3.187	3.187	3.187	3.187
B	6.000	6.000	6.000	6.000	6.000	6.000
C	15.060	12.940	15.060	12.940	15.060	12.940
D	2.750	2.750	2.750	2.750	2.750	2.750
E	0.688	0.688	0.688	0.688	0.688	0.688
F	1.485	1.485	1.485	1.485	1.485	1.485
G	2.750	2.750	2.750	2.750	2.750	2.750
H	1.735	1.735	1.735	1.735	1.735	1.735
J	0.725	0.725	0.725	0.725	0.725	0.725
K	4.500	4.500	4.500	4.500	4.500	4.500
L	2.250	2.250	2.250	2.250	2.250	2.250
M	5.000	5.000	5.000	5.000	5.000	5.000
N	0.937	0.937	0.937	0.937	0.937	0.937
O	3.875	3.875	3.875	3.875	3.875	3.875
P	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13
Q	2.000	2.000	2.000	2.000	2.000	2.000
R	4.250	4.250	4.250	4.250	4.250	4.250
S	3.000	3.000	3.000	3.000	3.000	3.000
T	1.380	1.380	1.380	1.380	1.380	1.380
U	0.630	0.630	0.630	0.630	0.630	0.630
V	1.940	1.940	1.940	1.940	1.940	1.940
W	3/4	3/4	3/4	3/4	-	-
X	5.640	5.640	5.640	5.640	5.640	5.640
Y	0.630	0.630	0.630	0.630	0.630	0.630
Z	6.000	6.000	6.000	6.000	6.000	6.000
AA	6.000	4.000	6.000	4.000	6.000	4.000
BB	9.500	7.500	-	-	-	-
CC	11.250	9.250	11.250	9.250	11.250	9.250
DD	14.750	12.750	-	-	-	-
EE	-	-	2.410	2.410	-	-
FF	-	-	1.940	1.940	-	-
GG	-	-	3.375	3.375	-	-
HH	-	-	-	-	7.220	7.220
JJ	-	-	-	-	2.100	2.100
KK	-	-	-	-	1.030	1.030
LL	-	-	-	-	5.000	5.000
MM	-	-	-	-	5/8	5/8
NN	2.500	2.500	2.500	2.500	2.500	2.500
OO	0.344	0.344	0.344	0.344	0.344	0.344
PP	1/2	1/2	1/2	1/2	1/2	1/2
QQ	0.671	0.671	0.671	0.671	0.671	0.671
Ship Wt. Lbs.	68	64	73	68	74	69



VERSATILELOCK[®] VISES

Manual (3400V) and Hydraulic (3400H)

NEW

Models: 3400V and 3400H

The VersatileLock vise is the industry's ultimate single station CNC vise. It offers ultra-precision function through these important design features: The original, time proven Kurt AngLock design prevents parts from lifting upward under heavy clamping loads. The "pull-type" jaw clamping reduces stationary jaw deflection by at least 80%. The one piece vise body and stationary jaw provide greater strength while reducing weight.

Features:

- Full 6" Opening.
- Can be mounted upright (3400V) or on either side.
- Matched stationary jaw to keyway including the body height ± 0.001 ".
- 0.0005" clamping repeatability.
- Footprint is less than 13". Ideal for the smallest machines.
- All hydraulic units feature a 1/4" vise stroke.
- Groove Lock workstop included.
- Ship weight: 3400V (28lbs.)/ 3400H (31lbs.)

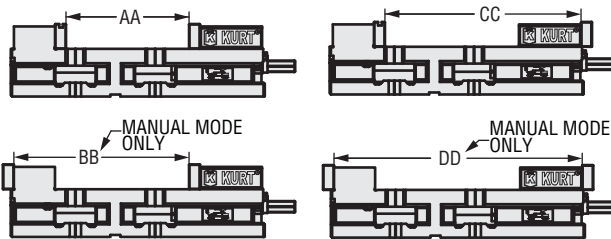
Model: 3400H



Model: 3400V



JAW POSITION



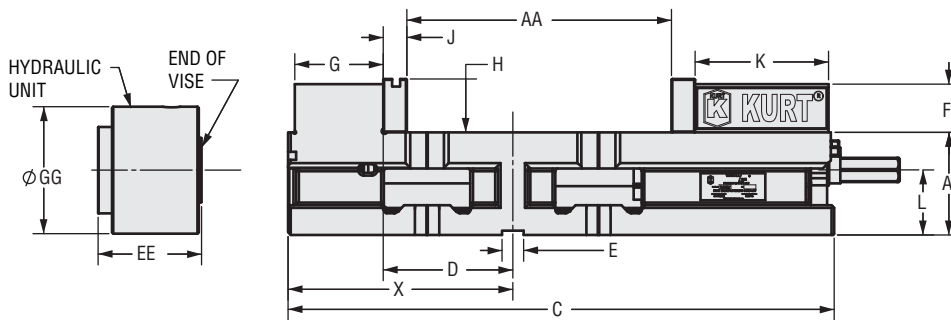
CLAMPING FORCE LBS.	
Torque Ft/Lbs	3400V
10	1,050
20	2,195
30	3,485
40	4,675
50	6,245
60	7,500

CLAMPING FORCE LBS.	
Hydraulic Pressure (Lbs)	3400H
500	350
1,000	1,600
1,500	3,000
2,000	4,300
2,500	5,700
3,000	7,200
3,200	7,800

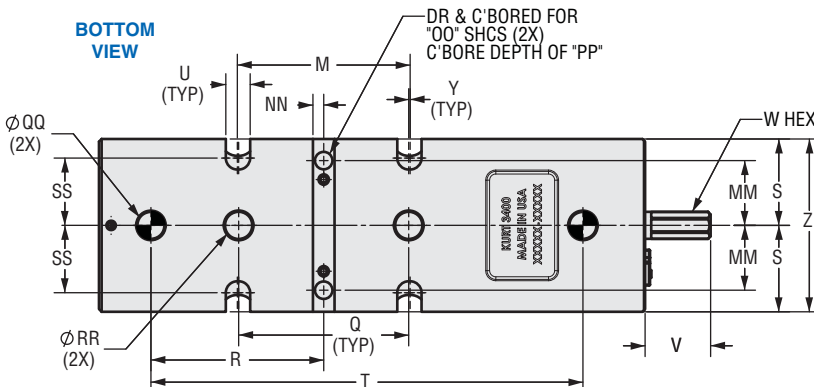
DIMENSIONAL DATA

	3400V/H
A	2.375
B	4.000
C	12.644
D	3.000
E	0.5005
F	1.115
G	2.047
H	1.235
J	0.547
K	3.090
L	1.505
M	4.000
N	0.687
O	2.500
P	3/8-16*
Q	100 MM
R	4.000
S	2.000
T	10.000
U	0.563
V	1.516
W	9/16*
X	5.203
Y	0.031
Z	4.000
AA	6.000
BB	8.594
CC	9.637
DD	12.231
EE	2.580
FF	-
GG	2.937
MM	1.500
NN	0.2503
OO	3/8*
PP	0.541
QQ	0.6253
RR	M16
SS	1.558

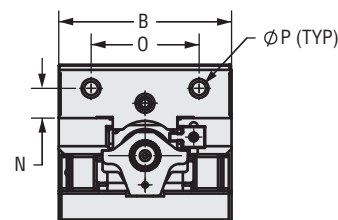
SIDE VIEW



BOTTOM VIEW



END VIEW

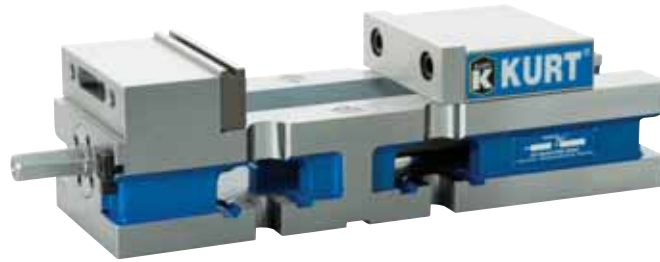


Models: 3410V and 3410H

Use the VersatileLock in this configuration for the added benefit of easier part programming in "Y axis" positive direction. It also reduces the "reach-over" distance making part loading safer and easier for the operator.

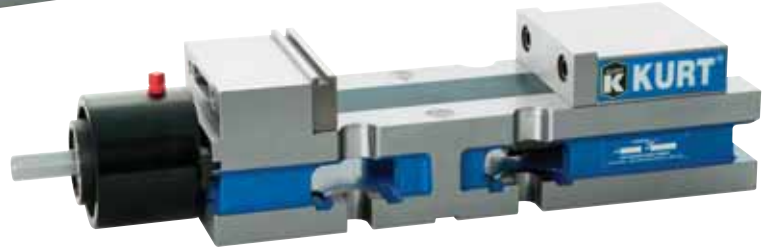
Features:

- Full 6" Opening.
- Can be mounted upright or on either side.
- Matched stationary jaw to the keyway including the body height ± 0.001 ".
- 0.0005" clamping repeatability.
- Footprint is less than 13".
Ideal for the smallest machines.
- All hydraulic units feature a 1/4" vise stroke.
- Groove Lock workstop included.
- Ship weight: 3410V (28lbs.)/ 3410H (31lbs.)

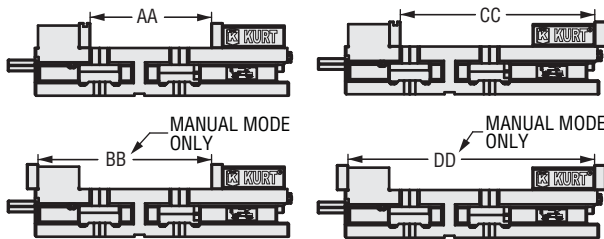


Model: 3410V

Model: 3410H



JAW POSITION

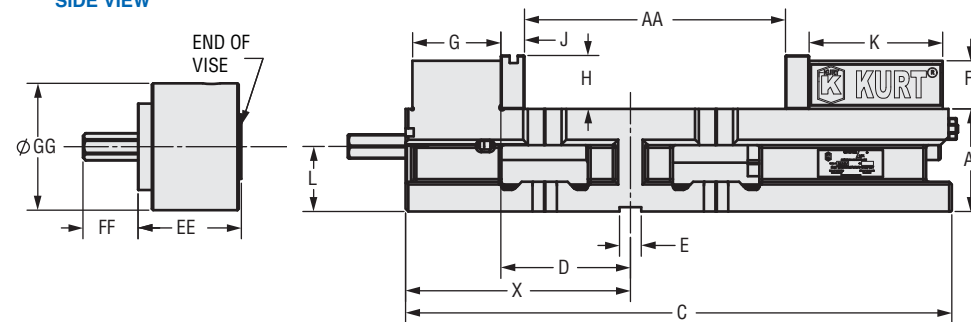


CLAMPING FORCE LBS.		
Torque Ft/Lbs	3410V	
10	1,050	
20	2,195	
30	3,485	
40	4,675	
50	6,245	
60	7,500	

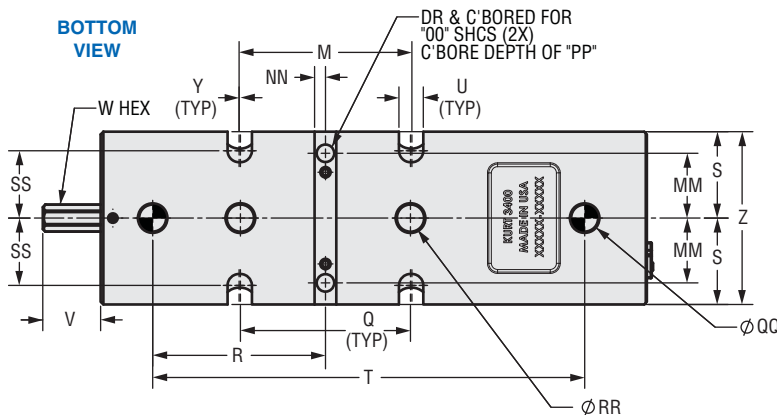
CLAMPING FORCE LBS.		
Hydraulic Pressure (Lbs)	3410H	
500	350	
1,000	1,600	
1,500	3,000	
2,000	4,300	
2,500	5,700	
3,000	7,200	
3,200	7,800	

DIMENSIONAL DATA	
	3410V/H
A	2.375
B	4.000
C	12.644
D	3.000
E	0.5005
F	1.115
G	2.047
H	1.235
J	0.547
K	3.090
L	1.505
M	4.000
N	0.687
O	2.500
P	3/8-16*
Q	100 MM
R	4.000
S	2.000
T	10.000
U	0.563
V	1.341
W	9/16*
X	5.203
Y	0.031
Z	4.000
AA	6.000
BB	8.594
CC	9.637
DD	12.231
EE	2.580
FF	1.275
GG	2.937
MM	1.500
NN	0.2503
OO	3/8*
PP	0.541
QQ	0.6253
RR	M16
SS	1.558

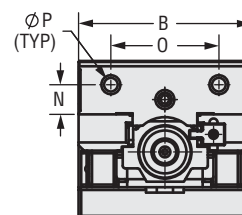
SIDE VIEW



BOTTOM VIEW



END VIEW





ANGLOCK® PT-SERIES VISES

Manual and Hydraulic

Models:
PT800A
PTH800A



The AngLock PT-Series vises offer high precision function through these important design features: The original, time-proven Kurt AngLock design prevents parts from lifting upward under heavy clamping loads. The “pull-type” jaw clamping reduces stationary jaw deflection by at least 80% as the movable jaw is “pulled” into the stationary jaw and not pushed like standard screw type vises.

Features:

- “Pull-type” clamping means high precision and repeatability.
- Up to 20,000 lbs. precision clamping force.
- Can be mounted upright or on either side.
- CNC style allows compact spacing.
- Both sides ground square to within 0.001" with base and top.
- 80,000-PSI ductile iron body.
- Matching of bed height ± 0.001 " available at an additional cost.
- Matching of the keyway to the stationary jaw ± 0.001 " is available at an additional cost.

The PTH800A shown mounted “back to back”. Makes fast, easy and economical vise tombstone. Bases can be tailored for most HMC’s. See Page 45



Accessories:



**KHP5000PF Pneumatic/
Hydraulic Pump, p.72**

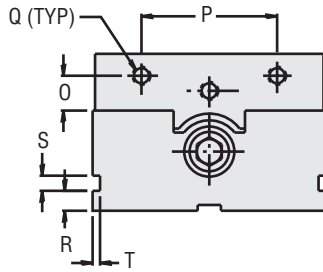


**KHP5000PH Pneumatic/
Hydraulic Pump, p.72**

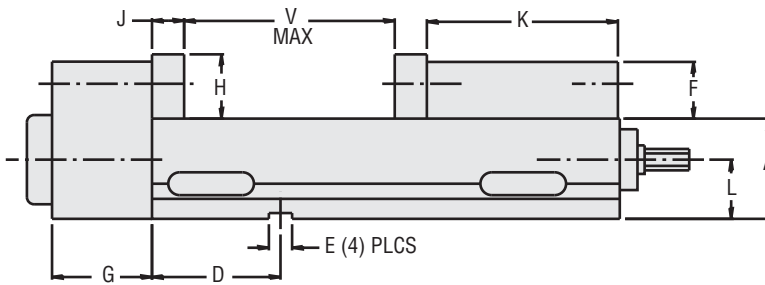


**KHP5000 Hydraulic
Pump, p.73**

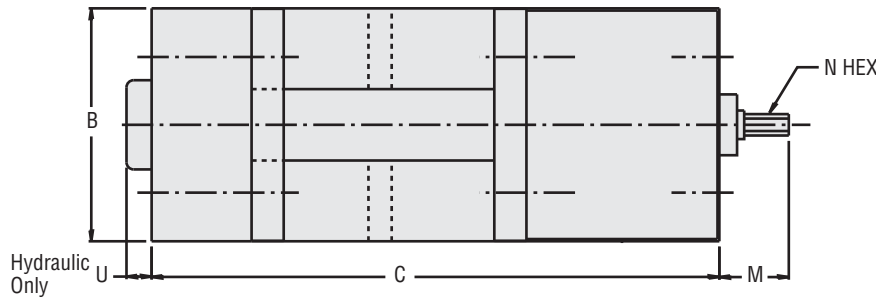
FRONT VIEW



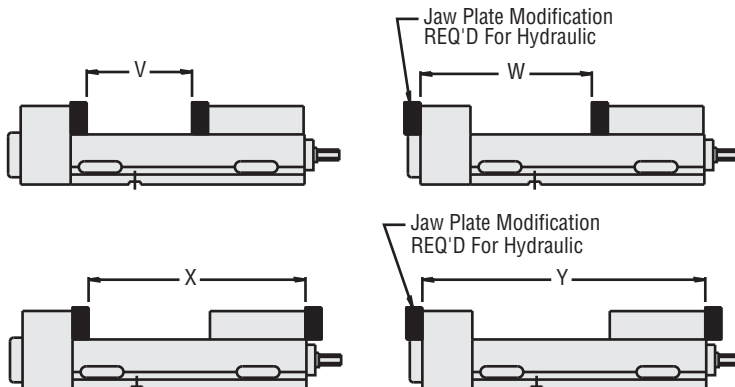
SIDE VIEW



TOP VIEW



JAW PLATE POSITION AND OPENING-INCHES



VISE CLAMPING FORCE-LBS.	
Hydraulic PSI	Hydraulic
	PTH800A
1,400	—
1,800	—
2,200	—
2,800	—
2,900	9,100
3,000	—
3,400	—
3,500	11,560
4,400	14,620
5,300	17,560
6,200	20,120

VISE CLAMPING FORCE-LBS.	
Manual Torque Ft.-Lbs.	Manual
	PT800A
10	—
20	1,637
30	—
40	3,447
50	—
60	3,895
80	4,764
100	6,065
120	8,023
140	8,947
160	10,337

DIMENSIONAL DATA		
	Manual	Hydraulic
	PT800A	PTH800A
A	3.500	3.500
B	8.156	8.156
C	19.875	19.875
D	4.500	4.500
E	0.816	0.816
F	1.985	1.985
G	3.500	3.500
H	2.200	2.200
J	1.075	1.075
K	6.690	6.690
L	2.062	2.062
M	3.120	3.120
N	7/8	7/8
O	1.220	1.220
P	4.750	4.750
Q	5/8-11	5/8-11
R	0.700	0.700
S	0.530	0.530
T	0.250	0.250
U	—	0.875
V	7-3/8	7-3/8
W	12	12
X	15-3/16	15-3/16
Y	19-13/16	19-13/16
Ship Wt. Lbs.	159	180
Hydraulic Displacement cu. In.	—	0.98



CUSTOM ENGINEERED WORKHOLDING

VMC Applications

Kurt brings more than five decades of experience in providing solutions to CNC machine workholding problems and a deep understanding of how workholding integrates into today's productivity and quality driven manufacturing process.

