

KURT 360°TM

Advantage



Benefit from Our Full Line of Options.





Benefit from Our Full Line of Options.

The KURT 360° ADVANTAGE represents our complete precision manufacturing product offering. Gain powerful manufacturing advantages from hundreds of workholding options, custom designed options, automation, gaging systems, and so much more.

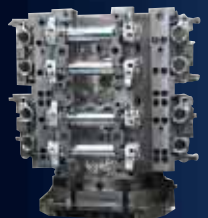
HD690 Vise



5 Axis Vise



Indexing Stations



Custom Workholding



PinLock Locating System



Zeropoint Docking System

Automation & Gaging



USB & Shop Computers



SPC Data Collection



Custom Gaging



KHP5000 Hydraulic Pump and cylinders

Index

Page	Page		
Introduction	2	Grid Plates.....	60
Application Chart	3	InnerLock Jaw Plates.....	61
PinLock Mounting System	4	Machinable Jaw Plate	61
PinLock Receiver Bushings	5	Standard Jaw Plates	61
MaxLock 350 Multi-Axis Vise.....	6	Groove Lock	62
HD & HDL Introduction	7	Magnetic Jaw Plate and	
HD690 Vise	8-9	Parallel Set.....	62
HDL AngLock Vises	10-11	6" Magnetic Jaw Plates	62
HD CarvLock Short Vises.....	12-13	Clak Parallels.....	63
HDL CarvLock Towers	14-15	8" Parallel Sets.....	63
HD CarvLock Towers.....	16-19	2MWS Magnetic Workstop.....	64
Rotary Table Workholding	20	AngLock Workstop	64
HD/HDL Vise How To Order	21	6AWS Workstop	64
HD/HDL Jaws Kits and		Parallel Keeper	64
Fixture Plates	22-25	ArmLock Handle AL6.....	65
DoubleLock Vises	26-27	Kurt Speed Handle	65
ClusterLock ClusterTower.....	28	Kurt Torque Handle TH6.....	65
ClusterLock	29	Replacement Vise Handles	65
SeraLock Foundations.....	30	Vise Screw Hex Extensions.....	65
WedgeLock Clamping Modules ..	31	Spanner Wrench	65
Modular ToolBlox	32	Swivel Base.....	66
ToolBlox	33	Sine Keys (Non-Expandable	
Versatile Lock Vises (3600) ..	34-37	O-Ring Style)	66
AngLock PT-Series Vises.....	38-39	Vise Keys	66
Custom Workholding	40-41	Hydraulic Intensifier	67
Back to Back Vises	42-43	KHP5000 Hydraulic Pump.....	67
MoveLock Modular System ..	44-45	Hydramax.....	68
MiniLock	46-47	PowerLock Drawbar.....	69
Self-Centering Vise	48-49	Precision Instruments	70-71
Extra Capacity 6" XL Vises ...	50-51		
Extra Capacity 8" XL Vises ...	52-53	Call For more information on	
AngLock D-Series Vises	54-55	these additional KURT products:	
Repair Kits	56-57	DockLock System, Hydraulic Swing	
DLU CarvLock Vise Jaw Kits	58	Clamps, Electronic Gaging and	
3-In-One System Jaw Plates	59	Automation Systems,	
		1-877-226-7823	



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	3600 Series	DoubleLock	HD Series Cluster Lower	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"									•							
	3"																
	3.5"										•	•					
	4"	•		•		•			•	•							
	5"																
	6"	•	•		•	•	•		•	•							
	8"	•		•	•			•									
	10"	•															
APPROXIMATE CLAMPING RANGE (LBS FORCE)	200																
	300																
	700																
	900																
	1,000	•	•														
	1,400																
	1,500																
	2,600																
	3,000																
	5,700																
	6,900																
	7,400																
	9,400																
12,600																	
20,000																	
26,000																	
MAXIMUM JAW OPENING IN STANDARD JAW POSITION (INCHES)		10	9	7.375	21	8	6	6x2	4x8	4x2	N/A	N/A	N/A	N/A	N/A	N/A	



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

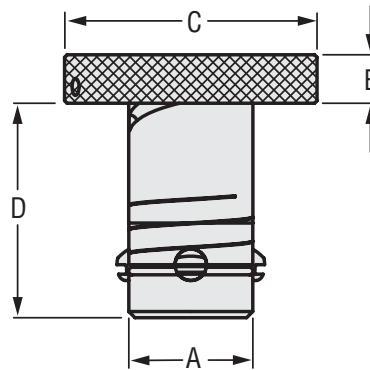
- Extraction assist for side load conditions.
- Pins provide stronger holding forces.
- Compatible with existing systems.
- Material : Shank/Bushing, high strength alloy steel
- Finish: Black Oxide
- Heat Treat: Shanks, RC 46-50
Bushings, RC 46-50
Liners, RC 46-50
- Operating Temperature Range
-49° to 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)
PL20-075	20	0.75	0.38	1.75	1.53	5/32	3/8	90	2,250
PL20-100		1.00			1.78				
PL25-075	25	0.75	0.38	2.00	1.70	5/32	3/8	90	5,444
PL25-100		1.00			1.95				
PL30-075	30	0.75	0.44	2.13	1.88	5/32	3/8	90	8,000
PL30-100		1.00			2.13				
PL35-075	35	0.75	0.50	2.25	1.97	1/4	9/16	90	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	90	15,200
PL50-100		1.00			2.70				
PL50-150		1.50			3.20				
PL50-200		2.00			3.70				