At Kurt, we provide the complete spectrum of workholding solutions with the same dedication that has produced the most successful vises for over 40 years. Our custom engineered workholding engineers have built an industry leading reputation assisting automotive, aerospace and other metalworking intensive industries to improve quality and reduce cycle times. **1 Year Iron Clad Warranty**



Application: Medical Device



Solution: Custom pallet vise enhances VMC throughput for Device manufacturer.

Application: Commercial Industry



Solution: Eight station indexing trunnion fixture for high speed machining.

VMC Applications

Application: Hydraulic Industry



Solution: High density fixture clamping four parts per station.



Application: Machine Tool Industry



Solution: Grinding fixture increases holding power and improves accuracy.

Application: Aerospace component



Solution: Rotary table fixtured with a zero-point docking system for repeatability.

Application: Machine Tool Industry

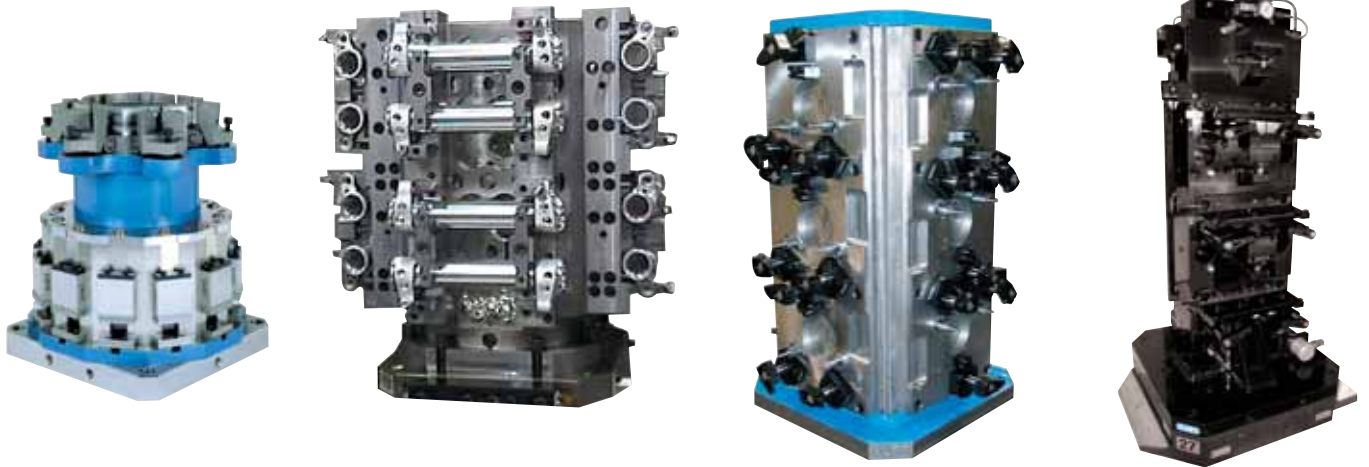


Solution: Second operation grinding fixture feeds productivity into FMS.

Application: Automotive Industry



Solution: Up to three-sided machining using an indexing trunnion fixture.



Application: Aerospace Industry



Solution: High density DoubleLock vise setup holds 18 parts for precision machining.

Application: Aerospace Industry



Solution: Two-sided tombstone with six MoveLock clamping stations handle wide range of part sizes.

HMC Applications



Application: Machine Tool Industry



Solution: Window fixture for 2 sided machining enhances automated FMS line.

Application: Automotive Industry



Solution: D100 movable and stationary jaws integrated onto a tower.

Application: Hydraulic Industry



Solution: Multiple towers with DoubleLock vises on palletized machining center for 24/7 production.

Application: Hydraulic Industry



Solution: Window hydraulic (AB Load) fixture allows matching on five sides.

Application: Hydraulic Industry



Solution: Kurt serrated Double Station vise towers on palletized machining centers for 24/7 production.



BACK TO BACK

Back to Back Models: D100, D810, HDLM6, 3600V



D100



D810



HDLM6

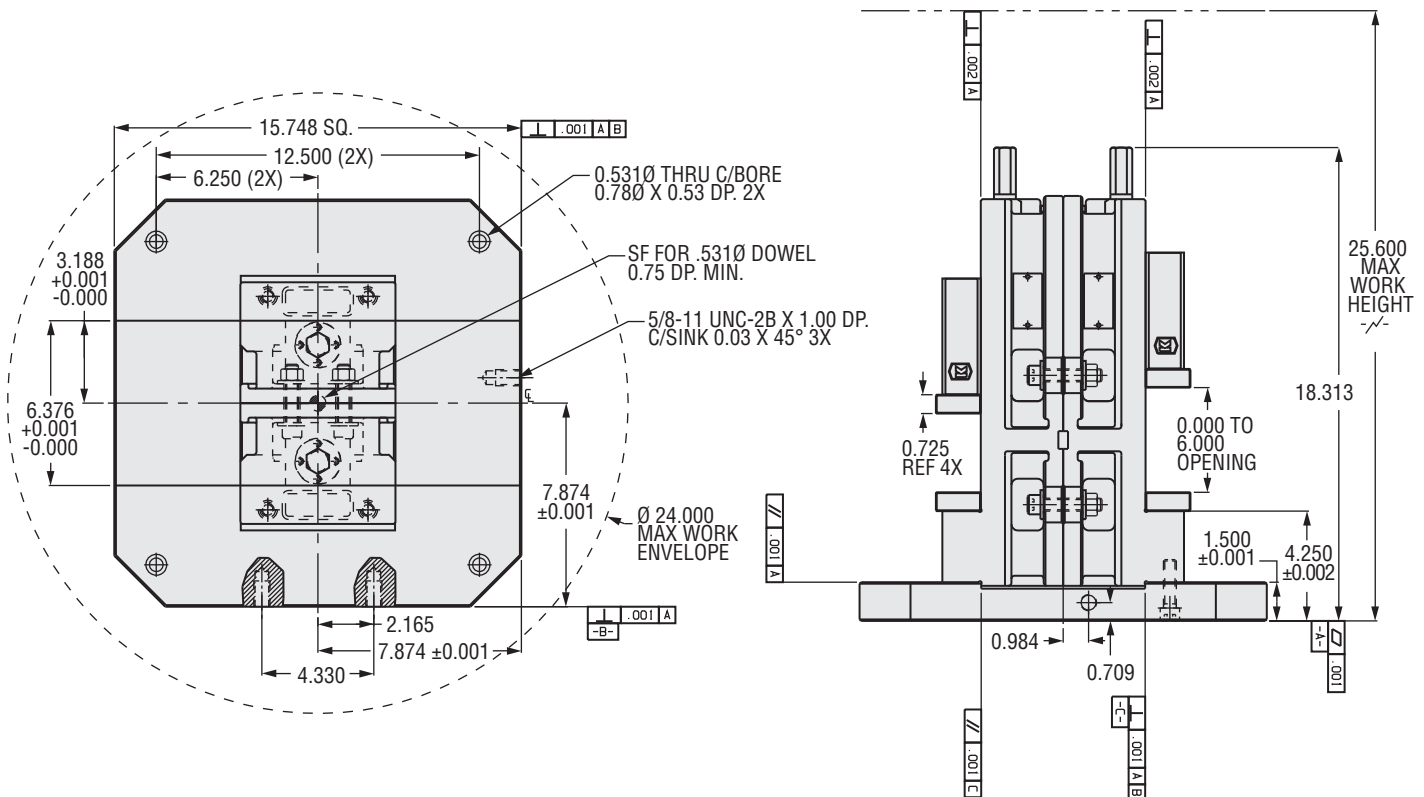


3600V

3600V Back to Back without a riser

#36V2T400 - #3600V mounted back to back on a 400mm pallet

#36V2T500 - #3600V mounted back to back on a 500mm pallet

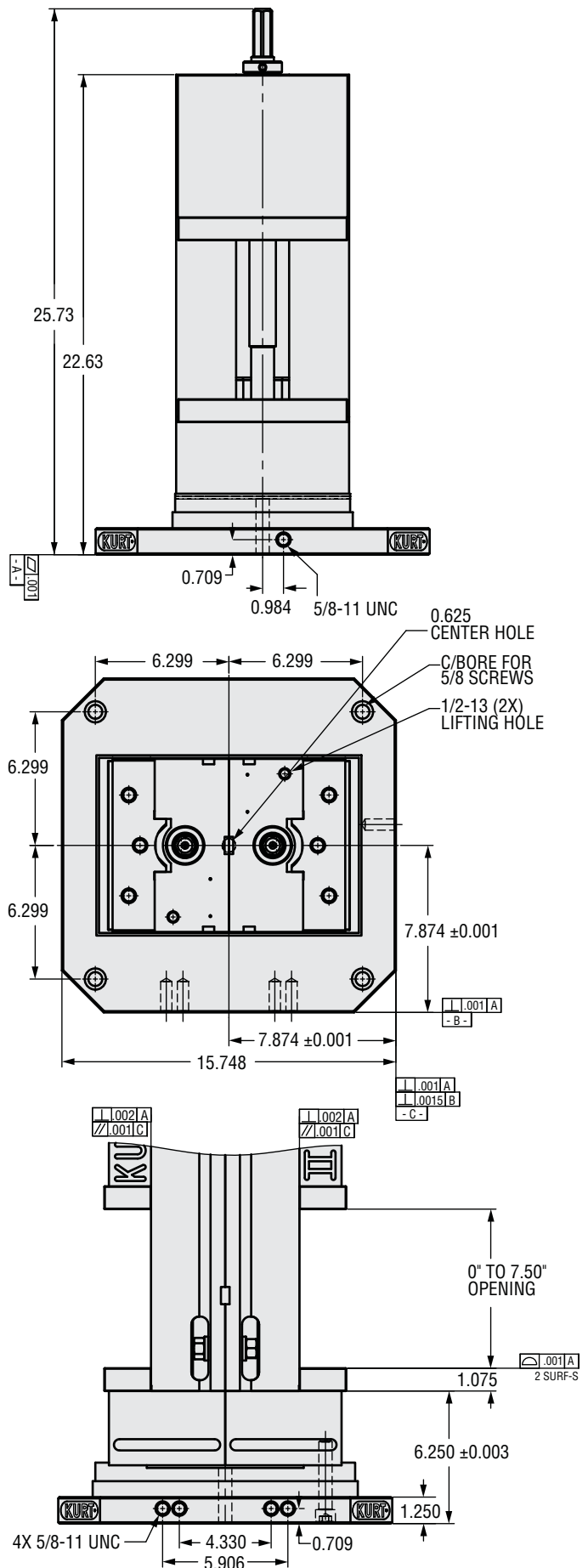


BACK TO BACK

3600V Back to Back with a riser
 36V2TR400-3600V back to back on a 400mm Base
 36V2TR500-3600V back to back on a 500mm Base



PT800A BACK TO BACK ON
 400MM RISER BASE PLATE





MoveLock Modular System

PATENTED



Hydraulic Movable Jaw MLH35



Manual Movable Jaw ML35



Stationary Jaw MLS351

MLH35 Hydraulic Pressure To Clamping Force Chart	
Hyd. Pressure (PSI)	Clamping Force (LBS)
400	200
800	500
1,200	850
1,600	1,200
2,000	1,550
2,400	1,850
2,800	2,150
3,200	2,500

ML35 Torque/Clamping Force Chart	
Torque (FT LBS)	Clamping Force (LBS)
5	750
10	1,550
15	2,600
20	3,550
25	4,450
30	5,400
35	6,300
40	6,900

This high precision two-piece vise is the first of its type to utilize the famous Kurt AngLock concept to prevent jaw lift during clamping. As power is applied to the piston, it is driven forward to locate on an internal segment. While the lateral force is clamping the part, downward pressure is being applied to the movable jaw, which minimizes or prevents part lift. For every pound of clamping force on the jaw, there is a half pound of force exerted down on the movable jaw.

Features:

- Movable and stationary jaws sold separately.
- Movable jaws are available in either manual or hydraulic actuation.
- May be used as a single or double station vise, and can be mounted side by side.
- Can be configured into high density fixturing. (See SeraLock pages 32-33)
- Features a 5/16" stroke.
- Mounts on a 2" x 2" grid system, T-slot sub-bases with a 2" pitch, standard sub-plates and machine tables and SeraLock system.
- Clamps large workpieces - jaw opening limited only by the work envelope.
- Light weight.
- Small footprint - 3.500" jaw width.

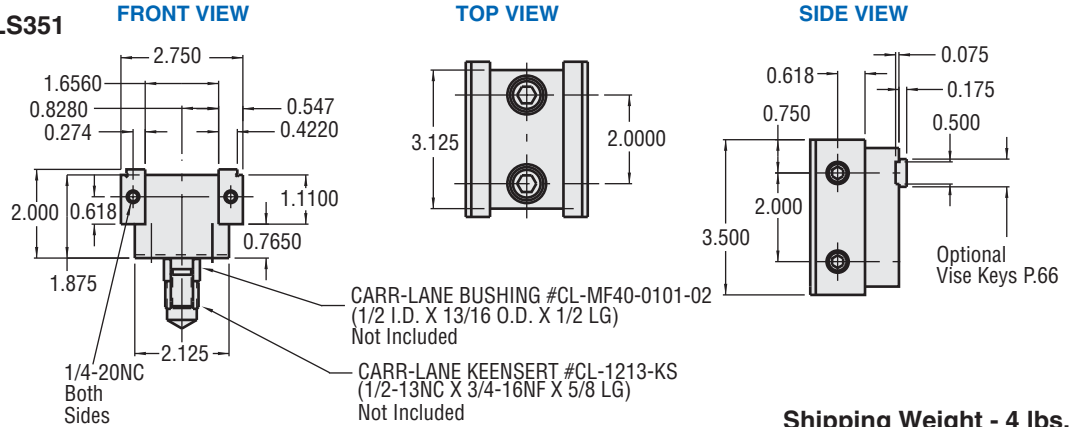
Special jaw plates and workstops are available. Contact the factory for pricing and availability.