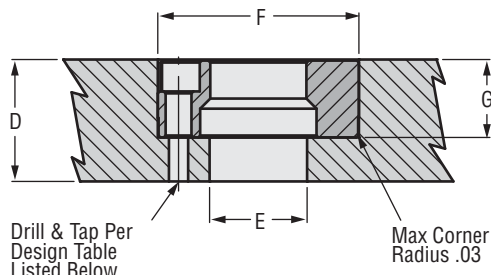


Back Mount



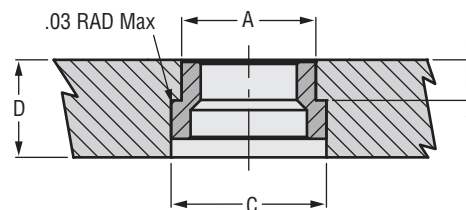
Face Mount

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 E	Bore +0.0005 -0.0000 F	Depth +0.002 -0.000 G	Tap Size & Depth ¹ H	Bolt Circle Diameter 3 PL Equally Spaced	Min. Subplate Thickness D
PL20RBF-60	20	1.6873	13/16	1.6873	0.637	10-32x3/8	1.362	1-1/8
PL25RBF-60	25	2.0623	1	2.0623	0.799	1/4-28x1/2	1.644	1-1/4
PL30RBF-60	30	2.2654	1 3/16	2.2654	0.872	1/4-28x3/4	1.876	1-3/8
PL35RBF-60	35	2.6873	1 9/16	2.6873	0.904	5/16-24x7/8	2.178	1-1/2
PL50RBF-60	50	3.4998	2 5/32	3.4998	1.240	3/8-24x1	2.916	2

Back Mount

Part Number	Shank Dia. (mm)	Actual O.D. +0.0000 -0.0004 A	Depth +0.002 -0.000 B	C-Bore ±0.006 C	Min. Subplate Thickness D
PL20RBB	20	1.0950	0.344	1.280	7/8
PL25RBB	25	1.3763	0.416	1.593	1
PL30RBB	30	1.6264	0.431	1.906	1-1/4
PL35RBB	35	1.8764	0.496	2.155	1-5/16
PL50RBB	50	2.6269	0.618	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 ±.0005" will be maintained if the two holes for receiver bushings are held to a centerline distance of ±.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"
0.75	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
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



Model: MX350

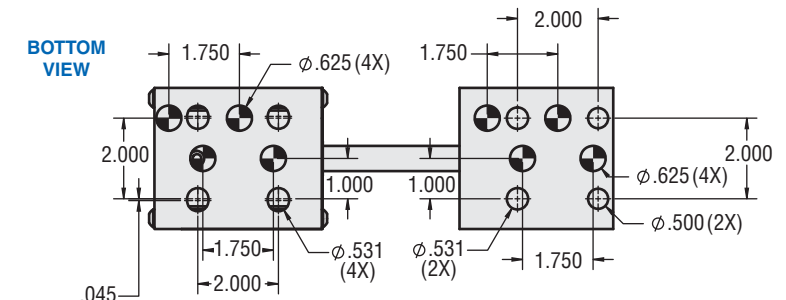
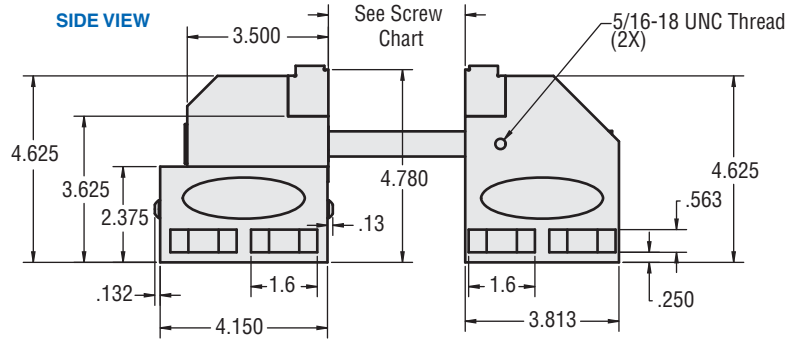
- Kurt AngLock Design pulls the part down.
- Pull Type feature decreases stationary deflection.
- 0.625" stroke – Allows for wider range of clamping before having to change setup.
- Modular Design – Mounts on two inch grid patterns when removed from the riser and "T" slots or center hole grids 100mm 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.
- Auxillary 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



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

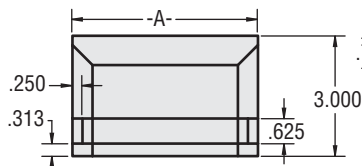
MX350-5-8 is the standard that is supplied with the vise



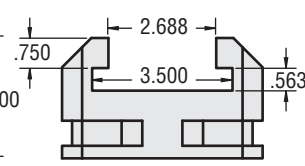
Clearance Required to Insert Bolt Under Rail.