MoveLock Modular System

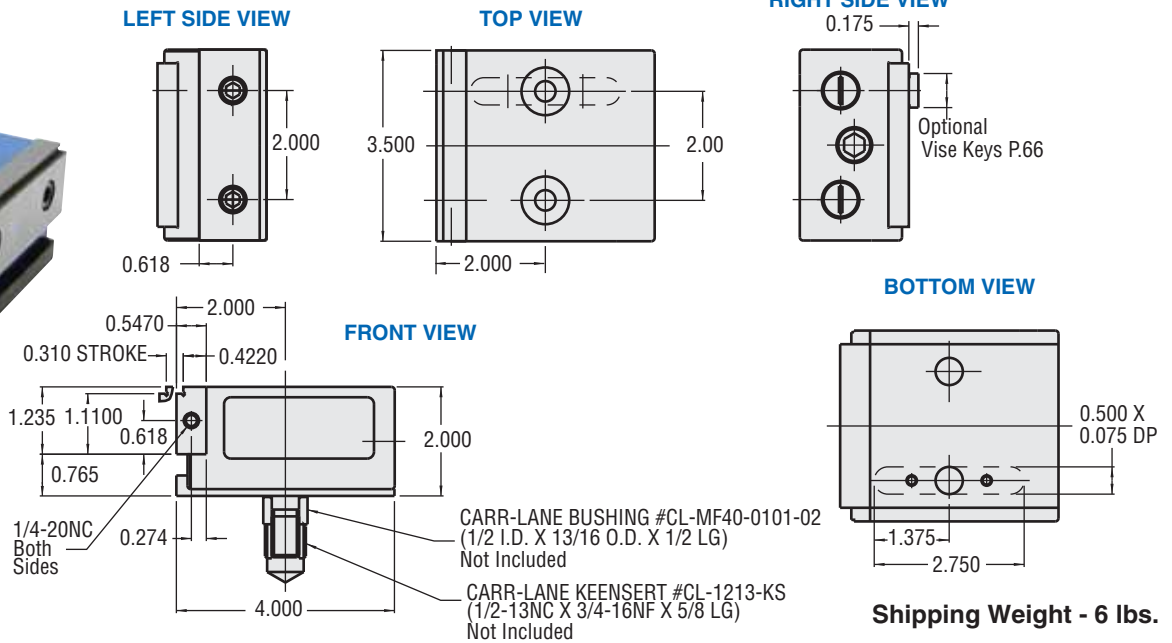
PATENTED

Stationary Jaw MLS351 Serrated Stationary Jaw SMLS351



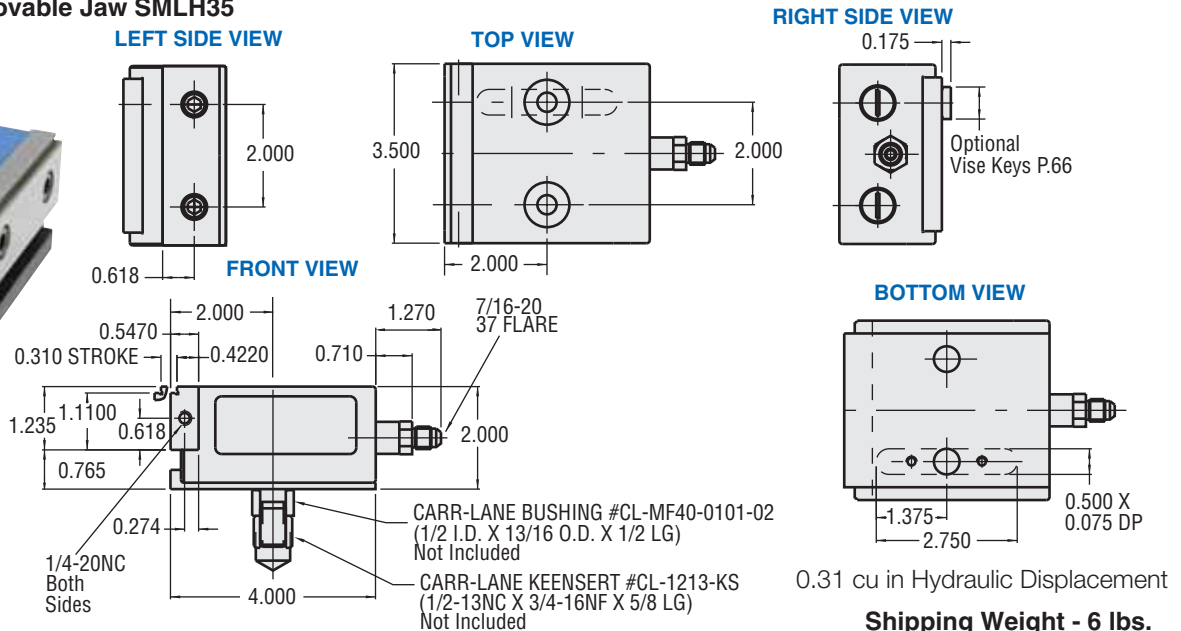
Shipping Weight - 4 lbs.

Manual Movable Jaw ML35 Serrated Manual Movable Jaw SML35



Shipping Weight - 6 lbs.

Hydraulic Movable Jaw MLH35 Serrated Hydraulic Movable Jaw SMLH35



0.31 cu in Hydraulic Displacement

Shipping Weight - 6 lbs.

Models: (Inch)

- MT4
- MT5
- MT6
- MT8

Models: (Metric)

- MTM4
- MTM5
- MTM6
- MTM8

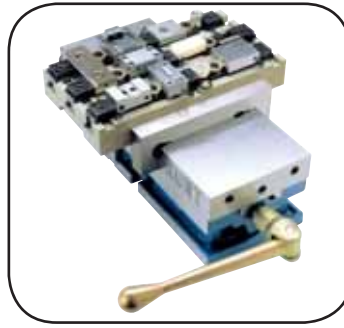
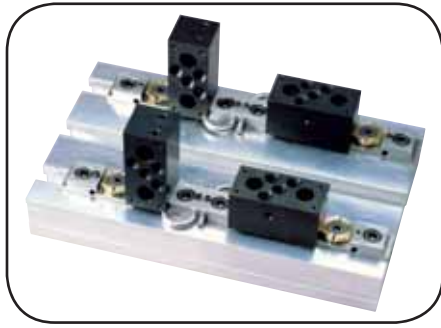


Unlike many competitive cam action models, this product employs the same AngLock concept as the world famous Kurt vises. When a quarter turn is applied to the screw, the split clamp jaw is forced both laterally and down, precisely clamping the part and preventing part lift at the same time. In-house tests showed zero lift when the MiniLock was used in several grinding operations.

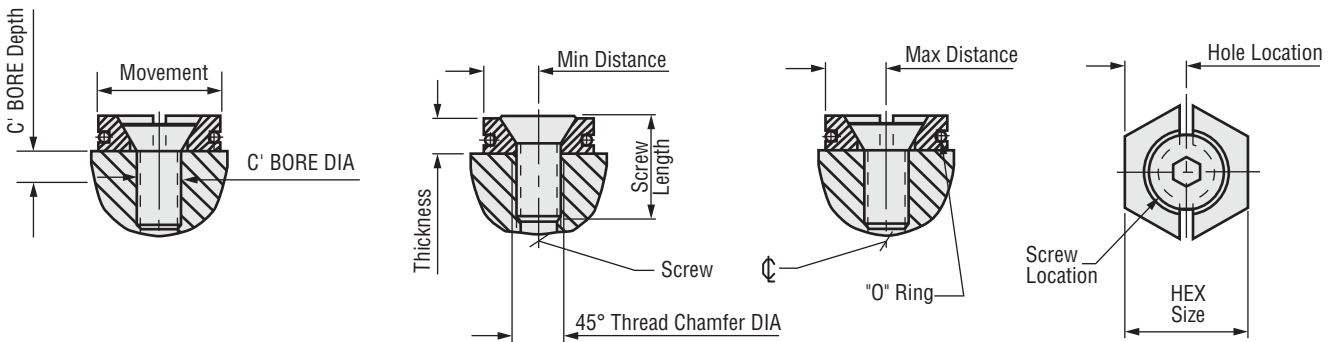
Features:

- By using stationary blocks or pins, two parts may be clamped by a single MiniLock.
- The versatile MiniLock can be used in single holding, double holding or multiples of both single and double holding applications.
- Ideal for dedicated fixturing as well as for palletizing small parts to be loaded into receivers on machine tables.
- Through the use of a variety of locating blocks, workstops and MiniLocks, several similar parts or a part "family" can be located on a single pallet.
- Clamping jaw made from rugged Ampco 18 aluminum bronze.
- Actuating screw is made from a special alloy steel.
- While one pallet of parts is being machined, the operator can be unloading and loading a second similarly configured pallet away from the machine tool.
- Steps may be machined into the clamp jaw for operations that require parts to be raised above the pallet or machine table.
- The low profile allows for machining of complete top surfaces of parts without having to re-clamp.
- Conveniently uses standard thread sizes and standard hex keys.
- **One MiniLock package contains six MiniLocks.**





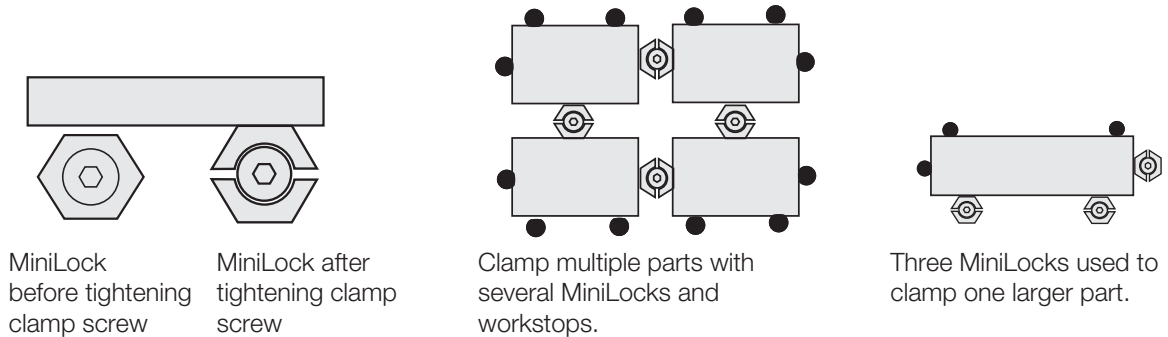
MINILOCK																
Model Number	Hex Size	Hex Thickness	Screw Size	Hex Wrench Size	Screw Length	Suggested Tapped Hole Loc. From Edge of Part	Min. Distance From Screw Cl	Max. Distance From Screw Cl	45° Thread Chamfer Dia.	Max part Size Differential Double Clamp	Optional C'Bored Tapped hole use for Larger part Tolerance Differential					
											C Bore Dia. (+.015-.005) (-.39-.13mm)	C Bore Depth +.020 (+.50mm)	Max part Size Differential Double Clamp	Approx. Thread Engagement	Torque Ft. lb.	Clamping Force Lbs.
INCH MODELS																
MT4	0.688	0.188	1/4-20	0.156	0.625	0.324	0.308	0.350	0.300	0.010	0.281	0.156	0.020	0.250	11	987
MT5	0.875	0.250	5/16-18	0.188	0.750	0.412	0.384	0.442	0.368	0.010	0.344	0.203	0.020	0.283	18	1,400
MT6	0.938	0.312	3/8-16	0.218	1.000	0.439	0.400	0.482	0.437	0.010	0.406	0.375	0.020	0.307	30	2,200
MT8	1.125	0.375	1/2-13	0.312	1.250	0.528	0.492	0.584	0.500	0.010	0.531	0.468	0.020	0.384	83	2,600
METRIC MODELS																
MTM4	17.476	4.776	M6 x 1	3.963	15.875	8.230	7.824	8.890	7.620	0.254	7.138	3.963	0.508	6.350	11	987
MTM5	22.250	6.350	M8 x 1.25	4.776	19.050	10.465	9.754	11.227	9.348	0.254	8.738	5.157	0.508	7.189	18	1,400
MTM6	23.826	7.925	M10 x 1.5	5.538	25.400	11.151	10.160	12.243	11.100	0.254	10.313	9.525	0.508	7.798	30	2,200
MTM8	28.575	9.525	M12 x 1.75	7.925	31.750	13.412	12.497	14.834	12.700	0.254	13.488	11.888	0.508	9.754	83	2,600



Option:

To allow a greater differential between workpieces, it is suggested you create a thread free zone to allow more sideways movement for the screw head.

Important Notice: Full thread is required when MiniLock is used clamping only on one side.





SELF-CENTERING VISE

Models:
SCD430
SCD640

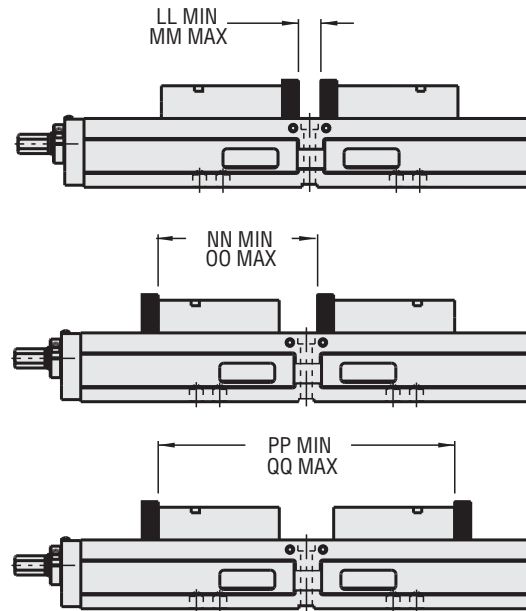


Kurt has two Self-Centering vises, a 4" jaw width (SCD430) and a 6" jaw width (SCD640). Jaw opening on the 4" model is 6.25" and 8" on the 6". Centering accuracy from minimum to maximum opening is 0.0006" with 0.0002" repeatability. Both movable jaws are AngLock design with zero lift. A unique feature is an adjustment that allows the centerline of the jaws to be set. This is especially important when mounting several vises on one machine and all centerlines must match.

Features:

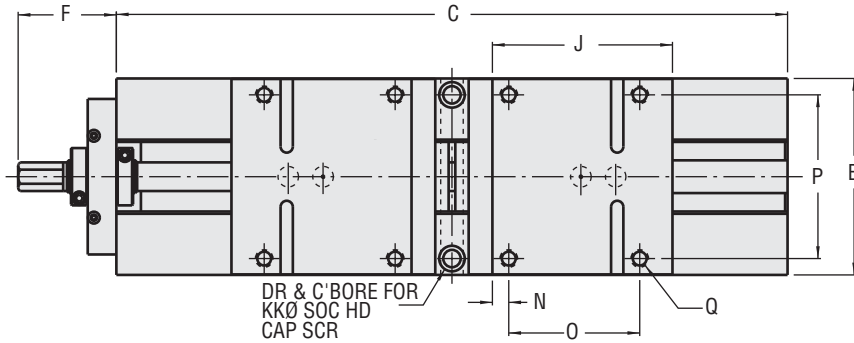
- Lip seals on main screw.
- Chip guards.
- Hardened jaws.
- Hardened bed ways.
- 80,000-PSI ductile iron construction.

JAW POSITION

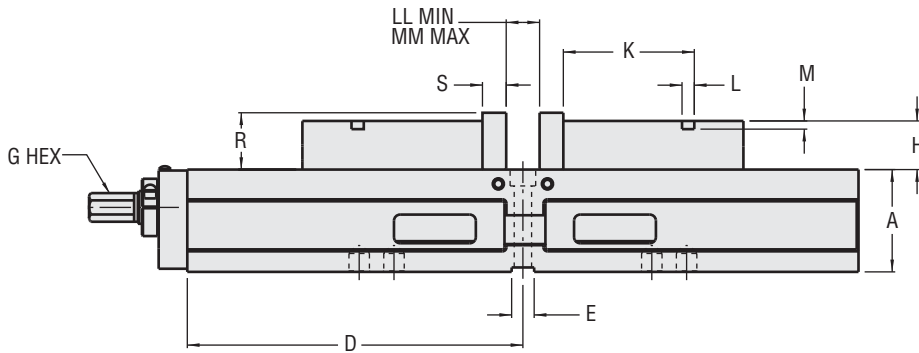


SELF-CENTERING VISE

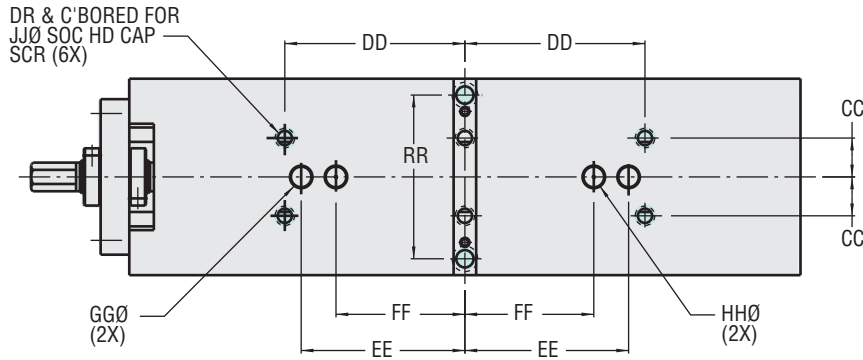
TOP VIEW



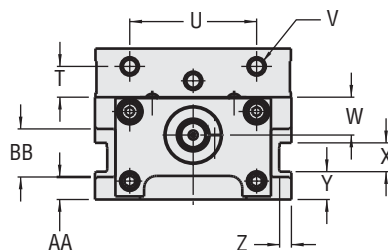
SIDE VIEW



BOTTOM VIEW
(Mounting hole pattern)



FRONT VIEW



WISE CLAMPING FORCE-LBS.

Torque-Ft. Lbs.	SCD430	SCD640
10	912	985
20	1,757	1,760
30	2,410	2,576
40	2,935	3,770
50	3,549	4,382
60	4,902	5,764

DIMENSIONAL DATA

	SCD430	SCD640
A	2.375	3.125
B	4.000	6.000
C	15.500	20.500
D	7.750	10.250
E	0.5005	0.6880
F	2.400	3.000
G	9/16	3/4
H	1.115	1.485
J	4.000	5.500
K	3.000	4.000
L	0.250	0.375
M	0.188	0.250
N	0.312	0.500
O	3.000	4.000
P	3.312	5.000
Q	5/16-18	1/2-13
R	1.235	1.735
S	0.547	0.725
T	0.687	0.940
U	2.500	3.875
V	3/8-16	1/2-13
W	0.871	1.156
X	0.690	0.880
Y	0.700	0.850
Z	0.250	0.360
AA	0.550	0.690
BB	1.000	1.470
CC	0.813	1.188
DD	3.750	5.500
EE	5.000	5.000
FF	3.370	3.937
GG	0.625	0.625
HH	0.630	0.630
JJ	5/16	3/8
KK	3/8	1/2
LL	1.000	1.000
MM	6.250	8.000
NN	5.540	7.240
OO	10.790	14.240
PP	10.090	13.470
QQ	15.340	20.470
RR	3.000	5.000
Ship Wt. Lbs.	40	100



EXTRA CAPACITY 6" XL VISES



Hydraulic Reverse Version

Manual Version

Kurt XL vises are designed for precision clamping of very large parts for both tool and die and production CNC applications. With up to a 28.750" jaw opening, these vises lock precisely, even for high horsepower "hogging out" operations. All sides of Kurt XL vises are accurate to within 0.001" for precise, easy alignment in multiples. XL vises may be mounted and used as receivers for other workholding devices.

Features:

- Up to 12,000 lbs. precision clamping force.
- AngLock design reduces jaw lift.
- 80,000-PSI ductile iron body.
- 6" and 8" jaw widths with jaw openings from 0"-21" with a maximum of 28.765" (in the outside jaw positions).
- "Pull-Type" clamping means high precision and repeatability.
- Great for high horsepower "hogging out" applications.
- Reverse model reduces "reach-over" distance making part loading safer and easier for the operator. Also part programming is easier in the "Y" axis positive direction.
- Manual, air and hydraulic models available.
- Air and hydraulic feature a 1/4" stroke.
- Air power option provides a precise and repeatable "gentle touch" for delicate parts.
- Internal hex screw available.

VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	640XLS	640XLR
10	989	989
20	1,768	1,768
30	2,586	2,586
40	3,731	3,731
50	4,398	4,398
60	5,785	5,785
70	6,235	6,235
80	6,877	6,877

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	640XLHS	640XLHR
400	1,575	1,575
800	3,150	3,150
1,200	4,725	4,725
1,600	6,300	6,300
2,000	7,875	7,875
2,400	9,450	9,450
2,800	11,025	11,025
3,200	12,600	12,600

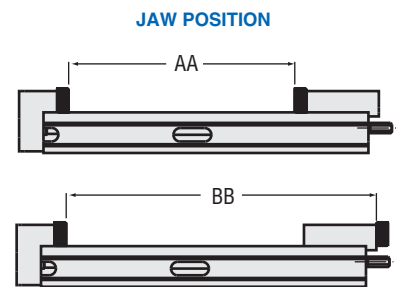
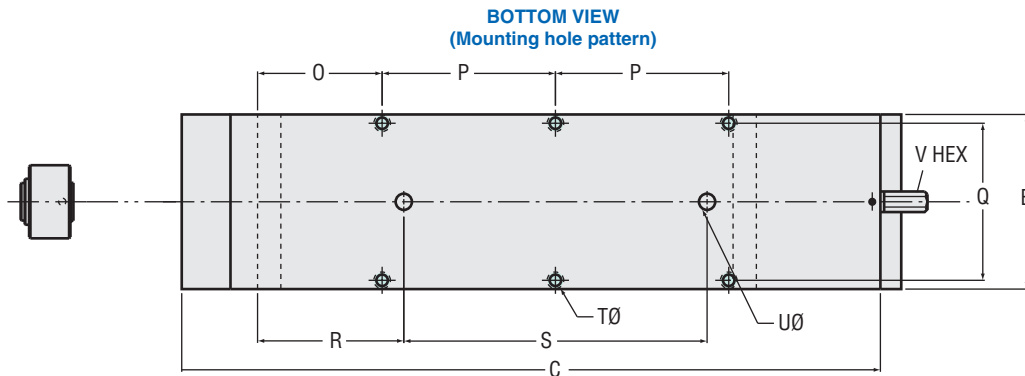
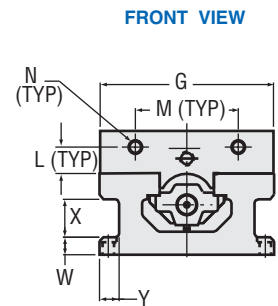
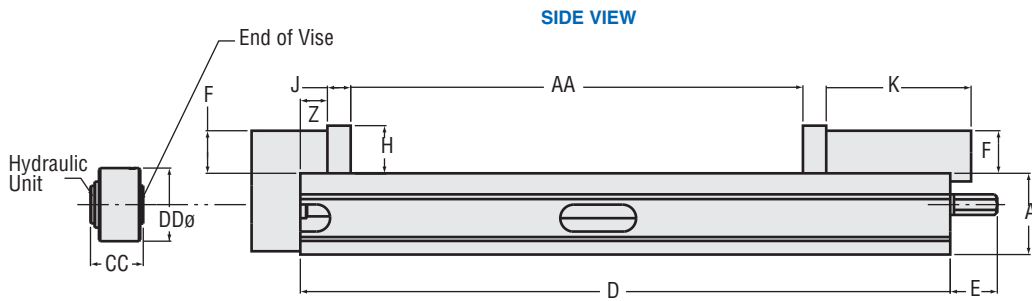
VISE CLAMPING FORCE-LBS.		
AIR PSI	Air	
	640XLAS	640XLAR
10	320	320
20	840	840
30	1,280	1,280
40	1,780	1,780
50	2,200	2,200
60	2,720	2,720
70	3,240	3,240
80	3,800	3,800
90	4,380	4,380
100	5,000	5,000



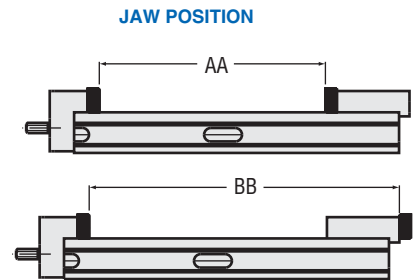
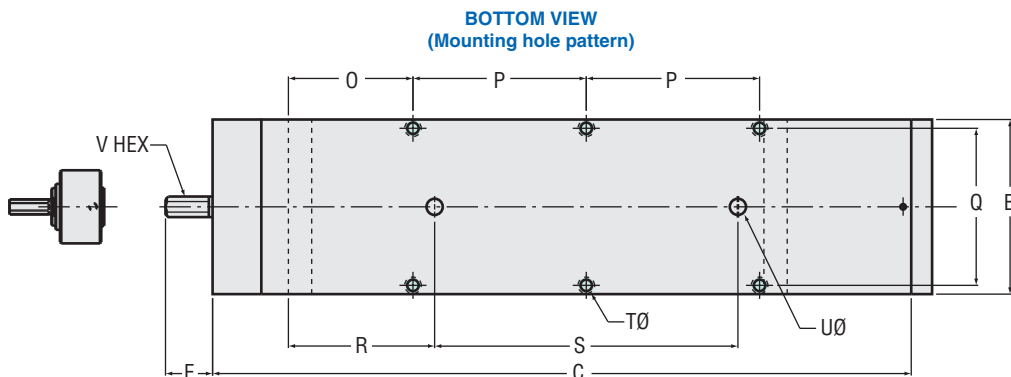
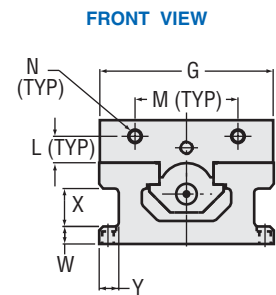
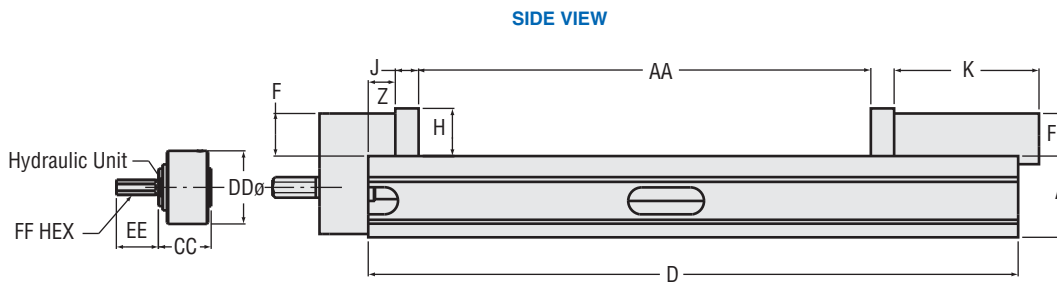
EXTRA CAPACITY 8" XL VISES

Model:
8XL

Standard (S)



Reverse (R)



Note: Keyway slots can be machined in.
Call CEW group for quotation 1-877-226-7823

EXTRA CAPACITY 8" XL VISES

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	8XLPTLSHS	8XLPTLSHR
1,400	5,600	5,600
1,800	7,490	7,490
2,200	8,765	8,765
2,800	11,250	11,250
3,000	12,050	12,050
3,200	12,780	12,780

VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	8XLPTLSS	8XLPTLSR
20	2,904	2,904
40	5,664	5,664
60	7,872	7,872
80	10,824	10,824
100	13,848	13,848
120	16,632	16,632
140	19,008	19,008
160	20,376	20,376

DIMENSIONAL DATA				
	Manual		Hydraulic	
	8XLPTLSS	8XLPTLSR	8XLPTLSHS	8XLPTLSHR
A	3.750	3.750	3.750	3.750
B	8.060	8.060	8.060	8.060
C	32.250	32.250	32.250	32.250
D	30.000	30.000	30.000	30.000
E	2.170	1.890	2.160	-
F	1.965	1.965	1.965	1.965
G	8.000	8.000	8.000	8.000
H	2.200	2.200	2.200	2.200
J	1.075	1.075	1.075	1.075
K	6.690	6.690	6.690	6.690
L	1.220	1.220	1.220	1.220
M	4.750	4.750	4.750	4.750
N	5/8-11	5/8-11	5/8-11	5/8-11
O	5.750	5.750	5.750	5.750
P	8.000	8.000	8.000	8.000
Q	7.250	7.250	7.250	7.250
R	6.750	6.750	6.750	6.750
S	14.000	14.000	14.000	14.000
T	1/2	1/2	1/2	1/2
U	0.750	0.750	0.750	0.750
V	7/8	3/4	7/8	-
W	0.810	0.810	0.810	0.810
X	1.750	1.750	1.750	1.750
Y	0.900	0.900	0.900	0.900
Z	1.250	1.250	1.250	1.250
AA	21.000	21.000	21.000	21.000
BB	28.765	28.765	28.765	28.765
CC	-	-	2.400	2.400
DD	-	-	3.375	3.375
EE	-	-	-	1.940
FF	-	-	-	5/8
Ship Wt. Lbs.	230	235	230	235
Hydraulic Displacement cu. In.	-	-	1.18	1.18





AngLock® D-SERIES VISES

Models:

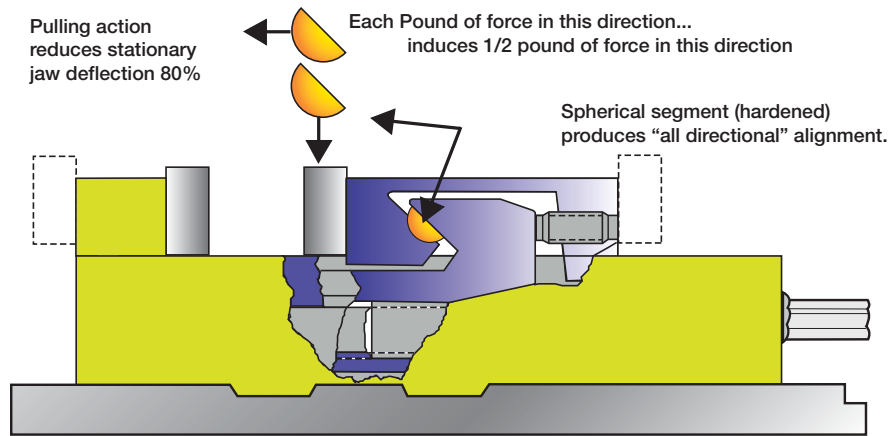
D40 DM40 D688 DM688 D810 DM810 D100

The original Kurt AngLock D-Series vises are designed for precision part clamping on basic machine tools such as knee-type mills, and machining centers. D-Series vises are ideal for use in running production parts where datums, flatness and parallelism is important. You can precision bore, tap, drill, grind and finish with high accuracy on most parts made of die cast aluminum, steel, and iron in your Kurt AngLock vises. No other brand can give you the time proven accuracy of the Kurt AngLock vises.

All Kurt vises have a friction reducing, needle bearing, thrust collar. The needle bearing increases jaw clamping pressure.

Features of All D-Series Vises Include:

- AngLock design assures the movable jaw does not lift.
- Standard bed height of ± 0.001 ".
- Matching bed heights within ± 0.001 " at additional cost.
- Hardened vise bed.
- Hardened jaw plates.
- Semi-hard steel screw.
- 80,000-PSI ductile iron body.
- Matching of the keyway to the stationary jaw ± 0.001 " is available for all vises at additional cost.



D40 DM40 (Metric)

The D40 vise is recommended for intermediate milling and work. It is an ideal vise for use in matched multiples for holding long parts. With jaw plates in their outside positions, this 4" vise has a 10-5/16" capacity.



D688 DM688 (Metric)

- Large 8.8" (223.520mm) jaw opening.
- Outside rail edges of the body are machined.
- Vise nut does not extend beyond the end of the vise body.
- D688 has the same footprint as the D675 vise. Distance from keyway to stationary same as D675.
- Groove Lock jaw (D60-315) and workstop (WSRL46) standard.
- Patented "O" ring pull down feature standard.
- Approximately a 20% increase in clamping pressure over D675 vise.
- Distinctive patented design of the "Kurt Look".
- Patented AngLock design.
- Bed height matched to size 2.875" (73.025mm) ± 0.0005 ".
- Repeatability within 0.001".
- Sealed needle thrust bearing used at hex end of screw to reduce clamping friction.



ANGLOCK® D-SERIES VISES

D810

DM810 (Metric)

Kurt's new D810 features a new updated body style:

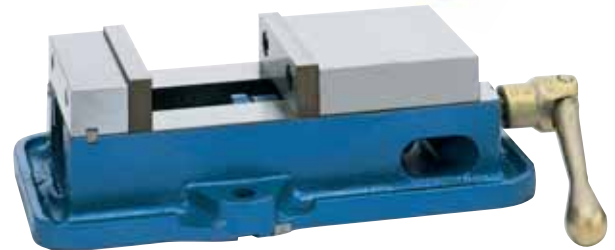
- Quick Set-up feature.
- Top down, four bolt design on the stationary jaw reduces vise deflection by 25 percent while allowing total disassembly of the vise without removing the body from the machine table. Special brush seals shield and protect vise screw threads from machined chips and residue.