OPTIONAL RISERS Part No MX350RL and MX350RS

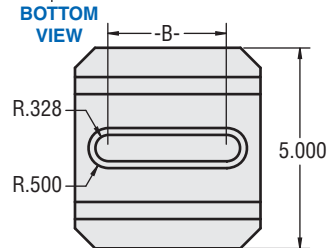
SIDE VIEW



END VIEW

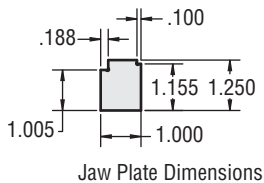


BOTTOM VIEW



Part Number	A	B
MX350RS	4.625	2.95
MX350RL	5.650	3.97

MX350-236 JAWPLATE

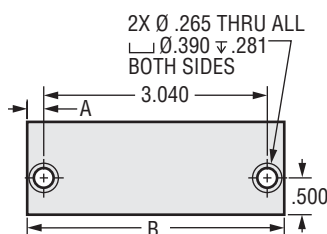


OPTIONS:

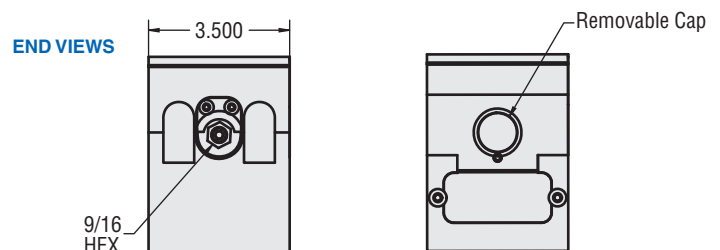
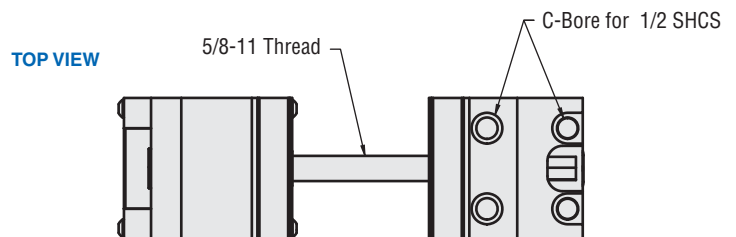
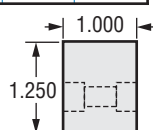
MX350-236 Double Step Jawplate

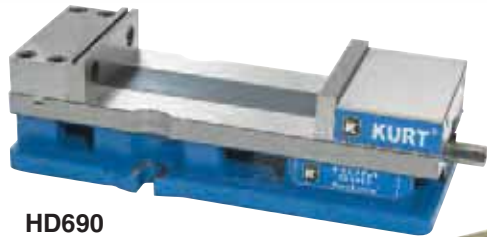
MX350-236-1 Double Step Jawplate w/CBN Coating

MACHINABLE JAW SEMI-HARD STEEL



Part Number	A	B
MX350-235-35	.230	3.50
MX350-235-45	.730	4.50
MX350-235-55	1.230	5.50





HD690



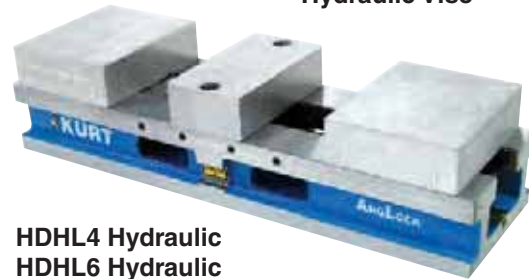
HDM6 Manual
(shown with optional machinable aluminum jaws)



HDHM6 Hydraulic
(shown with optional machinable aluminum jaws)
HDHM6-DA Double Acting Hydraulic Vise



HDL4 Manual
HDL6 Manual
(shown with optional hard jaws)



HDHL4 Hydraulic
HDHL6 Hydraulic
(shown with optional machinable aluminum jaws)



CTHD64 Manual
(shown with optional machinable aluminum jaws)



CTHDH64 Hydraulic
(shown with optional machinable aluminum jaws)
CTHDH64



CTHDL44 Manual
CTHDL64 Manual
CTHDL66 Manual
(shown with optional machinable aluminum jaws on left and optional hard jaws on right)

CTHDHL64 Hydraulic

FASTER SETUPS FOR VISES & TOWERS

HD and HDL vises and towers have new quick change jaw feature and fewer components for faster changeovers.

With a half turn of a hex key, the stationary jaw lifts off the vise or tower body. The jaw resets and self-aligns quickly without special tools. Spring pre-load design insures fast, easy loading of parts.



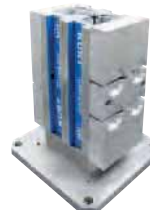
MORE OPTIONS



Fixture Plate (HD6ALP620-239)

Ultra high density loads of small parts can be accommodated in a single setup by mounting various off-the-shelf clamping 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.