- The nut has been shortened so as not to protrude past the end of the vise body. New powder coat paint finish resists coolant-induced peeling for greater corrosion protection. The overall vise footprint is identical to earlier models so both can be used interchangeably and in tandem.
- With a jaw opening of 10" and clamping force up to 11,600 lbs., the D810 vise locks parts precisely including very large parts for aggressive "hogging out" operations.

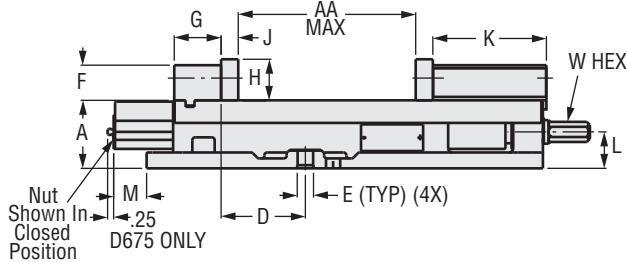


D100

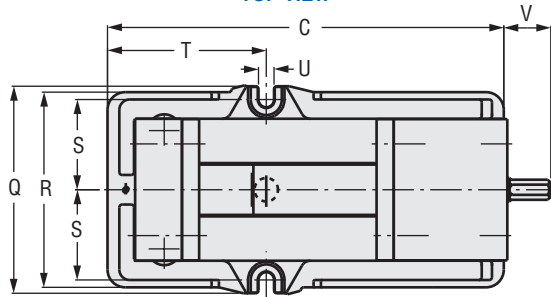
The D100 is the largest and strongest of our general purpose vises. With 9-3/4" of jaw opening, it has the capacity and strength to take on your highest horsepower milling cuts. It's the most precise and rugged 10" production vise in the world.



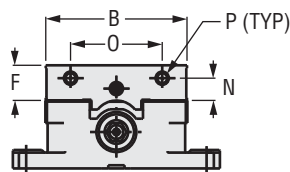
SIDE VIEW



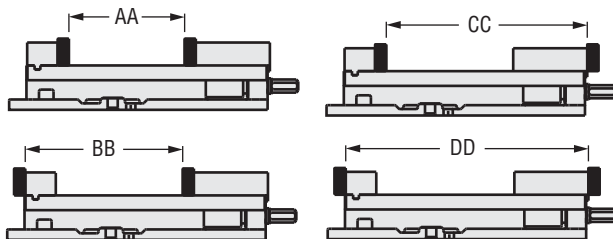
TOP VIEW



FRONT VIEW



JAW POSITION



MANUAL VISE CLAMPING FORCE-LBS.				
Torque Ft.-Lbs.	D40	D688	D810	D100
10	1,653	1,129	-	-
20	2,923	2,242	1,834	1,698
30	4,103	3,337	-	-
40	5,241	4,148	3,843	3,300
50	6,513	5,379	-	-
60	7,807	6,310	4,349	4,686
70	-	6,977	-	-
80	-	7,968	5,706	6,623
100	-	-	7,042	7,842
120	-	-	8,688	9,970
140	-	-	10,413	11,429
160	-	-	11,596	12,792
180	-	-	-	14,681
200	-	-	-	16,163
220	-	-	-	18,124
240	-	-	-	20,563
260	-	-	-	22,093
280	-	-	-	24,077
300	-	-	-	26,277

	DIMENSIONAL DATA				
	D40	D688	DM688	D810	D100
	Inch	Inch	MM	Inch	Inch
A	2.250	2.875	73.025	3.310	3.875
B	4.000	6.000	152.400	8.000	10.000
C	12.340	16.810	426.974	21.810	27.500
D	2.562	3.562	90.475	4.686	5.875
E	0.500	0.688	17.476	0.813	0.813
F	1.115	1.485	37.719	1.965	2.465
G	1.355	1.980	50.292	3.652	2.950
H	1.235	1.735	44.069	2.200	2.937
J	0.547	0.725	18.415	1.075	1.320
K	4.000	4.800	121.920	6.190	8.630
L	1.281	1.540	39.116	1.865	2.225
M	-	-	-	-	-
N	0.687	0.940	23.876	1.220	1.625
O	2.500	3.875	98.425	4.750	5.750
P	3/8-16	1/2-13	M12x25	5/8-11	3/4-10
Q	6.380	8.750	222.250	11.500	14.500
R	5.750	8.250	209.550	11.000	13.250
S	2.625	3.813	96.851	4.940	6.188
T	4.860	5.667	143.942	8.500	10.590
U	0.531	0.656	16.663	0.880	0.940
V	0.700	1.930	49.022	2.375	1.690
W	9/16	0.750	19.050	0.875	1
AA	3-7/8	8.8	223.520	10	9-3/4
AA MIN	0	0	0	0	0
BB	5.750	11.500	292.100	14.730	14.000
BB MIN	1.400	2.700	68.580	4.730	3.500
CC	8.4375	14.320	363.728	17.260	19.750
CC MIN	4.100	5.600	142.240	7.260	9.200
DD	10.3125	17.030	432.562	21.990	24.00
DD MIN	5.900	6.800	172.720	11.990	13.500
Ship Wt.	32	78	36	158	300

Repair Kits

MODEL	REPAIR KIT
D30	*D30-KIT
D40	*D40-KIT
D50	*D50-KIT
D60	D60-KIT
D675	*D675-KIT
D688	*D688-KIT
D80	D80-KIT
D810	*D810-KIT
D100	*D100-KIT

* = Same as Metric Vise

See page 60 for kit descriptions



REPAIR KITS FOR VISES

SINGLE STATION VISES	*D30-KIT	*D40-KIT	*D50-KIT	D60-KIT	*D675-KIT	*D688-KIT	D80-KIT	*D810-KIT	D100-KIT
CAP, PLASTIC	D30-12A	D40-12A	D50-12A	D60-12A			D80-12A		D100-12A
DRIVE TYPE GREASE FITTING					3300-C			3300-C	
INTERNAL BRUSH SEAL					D675-211	D688-211 (x2)		PT800-211 (x2)	
O-RING	DLU6J-96	D40-68	D50-68		D675-68	D675-68		D810-68	
PLUG, GREASE FITTING					D675-292			D675-292	
SEGMENT	D30-9	D40-9	D50-9	D60-9	D60-9	D60-9	D80-9	D80-9	D100-9
GREASE FITTING					3300-C				
SPIRAL RETAINING RING	D30-217A	D40-217A	D50-217A	D675-217A	D675-217A	D675-217A		D810-217	
THRUST BEARING	D30-41	D40-41	D50-41	D60-41	D60-41	D60-41	D80-41	D80-41	D100-41
THRUST BEARING WASHER	D30-42 (x3)	D40-42 (x3)	D50-42 (x3)	D60-42 (x3)	D60-42 (x3)	D60-42 (x3)	D80-42 (x2)	D80-42 (x3)	D100-42 (x3)

*= Same as Metric Vise

SINGLE STATION VISES	*3600V-KIT	3600H-KIT	HD690-KIT	PT400A-KIT	PT800A-KIT	PTH400A-KIT	PTH800A-KIT
BACK-UP RING		PTH600-188 360HU-187				PTH400-188 PTH400-187	
SPRINGS			HD6-197				
GUIDES			HDM6-142				
SCREWS			00-0251				
CAP PLASTIC							
INTERNAL BRUSH SEAL	3600V-211 (x2)	3600V-211 (x2)	D688-211 (x2)	PT400-211 (x2)	PT800-211 (x2)	PT400-211 (x2)	PT800-211 (x2)
O-RING AND/OR BACKER RINGS	3600V-99 3600V-128	3600V-99 3600V-128 360HU-98 PTH600-96	3600V-99 3600V-128 MT6-96	PT400-99	PT800-99A	PT400-99 PTH400-198 PTH400-197 PT400-97	PT800-99A PT800-97
POLYPAK PISTON SEAL							PTH800-198A PTH800-96A
SEGMENT	D60-9	D60-9		D40-9	D80-9	D40-9	D80-9
SPIRAL RETAINING RING	3600V-147 (x2)	3600V-147 (x2) 360HU-231					
THRUST BEARING	D80-41	D80-41	D80-41	PT400-41	PT800-41	PT400-41	PT800-41
THRUST BEARING WASHER	3600V-42 (x2)	3600V-42 (x2)	3600V-42 (x2)	PT400-42 (x2)	PT800-42 (x3)	PTH400-42	D80-42 (x2)
THRUST WASHER							PTH800-42 (x2)

*= Same as Metric Vise



HDHL Nut & Screw Assembly



HDL Nut & Screw Assembly



Vise Nut, D-Series



Vise Screw, D-Series



Vise Screw, HD-Series



Vise Repair Kit



D675 Repair Kit



Bearing Assembly



Thrust Bearing Washer



O-Ring



D675-292 Plug, Grease Fitting



3300-C Drive Type Grease Fitting



Plastic Cap



Spiral Retaining Ring



Internal Brush Seal



Segment



Movable Jaw w/Jaw Plate



Rear Stationary Jaw



Clutch

Find your local workholding service center by clicking the "Repair Service" tab at www.kurtworkholding.com



REPAIR KITS FOR VISES

DOUBLE STATION VISES	SERIAL #	SERIAL #	SERIAL #	SERIAL #	SERIAL #		
	<-3300	3301- >	1000-3734	3735-4999	5001- >		
	DL430-KIT1	DL430-KIT2	*DL640-KIT1	*DL640-KIT2	*DL640-KIT3	HDL4-KIT1	HDHL4-KIT1
BACK UP RING							HDHLM4-187 HDHLM4-188
FRICTION CLAMP	DL430-225A	DL430-225A-P					
O-RING	DL430-128 DL430-68	DL430-127 DL430-128 DL430-129 DL430-68	DL640-128 DL640-68	DL640-128 DL640-68	DL640-128 DL640-68 DL640-129	DL430-127 DL430-128 DL430-129 DL430-68	360AU-99B 3600V-99 MT4-96 HDHLM4-68 HDHLM4-96
PIN, DOWEL	04-0031	04-0030	04-0031	04-0031	04-0030	04-0030	
PIN, ROLL	04-4138		04-4144	04-4144			
PROTECTIVE PLUG							HDL4-191
RETAINING RING	DL430-217 DL430-217 DL430-231	DL430-147A DL430-217 DL430-231	DL640-147	DL640-147A DL640-147 DL640-217 DL640-231	DL640-217 DL640-231	DL430-147A DL430-217 DL430-231	
SEAL, U-CUP			DLU6J-146				
SEGMENT	D40-9	D40-9					
SPRING		DL430-197(x4)					
SPRING CLUTCH	DL600-215A	DL640-215A (3)	DL600-215A (4)	DL600-215A (4)	DL640-215 (3)	DL640-215	KDLM4-169
SPRING, PRE-LOAD	DL430-311A	DL430-311A	DL640-311A	DL640-311A	DL640-311A	HDL4-311	HDHLM4-311
THRUST BEARING	D40-41	D40-41	D60-41	D60-41	D60-41	D40-41	
THRUST BEARING WASHER	DL400-42A (x2)	DL400-42A (x3)	D60-42 (2)	D60-42 (2)	D60-42 (3)	DL400-42A	
TRUARC EXT. SNAP RING					DL640-147B		
U-CUP SEAL			DL640-180 (2)				
WIPER RING SEAL	DL430-331 (x2) DL430-97	DL430-97		DL640-331 (2) DL640-97	DL430-331 DL640-97	DL430-97	

* = Same as English/Metric Vise

REPLACEMENT PARTS	HD6-KIT1	HDH6-KIT1	*HDLM6-KIT1	HDHLM6-KIT1
BACK UP RING		HDH6-187 HDH6-188		HDH6-187 HDH6-188
FRICTION CLAMP				
O-RING	3600V-99 HD6-68 HD6-96	MLH35-173A PM43-96 HDH6-96 HDH6-68	DL640-128 DL640-68 DL640-129	HDH6-96 DLU4-96 HDH6-68
PIN, DOWEL			04-0030	
PLUG, NYLON				HDHLM6-168
PROTECTIVE PLUG				3600V-191
RETAINING RING	DL640-217		DL640-217 DL640-231	DL430-217 DL430-231
SPRING CLUTCH/COMPRESSION			DL600-215 (x3)	HDHLM6-169
SPRING, PRE-LOAD			DL640-311A	HDHLM6-311A
THRUST BEARING	D60-41		D60-41	
THRUST BEARING WASHER	D60-42 (x2)		D60-42 (x2)	
TRUARC EXT. SNAP RING	HD6-147		DL640-147B	
WIPER RING SEAL	DL640-97		DL430-331 DL640-97	DL430-97 DL430-331

HYDRAULIC INTENSIFIERS	
APD50-112-KIT	APD60-112-KIT
APD50-119	APD60-127
APD50-127	APD60-128
APD50-128	APD60-129
APD50-129	APD60-130
APD50-130	APD60-131
APD50-131	

Power Drawbar Parts



500-00 Drawbar Assembly Cover



101-02 Powerhead Assembly



Mechanical Power Drawbar Assembly



212-1000 Drawbar Wrench



102-01A Valve Assembly w/FRL (312-06)



Drawbar



202-03-SA Actuator Block Assembly



400-10 Universal Base



208-00 Drawbar Socket



DLU CARVLOCK® VISE JAW KITS

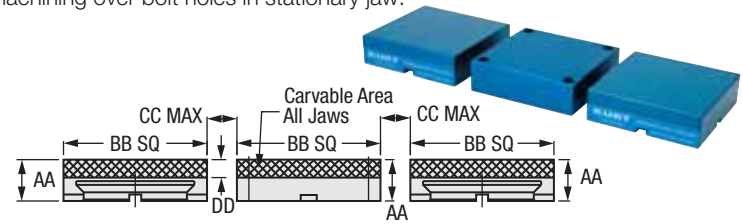
Select Your Choice of Jaw Kits for CarvLock Vise and CarvLock Towers

DLU4ALU - Jaw Kit • DLU6ALU - Jaw Kit

Quick Change, Machinable Soft Jaws

- 90° indexable soft jaws (6061 - T6 Aluminum) can be machined to fit the shape of your part for inexpensive dedicated fixturing.
- Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".

	AA	BB	CC	DD	MM	RR	SS	LBS
DLU4ALU- Jaw Kit	1.228	4.000	1.470	0.500	0.620	3.188	7.063	6
DLU4ALU1.70- Kit	1.700	4.000	1.470	0.972	0.620	3.188	7.063	8
DLU4ALU2.20- Kit	2.200	4.000	1.470	1.472	0.620	3.188	7.063	11
DLU6ALU- Jaw Kit	1.728	6.000	1.187	0.750	0.730	3.875	8.515	16
DLU6ALU2.50- Kit	2.500	6.000	1.187	1.500	0.730	3.875	8.500	25
DLU6ALU3.25- Kit	3.250	6.000	1.187	2.250	0.730	3.875	8.500	32

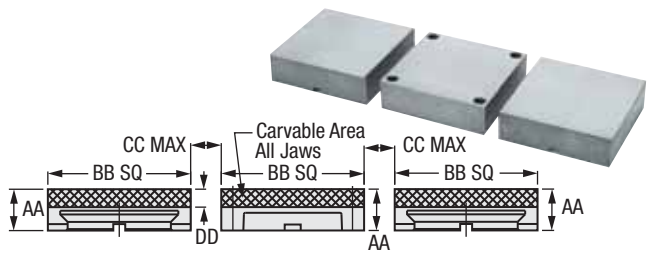


DLU4C - Jaw Kit • DLU6C - Jaw Kit

Quick Change, Machinable Ductile Iron Jaws

- Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".

	AA	BB	CC	DD	MM	PP	QQ	LBS
DLU4C- Jaw Kit	1.228	3.969	1.500	0.500	0.620	3.188	7.079	13
DLU4C1.70- Jaw Kit	1.700	3.969	1.500	0.972	0.620	3.188	7.079	19
DLU4C2.20- Jaw Kit	2.200	3.969	1.500	1.472	0.620	3.188	7.079	25
DLU6C- Jaw Kit	1.728	5.969	1.218	0.750	0.730	3.875	8.515	38
DLU6C2.50- Jaw Kit	2.500	5.969	1.218	1.500	0.730	3.875	8.515	59
DLU6C3.25- Jaw Kit	3.250	5.969	1.218	2.250	0.730	3.875	8.515	79

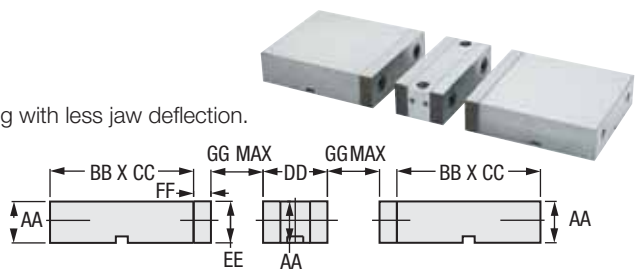


DLU6J - Jaw Kit

Standard Jaws

- Hardened steel jaw plates.
- Stationary and movable jaws 1.780" high. Extra height allows higher clamping with less jaw deflection.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".

	AA	BB	CC	DD	EE	FF	GG	MM	NN	OO	LBS
DLU6J- Jaw Kit	1.728	6.000	5.969	2.690	1.735	0.725	2.125	0.730	2.690	6.940	37



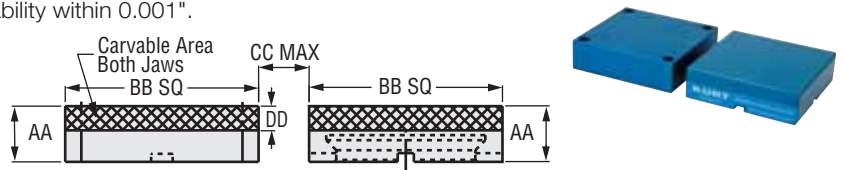
Select Your Choice Of Jaw Kits For DU68 Fixture Vise

DU68ALU - Jaw Kit

Quick Change, Machinable Soft Jaws

- 90° indexable soft jaws (6061 - T6 Aluminum) can be machined to fit the shape of your part for inexpensive dedicated fixturing.
- Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".

6" Jaw Kits	AA	BB	CC	DD	WT (lbs.)
DU68ALU- Jaw Kit	1.728	6.000	6.110	0.750	11
DU68ALU2.50- Kit	2.500	6.000	6.110	1.522	17
DU68ALU3.25- Kit	3.250	6.000	6.110	2.727	22

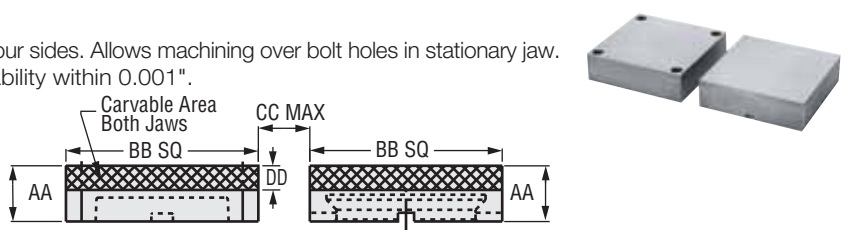


DU68C - Jaw Kit

Quick Change, Machinable Ductile Iron Jaws

- Movable jaw blocks are indexable and machinable on all four sides. Allows machining over bolt holes in stationary jaw.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".

6" Jaw Kits	AA	BB	CC	DD	WT (lbs.)
DU68C- Jaw Kit	1.728	5.969	6.140	0.750	26
DU68C2.50- Jaw Kit	2.500	5.969	6.140	1.522	39
DU68C3.25- Jaw Kit	3.250	5.969	6.140	2.727	53

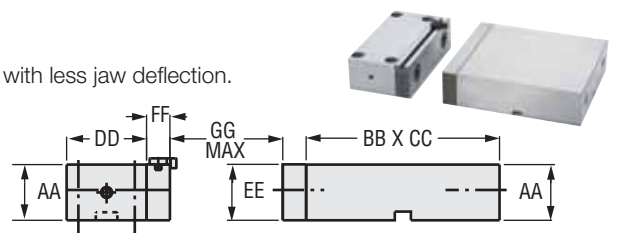


DU68J - Jaw Kit

Standard Jaws

- Stationary and movable jaws 1.780" high. Extra height allows higher clamping with less jaw deflection.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".
- Hardened steel jaw plates.

6" Jaw Kits	AA	BB	CC	DD	EE	FF	GG	WT (lbs.)
DU68J- Jaw Kit	1.728	6.000	5.969	2.480	1.735	0.725	8.045	24

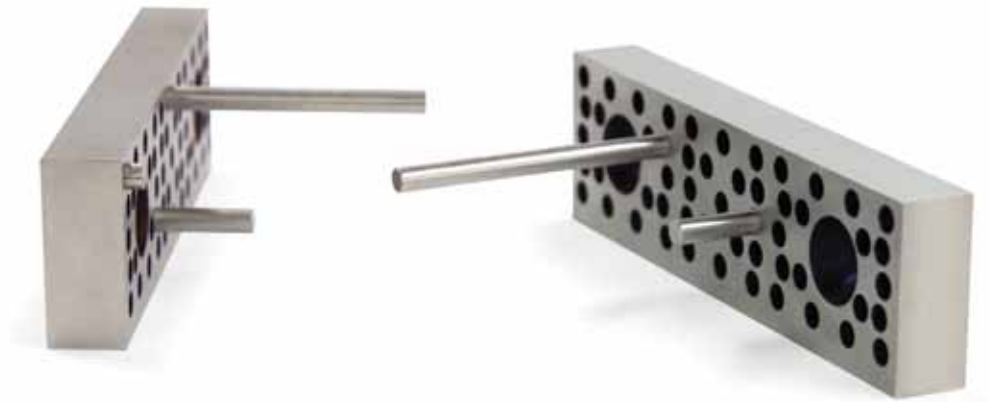


3-IN-ONE SYSTEM JAW PLATES

Models:

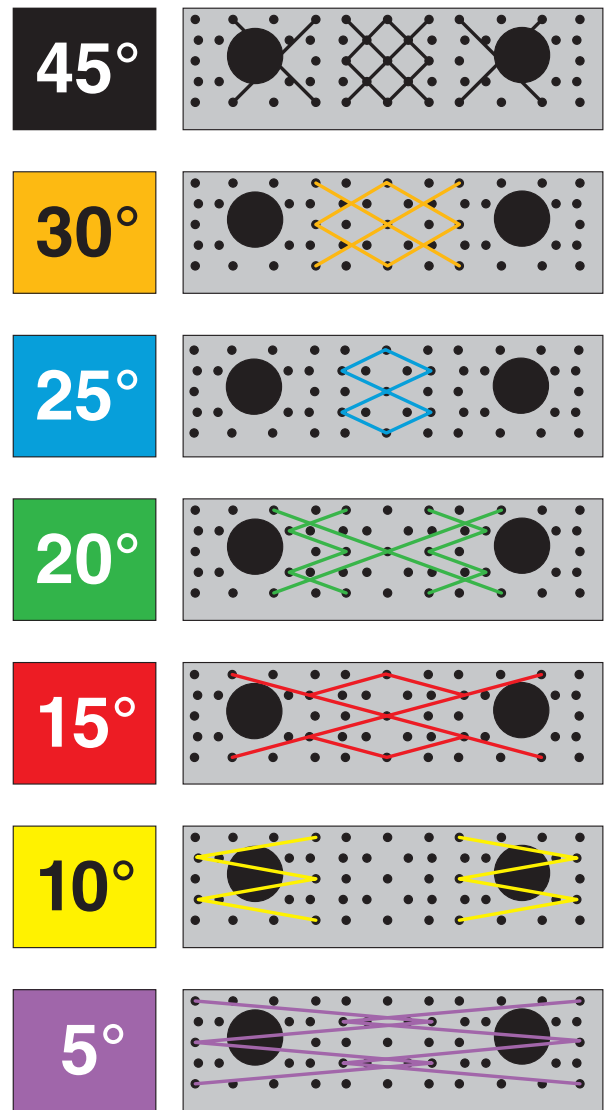
KSJ6 (for 6 Inch vise)

New KSJ8 (for 8 Inch vise)



Features:

- Ideal for quick setups of common angle cuts.
- Preset patterns in jaws provide for these 7 popular angles: 5°, 10°, 15°, 20°, 25°, 30°, 45°.
- Tolerance between holes 0.0004" (0.01mm)
- Jaw dimensions:
KSJ6 6" x 1.735" x 0.725" ±0.000787" (±0.02mm)
KSJ8 8" x 2.20" x 1.075" ±0.000787" (±0.02mm)
- Pins Sets Included are:
 - 4 ea 6mm x 22mm • 3 ea 6mm x 40mm
 - 3 ea 6mm x 58mm • 3 ea 6mm x 76mm
- Pin Sets Dimensional Tolerance: ±0.0007" (0.018mm)
- Doubles as a convenient workstop, Triples as a parallel. Does the work of 3 products.
- Made for Kurt in Sweden.



Grid Plates

- TP101602** 10" x 16"
- TP122002** 12" x 20"
- TP162602** 16" x 26"

Grid Plates (also known as locator plates, tooling plates) – customizable grid patterned locator system.

Purchase standard grid plates to self customize or purchase a plate customized to your machine tool table for hold down holes, locator pins, standard dowel pins, keyway holes or slots as required. Call for quote on custom plates.

A36 Steel plates are stress relieved and ground with a treated black oxide surface.

Features:

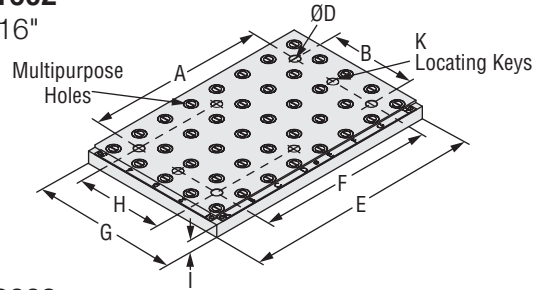
- Available in a variety of sizes (inch dimensions).
- Laser cut alpha/numeric indicator strips can be added/removed to adjust to needed size.
- Reduce set-up time.
- Multipurpose bushed and tapped holes held to true position 0.0008".
- Protection plugs included for every hole.
- Kurt HD and MoveLock vises can be mounted directly.
- 2" center to center spacing.

In-stock standard plates ship next day. Customized plates ship within 5 days or less after receipt of all specifications.

Each plate comes with one alpha and one numeric strip, multipurpose bushed and tapped holes, protection plugs, and four locator holes. Mounting brackets sold separately.

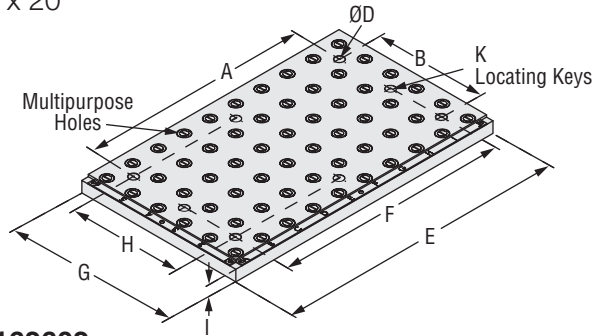
TP101602

10" x 16"



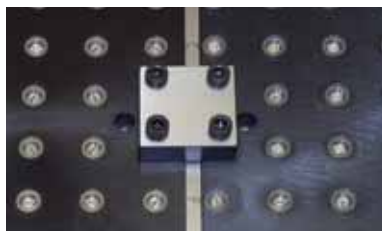
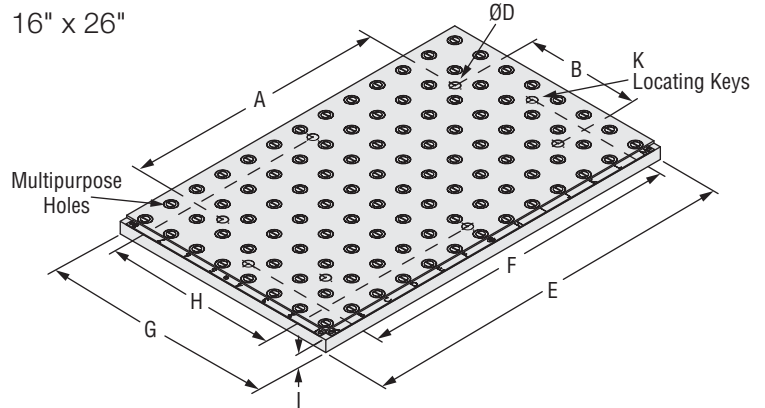
TP122002

12" x 20"



TP162602

16" x 26"

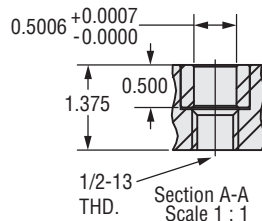


Locator Block shown connecting two grid plates.
Part No. TP400102 Locator Block (1)
Part No. TP400102-SC Screws (4)

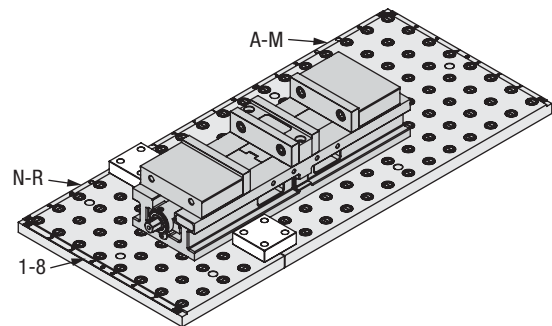
Indicator strips are adjustable based on combination of plates. Example shown: Alpha A-M and N-R with 1-8 numeric.

Call for special pricing on vise and grid plate packages. Plus, receive free mounting on all packages!

Multipurpose Holes



Example of two plates combined with HD Vise mounted



Part #	A	B	D	E	F	G	H	I	K	Wt.
TP101602	Note: A, B & D hold down holes to be added based on customer specifications (size and location).			15.938"	12.000"	9.938"	6.000"	1.000" ±0.001	Ø.6250" +0.0005" -0.0000 thru	45 Lbs.
TP122002				19.938"	16.000"	11.938"	8.000"	1.000" ±0.001		68 Lbs.
TP162602				25.938"	22.000"	15.938"	12.000"	1.000" ±0.001		118 Lbs.

InnerLock Jaw Plates



InnerLock Individual Jaws	4" Vise		6" Vise		8" vise	
	Part #	Ship Wt.	Part #	Ship Wt.	Part #	Ship Wt.
SINGLE STEP	AJ400-32	1 Lb.	AJ600-32	2 Lbs.	AJ800-32	6 Lbs.
DOUBLE STEP	AJ400-236	1 Lb.	AJ600-236	2 Lbs.	AJ800-236	5 Lbs.
ALUMINUM	AJ400-234	1 Lb.	AJ600-234	1 Lb.	AJ800-234	2 Lbs.
SEMI-HARD STEEL (4150)	AJ400-235	1 Lb.	AJ600-235	3 Lbs.		
SERRATED	AJ400-47	1 Lb.	AJ600-47	2 Lbs.	AJ800-47	6 Lbs.
V JAW HARDENED & GROUND	AJ400-237	2 Lbs.	AJ600-237	5 Lbs.	AJ800-237	10 Lbs.
*BOLTS-D PIECES 2/PLATE	00-3353	1 Lb.	00-3417	1 Lb.	00-3481	1 Lb.
*BOLTS-PT PCS. 2/PLATE	00-3353	1 Lb.	00-3417	1 Lb.	00-3481	1 Lb.
*BOLTS-DL PCS. (STATIONARY) 2/PLATE	00-3348	1 Lb.	00-3412	1 Lb.	-	-
*BOLTS-DL PCS. (MOVABLE) 2/PLATE	00-3353	1 Lb.	00-3417	1 Lb.	-	-

Jaws for HDL Vises	Part #		Dimensions	
HDL SERIES VISE – MOVABLE (4)	AJ600-89	LHSCS	M12 x 1.75	30mm Lg
HDL SERIES VISE – STATIONARY (4)	AJ600-143	LHSCS	M12 x 1.75	16mm Lg

With the InnerLock jaw plates, it takes only 40 seconds to change. By minimizing down time, the unique reversible feature saves you money on the jaw plates. Each jaw plate can be mounted in two directions, giving you two jaw plates for the price of one. For instance, the plain jaw plate when in the inverted position has a step for holding small parts closer to the spindle. Our small through-hole design allows for greater gripping surface.