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

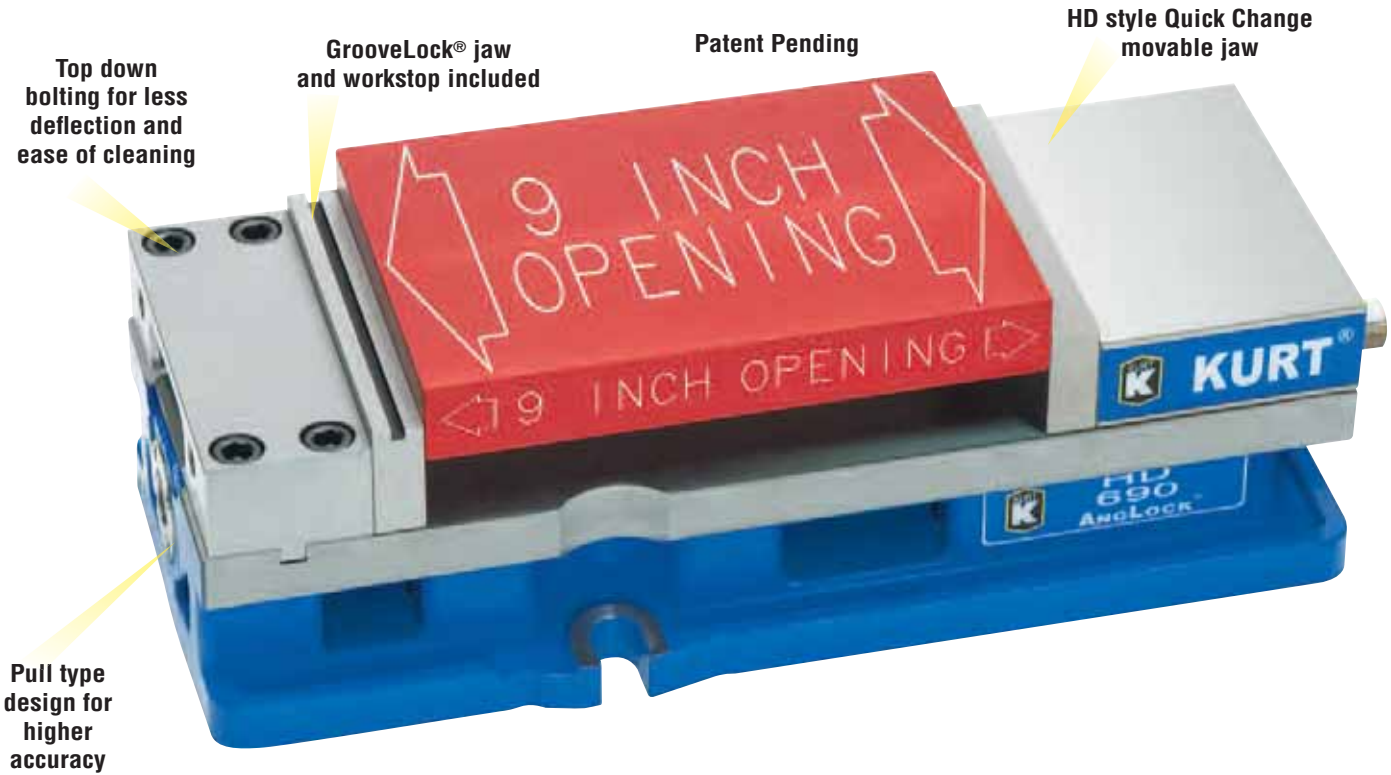


HD690 Vise

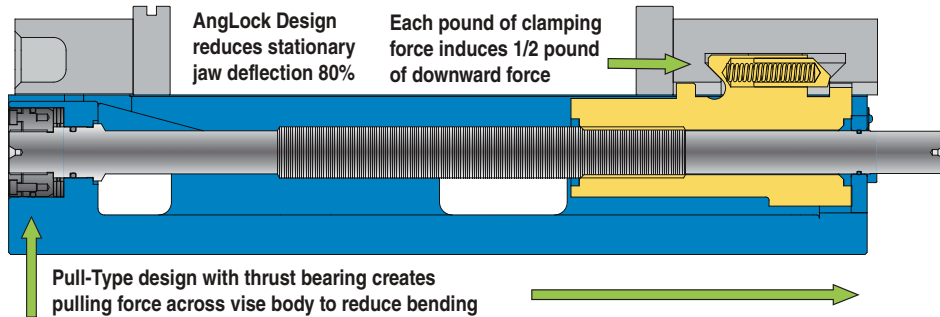
NEW

HD690 – English Version
HDM690 – Metric Version

THE FIRST 6 INCH PULL TYPE VISE WITH A 9 INCH OPENING



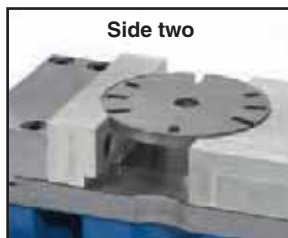
KURT Anglock® design combined with pull-type design provides ultimate rigidity and accuracy



Machinable jaws are reversible to provide multiple setups for similar or dissimilar parts.



Side one



Side two



Built-in handle for easy positioning



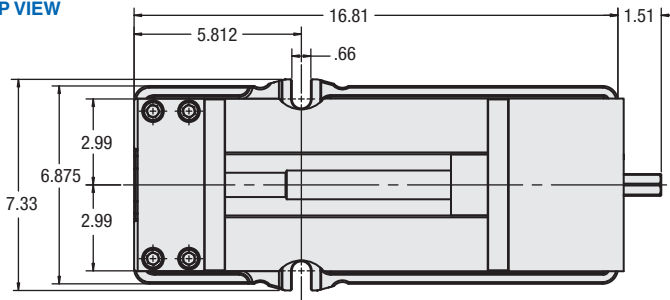
Convenient workstop mounting when not in-use

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.
- GrooveLock® jaw and workstop included.
- Adaptable to hydraulic. Uses sine keys for alignment.
- Swivel base available. Part No. D50-4-SA

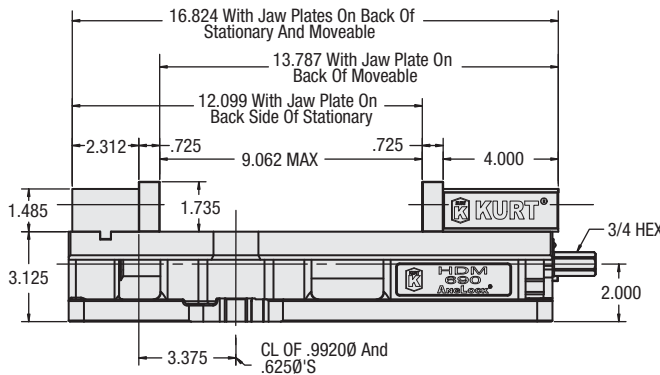


TOP VIEW



Torque-Ft. Lbs.	Clamping Force LBS.
10	975
20	1,625
30	2,400
40	3,250
50	3,700
60	4,275
70	4,700
80	5,250