Part #	INNERLOCK JAW PLATE DIMENSIONS																						
	Aluminum			Semi Hard			Single			Double Step				Serrated			V-Jaw						
	W	L	H	W	L	H	W	L	H	W	L	H	ST 1	ST 2	W	L	H	W	L	H	SMØ	LGØ	
AJ400	0.730	3.969	1.374	0.730	3.969	1.374	0.570	3.969	1.374	0.125	0.547	3.969	1.374	0.250	0.500	0.547	3.969	1.374	1.125	3.969	1.374	0.100	1.500
AJ600	0.9810	5.969	1.880	1.125	5.969	1.880	0.725	5.969	1.880	0.188	0.735	5.969	1.880	0.375	0.750	0.725	5.969	1.880	1.875	5.969	1.880	1.125	3.000
AJ800	1.230	7.969	2.440	-	-	-	1.075	7.969	2.440	0.250	1.075	7.969	2.440	0.500	1.000	1.075	7.969	2.440	2.375	7.969	2.440	1.500	4.500

*InnerLock jaws require low profile cap screws (LPCS). Sold as each.

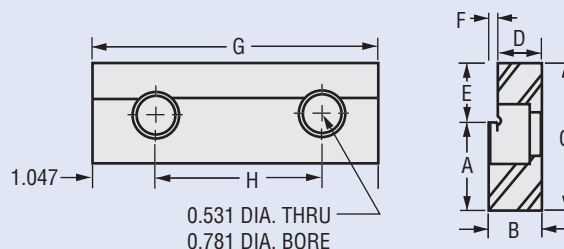
Machinable Aluminum Jaw Plate For All Kurt 6" Vises

XJAB6A-318



- 6" Aluminum (6061-T6) soft jaw. Fits all Kurt 6" vises.
- Reversible top to bottom and front to back, (Counter bore both sides).
- Extra thickness for carving part shapes into jaw plate.
- 5.969" L x 1.500" W x 1.874" H.
- Ship Wt. 2.00lbs

Standard Individual Jaw Plates

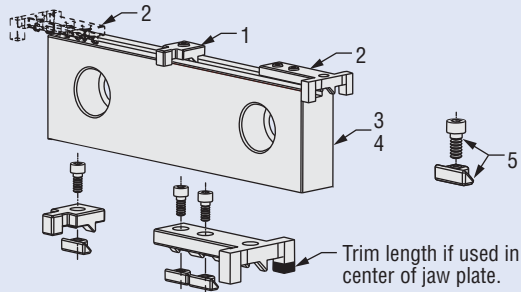


Part #	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Dim "E"	Dim "F"	Dim "G"	Dim "H"	Description	Ship Weight
D40-7	N/A	0.547	1.235	N/A	N/A	N/A	3.969	2.500	Std. Hard Jaw	1 lbs.
D40-7 SOFT	N/A	0.562	1.250	N/A	N/A	N/A	3.969	2.500	Std. Soft Jaw	1 lbs.
D60-7	N/A	0.750	1.750	N/A	N/A	N/A	5.969	3.875	Std. Hard Jaw	2 lbs.
D60-7 SOFT	N/A	0.750	1.750	N/A	N/A	N/A	5.969	3.875	Std. Soft Jaw	2 lbs.
60-32-1	1.693	0.725	1.880	0.610	0.187	0.115	5.969	3.875	Std. Step Jaw	2 lbs.
60-236-1	1.505	0.725	1.880	0.610	0.375	0.115	5.969	3.875	Std. Step Jaw	2 lbs.
60-236-2	1.130	0.725	1.880	0.610	0.750	0.115	5.969	3.875	Std. Step Jaw	2 lbs.
*60-234-1	N/A	0.980	1.880	N/A	N/A	N/A	5.969	3.875	Aluminum	1 lbs.
*60-235-1	N/A	1.125	1.880	N/A	N/A	N/A	5.969	3.875	4150 semi-hard	3.5 lbs.
LP60-32	1.469	0.725	1.635	0.610	0.166	0.115	5.969	3.875	Low Profile Step Jaw	2 lbs.
*60-47-1	N/A	0.725	1.735	N/A	N/A	N/A	5.969	3.875	Std. Serrated	2 lbs.
D80-7	N/A	1.105	2.200	N/A	N/A	N/A	7.969	4.750	Std. Hard Jaw	5 lbs.
D80-7 SOFT	N/A	1.105	2.200	N/A	N/A	N/A	7.969	4.750	Std. Soft Jaw	5 lbs.
D100-7	N/A	1.320	2.937	N/A	N/A	N/A	10.125	5.750	Std. Hard Jaw	6 lbs.
D100-7 SOFT	N/A	1.350	2.957	N/A	N/A	N/A	10.125	5.750	Std. Soft Jaw	6 lbs.
D100-47	N/A	1.375	3.000	N/A	N/A	N/A	10.125	5.750	Std. Serrated	6 lbs.

*60-234-1 is a carve your own pocket jaw plate.
 *60-235-1 is a carve your own pocket jaw plate.
 *60-47-1 Serrations are aggressive and will mark parts.

Groove Lock

PATENTED



Features:

- Simple, functional, integral workstop system.
- Workstop does not interfere with part or spindle.
- Single bolt design for tightening workstop.
- Multiple parts can be located on the same jaw plate.



D60-315



WSRL46

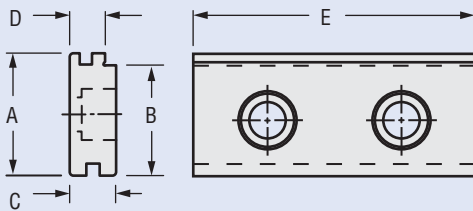


WSRL46

GROOVE LOCK WORKSTOP		
Item	Part #	Description
1	WSRL46	Workstop assembly, suitable to use with 2" thru 6" jaw plates
2	WSRL46	Extended length workstop assembly, suitable to use with 4" thru 6" jaw on outside. Can be used on right or left end of jaw. Note: To use in center of jaw length, locating ear must be shortened to clear the top of the stationary jaw area.
3	D60-315	6" Groove Lock jaw plate (Not reversible) 1.735 x 0.7520 x 5.969
4	D40-315	4" Groove Lock jaw plate (Not reversible) 1.235 x 0.5470 x 3.969
5	WSRL46-86-SA	Replacement clamp assembly

All items sold separately

Groove Lock Reversible Style Step jaw plates



REVERSIBLE STYLE STEP JAW PLATES						
Vise Size	Part #	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Dim "E"
4"	D40-316	1.374	1.250	0.672	0.547	3.969
6"	D60-316	1.880	1.700	0.735	0.547	5.969

6PJS Magnetic Jaw Plate and Parallel Set (Imported)

This 6" magnetic jaw set from Kurt comes complete with two jaw plates with an embedded rare earth magnet for holding the parallels in place, leaving hands free to hold and clamp the workpiece. Genuine Kurt Groove Lock workstops are also included, all in it's own convenient plastic storage box. **PATENTED**



This 11 Piece Set Includes:

- 2 ea. 3/16" x 1" x 6" ground steel parallels.
- 2 ea. 3/16" x 1-1/4" X 6" ground steel parallels.
- 2 ea. 3/16" x 1-1/2" x 6" ground steel parallels.
- 1 ea. D60-7-SAMAG hardened jaw plate with rare earth magnet.
- 1 ea. D60-315-SAMAG hardened Groove Lock jaw plate with rare earth magnet.
- 1 ea. WSRL46 Kurt Groove Lock workstop.
- 1 ea. WSRL46 Kurt Groove Lock extended workstop.
- 1 ea. plastic storage box.

Features:

- Fits all Kurt 6" vises.
- Powerful rare earth magnets hold the parallels in place securely.
- Genuine Kurt Groove Lock workstops are included.
- Storage box helps keep you organized.
- Ground steel jaw plates and parallels.
- 8 lbs.

6" Magnetic Jaw Plates

Features powerful rare earth magnets for holding parallels securely in place, leaving hands free to hold and clamp the workpiece. Fast and accurate set-ups. **PATENTED**



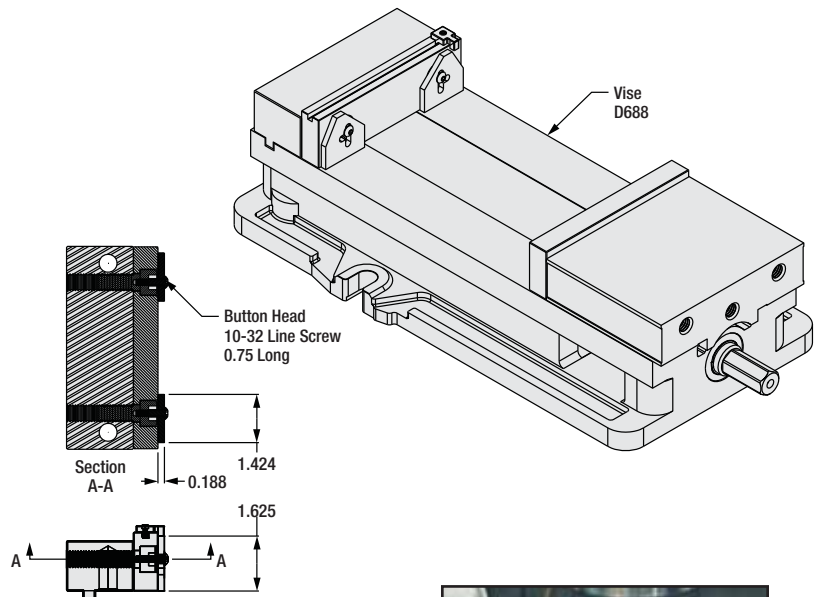
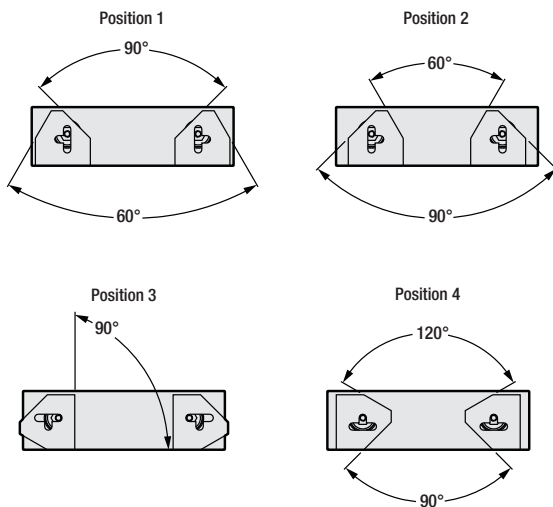
6" MAGNETIC JAW PLATES				
Part #	Description	Length	Width	Height
D60-7-SAMAG	6" Magnetic Jaw Plate	5.969	0.725	1.735
D60-315-SAMAG	6" Magnetic Jaw Plate Accepts Groove Lock Workstops	5.969	0.725	1.735

Workstop sold separately

SP63045 Sine Plates

- 30°, 45° and 60° angles built in
- Hold round parts
- Use as parallels
- Squares up parts at 90°
- Precision ground
- Installs quickly and easily
- No need to remove jaw plates to use them

NEW



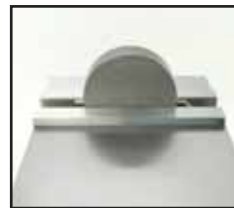
Position 1



Position 2



Position 3



Position 4



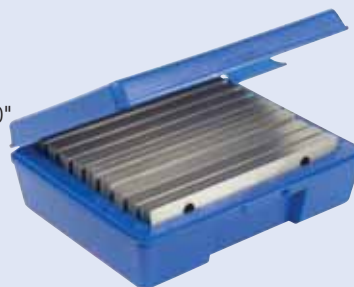
8" Parallel Sets (IMPORTED)



8" Parallel Sets	
Part #	Description
8PS6	6 Pair Set
8PS9	9 Pair Set

8PS6 6 Pair Set Features:

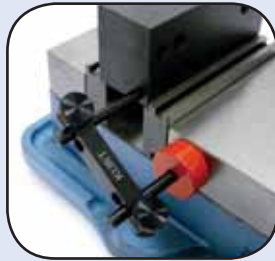
- 1.000", 1.250", 1.500", 1.750", 2.000", 2.125" Heights.
- 0.250" ±0.002" Thickness.
- 0.0002" Parallelism.
- 1 ea. Plastic storage box.
- Weight 12 lbs.



8PS9 9 Pair Set Features:

- 1.000", 1.250", 1.375", 1.500", 1.625", 1.750", 1.875", 2.000", 2.125" Heights
- 0.250" ±0.002" Thickness.
- 0.0002" Parallelism.
- 1 ea. Plastic storage box.
- Weight 17 lbs.

2MWS Magnetic Workstop



Features:

- Fast, accurate positioning of parts.
- Rare earth magnet attaches anywhere on the workholding setup without the need for connecting bolts or screws.
- Removes quickly to clear spindle travel when necessary.
- 18lbs of pull.
- Body is 2 5/8" long with 2" adjustable stop pins on both ends of body.
- Ideal for single, multiple station vises and high density workholding setups.

AngLock Workstop



Versatile, quick mounting workstops will work above jaws when gang mounting vises and space for a workstop does not exist. These Kurt workstops permit fast, accurate positioning on repetitive work. They team up with your AngLock precision vise for accurate parts production.



ANGLock VISE WORKSTOPS		
Part #	Vise Size	Weight
D30-45	4" Vise	1 Lb.
360PWS	6" Vise	2 Lbs.
D80WS	8" Vise	4 Lbs.

6AWS Workstop



New adjustable workstop can be used on all Kurt high-density vises. The body clamp has a 2" adjustment and features a 3" long stop pin for fast and easy set-ups. A long and short spacer is also available to fit almost any application.

Features:

- Versatile.
- Economical.
- Fast, easy set-up.
- Black oxide finish.
- Fast accurate positioning of parts.

WORKSTOPS	
English Vise 5/16-18	Metric Vise m8 x 1.25
6AWS-Kit	6AWSM-Kit
6AWS Workstop	6AWSM Workstop
6AWS-288 1" Short Spacer	6AWSM-288 25.4mm Short Spacer
6AWS-289 2" Long Spacer	6AWSM-289 50.8mm Long Spacer

Kits include the workstop and both long and short spacers.

Parallel Keeper

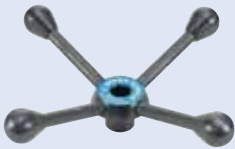
Models:
KPS-6000
KPS-8000

Place your parallels in the vise against the jaws. Take the Parallel Keeper, squeeze it together and place it inside the parallels. Release the Parallel Keeper, it will push against the parallels, holding them against the jaws of the vise. It's that simple! KPS-6000 model opens to 6" and has an overall size of 8" x 14". KPS-8000 model opens to 8" and has an overall size of 10" x 14". Your new revolutionary labor saver, your "machinists third hand," is at work, saving part change time. 1 lb. shipping weight.



Shown with 3610V

Kurt Speed Handle



The Kurt Speed handles reduce set-up and clamp times. The handles come in two sizes. The **D40SH** with its **9/16** internal hex fit our 4 inch vises. The **D60SH** with a **3/4** internal hex will fit all our 6 inch model vises. Our handles do not interfere with the milling machine giving you rapid part loading and unloading. You get Kurt's quality in a custom steel designed product. There is no aluminum hex to strip. If you add one of our **Hex Extensions** you can use it on our 8 inch vises as well. **D40SH**. 3 lbs. **D60SH**. 4 lbs.

Kurt Torque Handle TH6



Torque Vs. Position				
Position	1	2	3	4
Torque Ft. Lbs.	6	8	10	20

Torque Tolerance ±2 Lbs.

The Kurt Torque Handle provides repeatable clamping for small delicate parts. The Torque Handle gives you a precise feel while providing an audible "click". The small 10-3/4" overall length will not interfere with most table set-ups and the steel construction will give you the versatility and reliability demanded by today's modern machine shops. A set screw allows your Torque Handle to become an integral part of your vise and by adding a hex extension you can use it on 4" and 8" vises. 3.5 lbs.

Replacement Vise Handles



Kurt original equipment handles are solid cast iron for strength and durability and are plated for rust protection. The handle portion is one-piece with a machined ergonomic ball on the end.

Part #	Hex	Length
D40I-10-SA	9/16	6 in.
D60I-10-SA	3/4	8-5/8 in.
D80I-10-SA	7/8	16-1/8 in.
D100I-10-SA	1	16-1/8 in.

KH6 and KH8

Never lose a vise handle again. New Kurt Vise Handle Hanger.

- Models KH6 (for 6" handles) and KH8 (for 8" handles)
- Made from high strength Thermoplastic
- Mount to workbenches, tool carts, cabinets or any surface near machine tables.
- Creates a convenient holding spot for quick access to vise handles.