SIDE VIEW

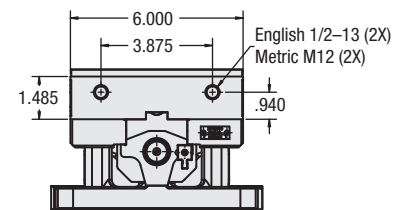


HD690 MACHINABLE KIT Part No. HD690AL-JAWKIT

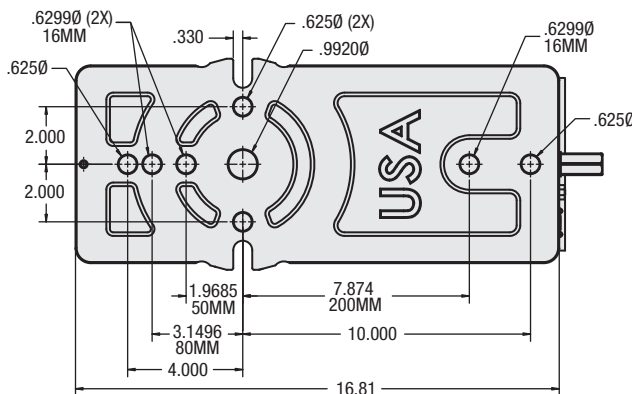
Jaw #	Used
XJAB6A-318	STATIONARY JAW
HD6AL-2	MOVEABLE JAW



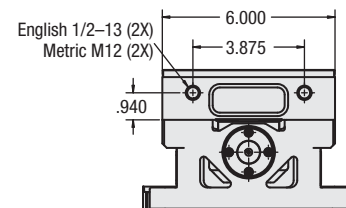
END VIEW



BOTTOM VIEW



END VIEW





HDL AngLock® VISES (4&6 Inch)

Manual & Hydraulic

4 Inch Models:

HDL4 Manual – English

HDHL4 Hydraulic – PATENTED

HDLM4 Manual Metric

HDHLM4 Hydraulic – PATENTED

6 Inch Models:

HDL6 Manual – English

HDHL6 Hydraulic – PATENTED

HDLM6 Manual Metric

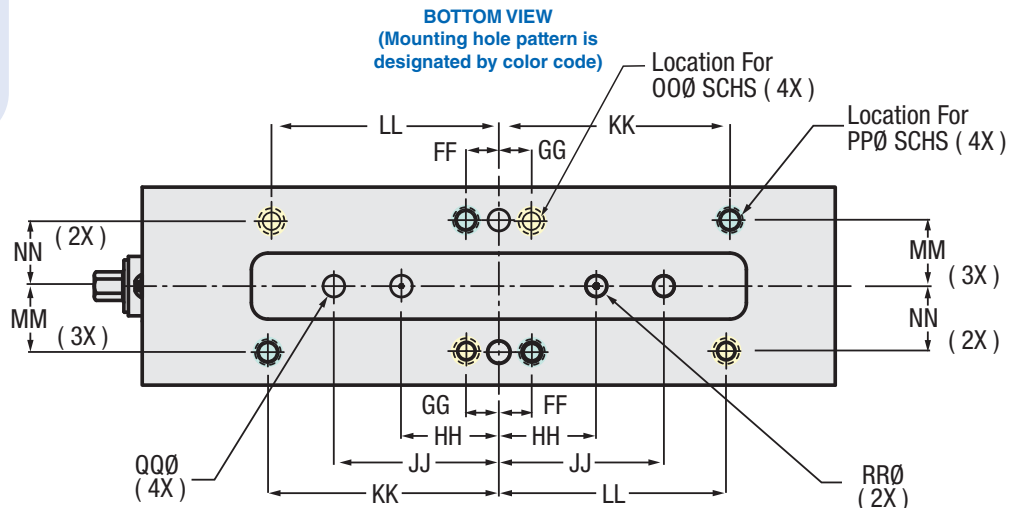
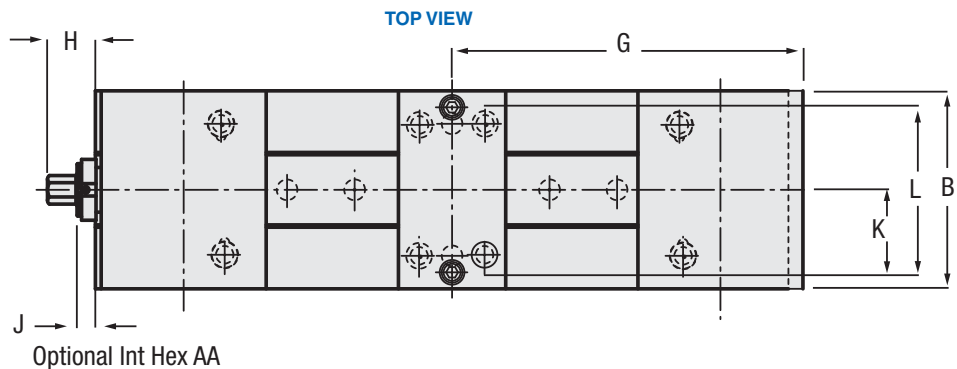
HDHLM6 Hydraulic – PATENTED



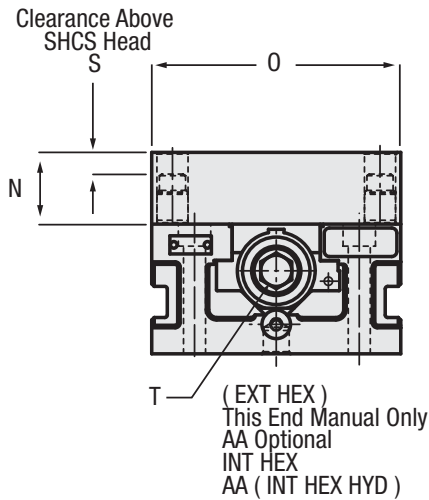
The HDL Anglock® Vises are high density long vises with two clamping stations. They provide repeatable clamping to 0.0002" and combine high density with heavy duty features. Designed on a rugged 80,000 PSI ductile iron body with steel components, both models provide strength, rigidity and long term accuracy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

Features:

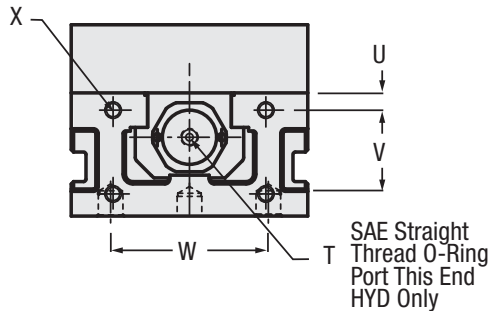
- Two clamping stations – repeatable clamping to 0.0002".
- Full 4 and 6 inch opening in each station with standard hard jaw system.
- Jaws are indexable 180 degrees.
- Manual and hydraulic models available.
- Fast easy conversion between manual and hydraulic models.
Part #HDHLM4-3-SA-KIT (4 inch) & #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 "



FRONT VIEW

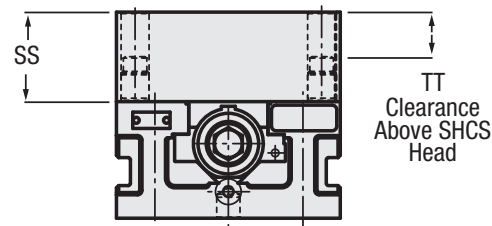


REAR VIEW OF STANDARD HEIGHT JAW

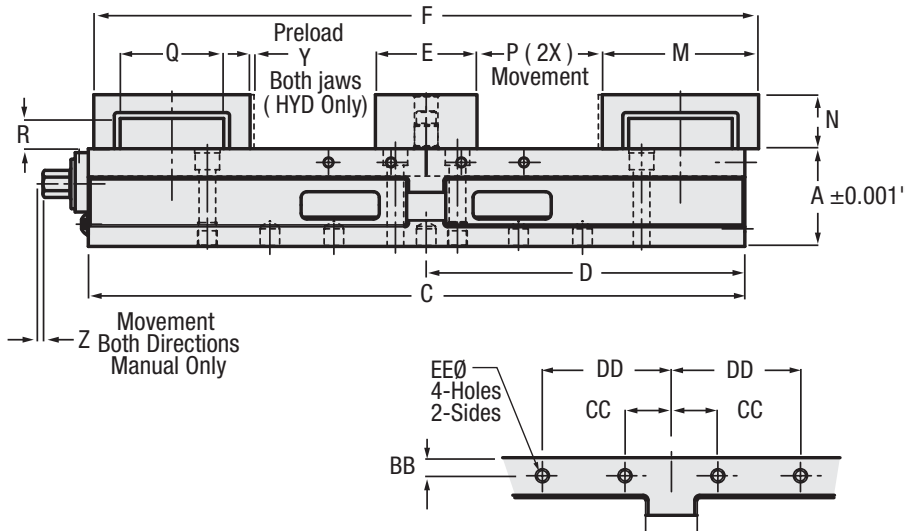


OPTIONAL JAW KIT

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 / HDHL4		HDHLM4 / HDHL4		HDLM6		HDHLM6	
	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.	HDLM4 HDL4	Hydraulic PSI	HDHLM4 HDHL4	HDLM6	Hydraulic PSI	HDHLM6 HDHL6
10	1,040	1,000	775	1,540	500	875
20	2,125	1,500	1,450	2,520	1000	1,600
30	3,140	2,000	1,900	3,350	1500	2,330
40	4,040	2,500	2,550	4,310	2000	3,130
50	4,980	3,000	3,100	5,750	2500	3,950
60	5,870	3,500	3,700	6,860	3000	4,750
70		4,000	4,200	7,460	3500	5,475
		4,500	4,800		4000	6,350
					4500	7,100
					Hyd. Displacement .414 cubic inches	
						Hyd. Displacement 1.08 cubic inches

**HD & HDL Jaw Kits & Fixture
PLATES SEE PAGES 22-25**



HD CARVLOCK® SHORT VISES

Manual & Hydraulic

Model: HDM6 Manual

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

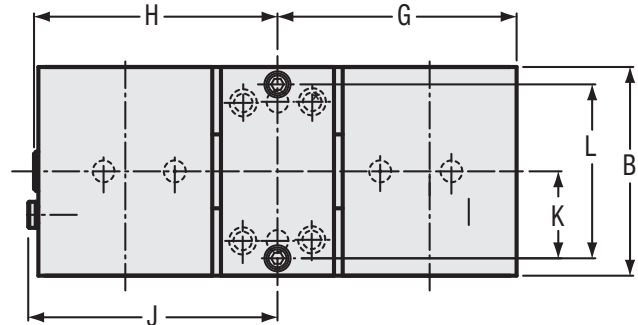
Double acting hydraulic vise uses hydraulic pressure to clamp and unclamp. Extremely reliable operation compared to other vises using mechanical operation for unclamping. Designed for automated systems.