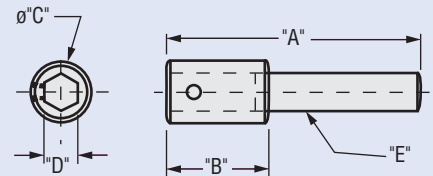


Vise Screw Hex Extensions



Features:

- Vise screw hex extensions become useful when the vises are mounted on large machines where extending the hex will allow better access.
- Hex extensions will allow a 6" handle to be used on a 4" or 8" Kurt vise.



VISE SCREW HEX EXTENSION								
Vise Size	Handle Size	Part #	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Dim "E"	Weight
4"	4	HEX4	3.750	1.500	1.000	0.563	0.562	.5 lb.
6"	6	HEX6	5.000	2.000	1.250	0.750	0.750	1 lb.

Spanner Wrench

Model No. DL430-307-SA – 4"
Model No. DL640-307A-SA – 6"

Features:

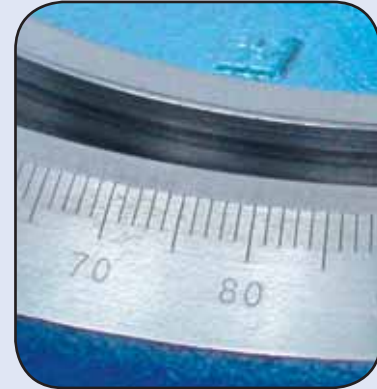
- Adjust the preload on your Kurt DoubleLock vise simply and quickly
- All Aluminum
- Knurled end for better grip
- Two models available: 4" and 6"



Swivel Base



Swivel base allows positioning in 1 degree increments.



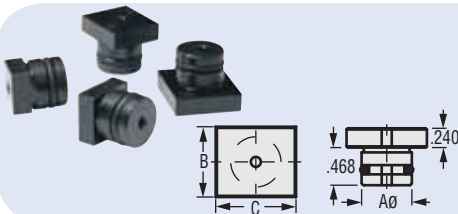
T-Bolt and Washer

SWIVEL BASE			
Part #	T-Bolt and Washer	Fits These Vise Models	Ship Wt.
D40-4-SA	D40-27-SA	D40	16 lbs.
D50-4-SA	D50-27-SA	HD690	20 lbs.
D60-4-SA	D60-27-SA	D60, D675, D688	26 lbs.
D80-4-SA	D80-27-SA	D80, D810	80 lbs.



D688 vise shown mounted on D60-4-SA swivel base.

Sine Keys (Non-Expandable O-Ring Style)



SINE KEYS - Non-Expandable O-Ring Style – English (Each)			
P/N	AØ	B	C
SKOA8.9	0.625	0.4995	0.5620
SKOA10.11	0.625	0.6245	0.6870
SKOA12.13	0.625	0.7495	0.8120
SKOA14.16	0.625	0.8745	0.9995

SINE KEYS - Non-Expandable O-Ring Style – Metric (Each)			
P/N	AØ	B	C
SKOAM14.16	0.625	14mm	16mm
SKOAM18.20	0.625	18mm	20mm
SKOAM20.22	0.625	20mm	22mm

Vise Keys



Hardened vise keys are used to align your Kurt vise to your milling machine table. Step keys are used when the keyway in the vise is different than that of the machine T-slot. Standard keys are used when they are the same width.

HARDENED STANDARD KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vise	1/2 x 1/2	D30-50
6" Vise	11/16 x 11/16	D50-50
8" & 10" Vises	13/16 x 13/16	D80-50

HARDENED METRIC KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vise	1/2 x 18 mm	D30-33M18
6" Vise	11/16 x 16 mm	D50-33M16
6" Vise	11/16 x 18 mm	D50-33M18
8" Vises	13/16 x 16 mm	D80-33M16
8" & 10" Vises	13/16 x 18 mm	D80-33M18

HARDENED STEP KEYS (PAIR)		
Vise Model	Key Size	Part #
4" Vise	1/2 x 5/8	D30-33A
6" Vise	11/16 x 5/8	D50-33A
	11/16 x 13/16	D50-33B
	11/16 x 3/4	D50-33C
	11/16 x 9/16	D50-33D
	11/16 x 1/2	D50-33E
8" & 10" Vises	13/16 x 7/8	D80-33A
	13/16 x 11/16	D80-33B
	13/16 x 3/4	D80-33C
	13/16 x 5/8	D80-33D

**Automatic
Drawbar**



**Mechanical
Drawbar**



Available for most manual & CNC mills with standard R-8 collets or 30 or 40 taper tool holders. Automate your present "Knee-Type" milling machines by installing a Kurt PowerLock Drawbar. PowerLock Drawbars reduce tool change time and allow more cutting time in the cycle. This eliminates waste. The whole process using the Kurt automatic or mechanical PowerLock Drawbar cuts the tool change time to one-fourth the time required to change tools manually with wrenches. An added benefit is consistent torque on the drawbar rod. When you multiply the time savings for every tool change on all of your mills, it can really add up.

Features:

- Easy installation - operator can install with no special tools (instructions provided).
- Reduces operator fatigue - improves productivity and safety.
- Eliminates drawbar tapping to free tool in collet - reduces operator abuse.
- Convenient control - eliminates operator stretching to reach the drawbar.
- Assures uniform collet tightening - prevents under tightening and tool slip or over tightening and drawbar breakage.
- Operates on shop air supply - filter/lubricator, regulator and gauge included with most units. Provides clean oiled air to ensure long life.
- Safety interlock on automatic models prevents accidental engagement.
- Used with present tooling - operates R-8, #30 & #40 taper tool holders. Additional special tool holders not needed.
- Machine your own Drawbar Kits. Available for R-8 collets, #30 or #40 taper tool holders.



**PowerLock Drawbar is available
for these popular mills:**

- | | |
|-----------------|--------------|
| Acer | Lagun |
| Acramill | Mighty |
| Alliant | Millport |
| Bridgeport | Royal |
| Chevalier | Seiki |
| Clausing/Kondia | Sharp |
| Comet | Shizouka |
| DoAll | South Bend |
| Ex-Cell-O | Southwestern |
| Hurco | Supermax |
| Jet | Tri-Onics |
| Kent | Webb |
| Kondia | Willis |

For manufacturers not listed, contact factory.

*Note: All machines that have Erickson Quick Change Spindle, and are converted to a Power Drawbar will have sharp threads and drive keys exposed near the spindle nose. We recommend the installation of a 194-00-SA Erickson Spindle Nose Guard.



**Model:
KHP5000PF**



**Model:
KHP5000PH**



The Kurt hydraulic pump is a compact, lightweight pump which will keep your vise or clamp under constant hydraulic pressure. The pump is driven by a high efficiency pneumatic motor and operated with either a easy to use foot lever control or hand lever control. It will maintain constant pressure ensuring accurate and reliable clamping pressure each and every time.

Manufactured to ISO 9001:2008 standards through an international quality assurance program to create a high quality product that you can depend on.

- For single acting vises and clamp systems only
- Can be used with all Kurt single acting 4, 6 and 8 inch vises
- Internal load limiting valve protects against an overload
- Air exhaust muffler for quiet operation
- Aluminum reservoir
- Features both air and oil filters to reduce the risk of damage from environmental contaminates

Pressure Chart

Air Pressure (PSI)	Hydraulic Pressure (PSI)
20	500
30	1,000
40	1,800
50	2,500
60	3,200
70	3,800
80	4,500
90	5,000

Specifications

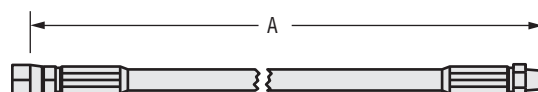
Pressure Rating (PSI)	5,000
Useable Oil Capacity (CU. IN.)	85
Hydraulic Oil	#13
Max. Input Air Pressure (PSI)	145
Input Port Threads (NPT)	1/4"-18
Output Port Threads (NPT)	3/8"-18
Oil Delivery (CU. IN./MIN.)	No Load: 49.5 / Under Load: 7.6
Model: KHP5000PF Weight (LBS)	19
Model: KHP5000PH Weight (LBS)	22

KHP5000PF-KIT Optional Vise Connection Kit

Kurt Part #	Qty	Unit	Description
1HLZ8	1	Each	Coupler, Male, Air
219-00-RM	5	Foot	Tubing, Polyethene, 1/4"
226-02	2	Each	Fitting, 1/4", Straight
312-06	1	Each	FRL W/ Gage, Micro-Fog MOD
A33-82	1	Each	Mounting Bracket and Nut
APD50-309	1	Each	#4 SAE Fitting, 7/16-20UNF
AT-L4	1	Each	Oil, Air Tool

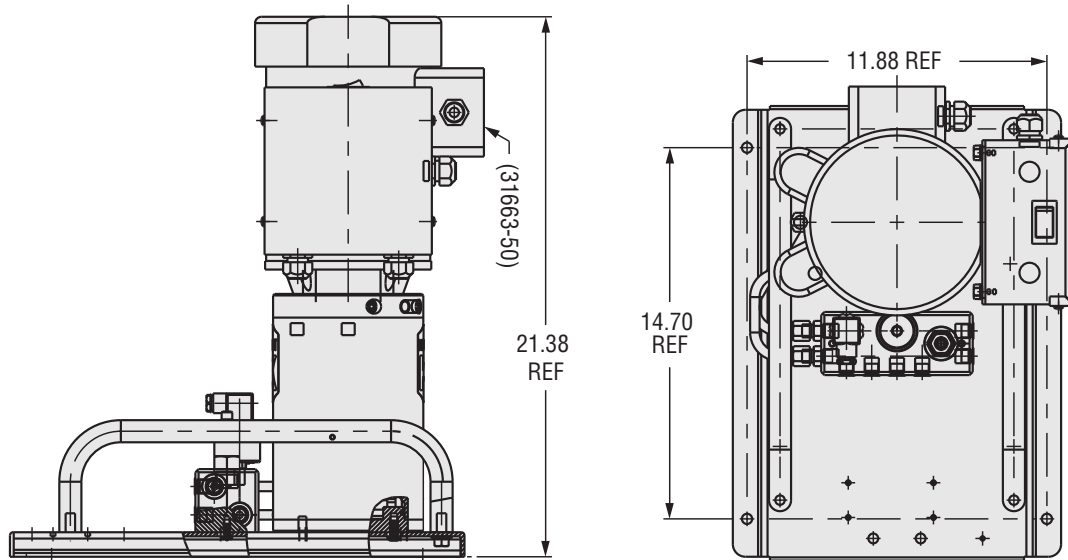
KHV-109	1	Each	3-line Air Hose - KHP5000PH Replacement Hose
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Kurt Part #	Optional Hydraulic Hoses (sold separately)
KT04036PM6JF4	36" Kurt Tuff Hydraulic Hose W/Fittings, #6 Male Pipe, #4 Female JIC
KT04072PM6JF4	72" Kurt Tuff Hydraulic Hose W/Fittings, #6 Male Pipe, #4 Female JIC
KT04144PM6JF4	144" Kurt Tuff Hydraulic Hose W/Fittings, #6 Male Pipe, #4 Female JIC



KHP5000 Hydraulic Pump

- 1 HP Motor, 115/208-230 VAC
- Max Amps 11.1 @ 5,000 PSI
- External safety relief is user adjustable from 500-5,000 PSI
- Internal safety relief set at 5,000 PSI
- Auto dump valve
- 127 cu. In. (0.54 gal) total capacity
- 75 cu. In. (0.32 gal) useable capacity
- Weight 82 lbs
- Average Pump Output Volume 31.3 cu. In.



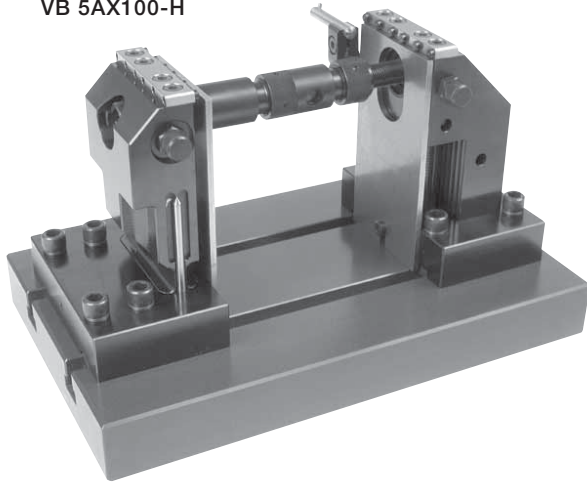
Hydraulic Clamping Systems



For complete details request a copy of the Hydraulic Swing Clamps catalog, or download a digital catalog at <http://www.kurtworkholding.com/downloads.php>

VB SCHENKE 5-AXIS CLAMPING SYSTEM

VB 5AX100-H



VB 5AX100-L



The rational vise system for 5 axis machining

- **High clamping force** (up to 40 kN) exactly where it is needed, by incorporating the tension spindle directly below the work piece support.
- Form fit clamping with embossing pins. **No pre-embossing** required.
- **No flare out** of the jaws under tension, **no distortion** on machine table.
- The special design and a clamping depth of just 8mm permits **obstruction free** machining on 5 sides.
- **Extreme rigidity** permits maximum cutting forces.
- **Any desired clamping width**, limited only by the size of the machine table. The two clamping jaws, one fixed and one moving, can be positioned at any desired distance from each other.
- Clamps blank work pieces, machined work pieces, round and irregularly formed work pieces.
- **5AX100** clamping system can be mounted on T-slot or location grid machine tables or any custom fixture.

For complete details request a copy of the VB Schenke 5-Axis catalog, or download a digital catalog at <http://www.kurtworkholding.com/downloads.php>

LEADER MultiCHUCK MMY

The Leader MultiChuck MMY product line consists of manual self-centering static workholding for machining centers, milling machines and grinders. These chucks integrate with Kurt's high density workholding towers and other devices to provide the ultimate in high productivity and high precision workholding.

MultiChuck MMY provides a simple top face operation that enables more chucks, and therefore workpieces, to be 'banked' closely together—which is not the case with the traditional side face lock/unlock systems.

Available with two or three jaws. Standard jaw strokes are 0.157", 0.196", 0.314" and 0.393" across the four variants, and the low height from 0.984" to 1.575" maximizes the machine's Z-Axis (height can be increased using blocks).



High density application with MultiChuck banked closely together on 2 sided tower.



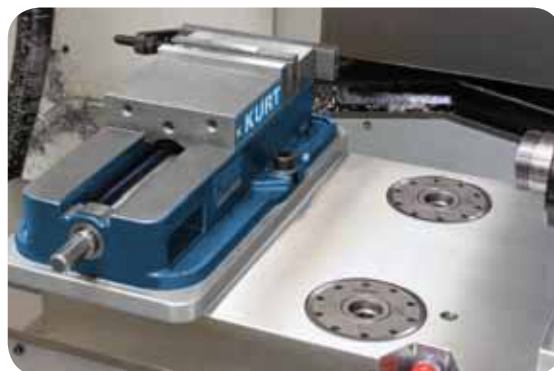
5-Axis application with MultiChuck mounted directly onto pallet.

For complete details request a copy of the Leader MultiChuck MMY catalog, or download a digital catalog at <http://www.kurtworkholding.com/downloads.php>

VB DockLock

The VB DockLock system is a patented, zero-point workholding system for increasing productivity and reducing setup and changeover. The VB DockLock system integrates with new or existing workholding devices such as Kurt vises and fixtures, and provides fast, ultra accurate setup on machining centers. Time consuming setup, alignment and bolt down tasks are eliminated.

The system consists of a patented hydraulic actuated locking cylinder device that positions and locks the vise or fixture onto the machine worktable. It allows the user to locate or remove the workholding from a machine, or move it offline or to another machine and/or back again in just seconds with zero-point positioning accuracy every time.



For complete details request a copy of the VB DockLock catalog, or download a digital catalog at <http://www.kurtworkholding.com/downloads.php>

HYDRAULIC SWING CLAMPS

Kurt Workholding introduces a wide range of Swing Clamps having clamping capacity of 475 lbs. to 6,000 lbs. at 5,000 PSI. The single cylinder design powers both the swing and clamp force cycle. The single cylinder swing clamp design allows for the clamp to swing left or right when unclamping to allow access to remove the part. Loading and unloading are a much easier task with the swing clamp design.

There are three types of Clamping Cylinders.

- Swing Action Clamps
- Link Clamps (Vertical Swing Clamps)
- Threaded Body Cylinders.



For complete details request a copy of the Hydraulic Swing Clamps catalog, or download a digital catalog at <http://www.kurtworkholding.com/downloads.php>

www.kurtworkholding.com



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