Features:

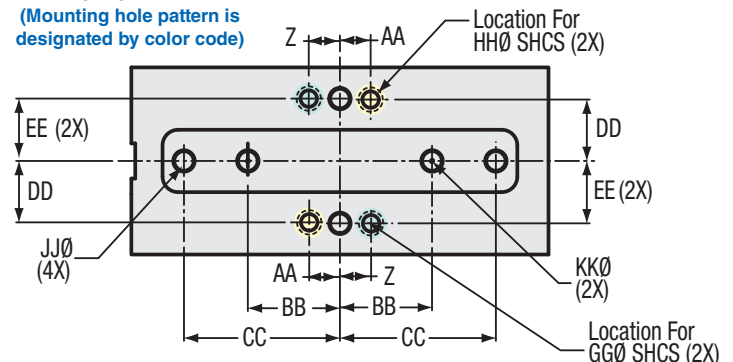
- Well suited for automation.
- Fast, positive open/close cycle.
- Compact size - overall length of just 13.750" and overall width of only 6".
- Clamping power/accuracy - produces up to 7,800 lbs clamping force @ 5,000 PSI of hydraulic pressure with repeatable clamping to 0.0002".
- Durability - 80,000 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



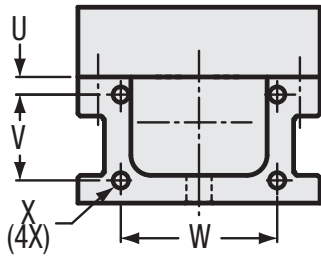
BOTTOM VIEW (Mounting hole pattern is designated by color code)



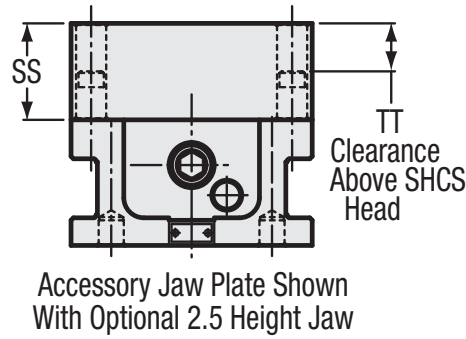
HD CARVLOCK® SHORT VISES

Manual & Hydraulic

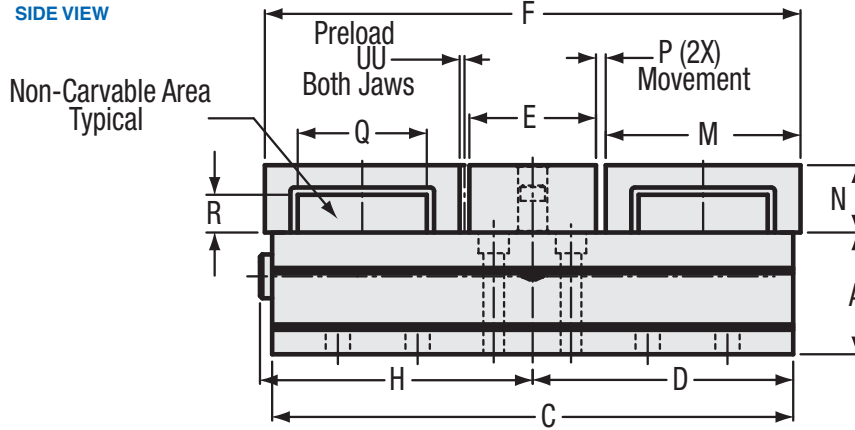
REAR VIEW



FRONT VIEW

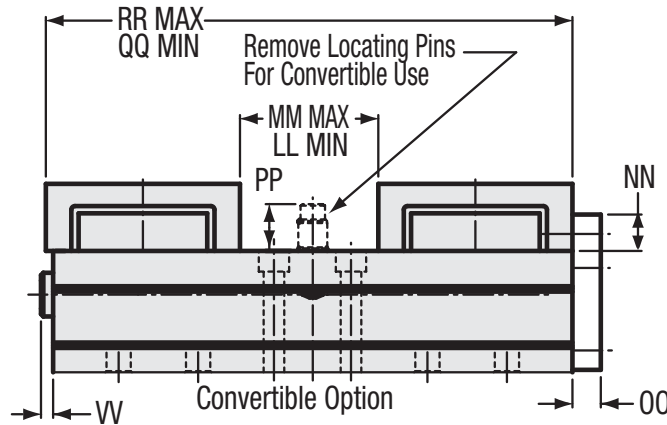


SIDE VIEW

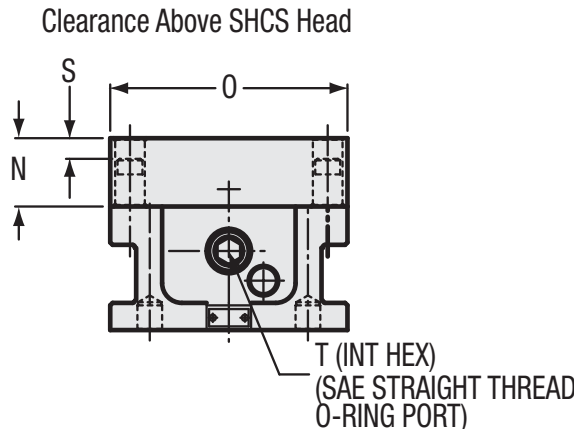


Convertible Kits for Optional Machinable Jaws – Part Number HDM6-CONVKIT

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	98.425	3.312	98.425	3.312
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	–	–	9.530	0.375

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	1000	1,600
30	2,503	1500	2,330
40	3,187	2000	3,130
50	3,963	2500	3,950
60	4,837	3000	4,750
70	5,556	3500	5,475
		4000	6,350
		4500	7,100
		5000	7,800
		Hyd. Displacement 1.08 cubic inches	

HD & HDL Jaw Kits & Fixture Plates SEE PAGES 22-25



HDL CARVLOCK® TOWERS (4&6 Inch)

Manual & Hydraulic

4 Inch Models:

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

6 Inch Models:

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

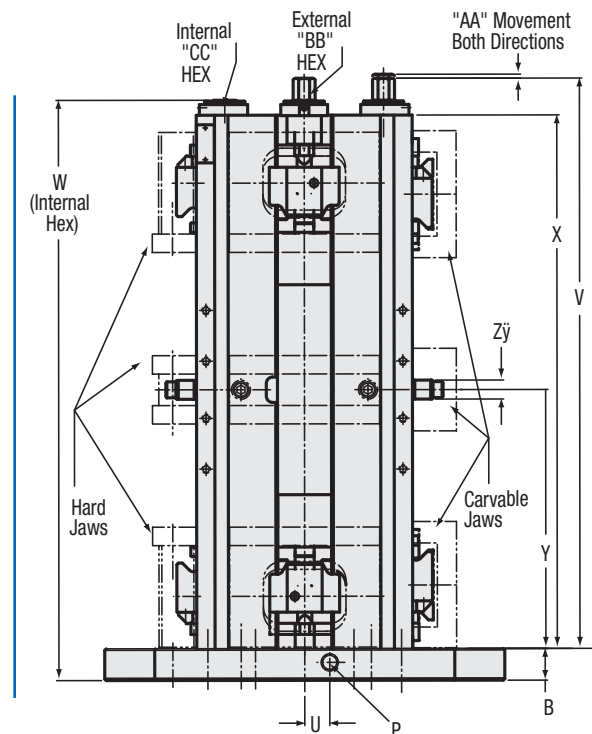
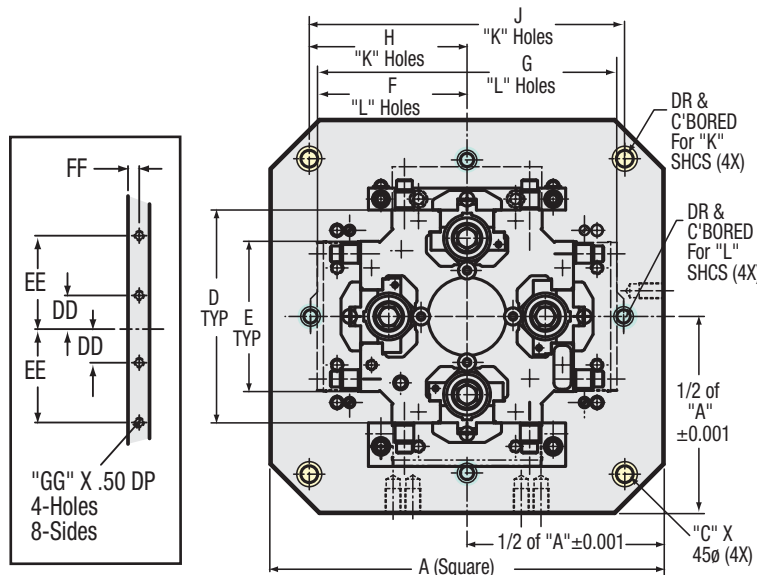
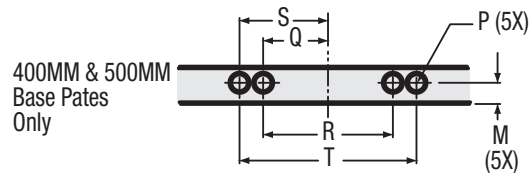
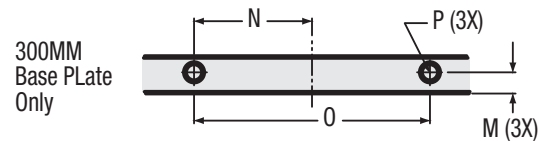
Manually or Hydraulically operated, eight station HDL Cluster Tower system features a ductile iron integral vise tower. Designed for use on mid-size and larger machining centers including horizontal and vertical machining centers with a fourth axis and indexable tables. This workholding system achieves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

Features:

- High density vise tower system. Hold multiple parts in eight clamping stations. Increase part volume.
- Repeatable 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 25.
- Jaws are indexable 180 degrees.
- Aluminum fixture plate available. See page 24.
- Elevated column makes clearing chips and contaminants fast and easy.
- Lifetime Iron Clad Warranty.



EDGE LOCATING HOLES ON BASE PLATE



Base Dimensional Data HDL Long Cluster Tower												
	CTHDLM44		CTHDLM64		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	457.53	18.013	548.38	21.59	451.18	17.763						
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										
CC	11.1	0.437										
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								

CLAMPING FORCE LBS.					
Torque-Ft. Lbs.	HDLM4	HDLM6	Hydraulic PSI	HDHLM4	HDHLM6
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			Hyd. Displacement	
	.414 cubic inches			1.08 cubic inches	



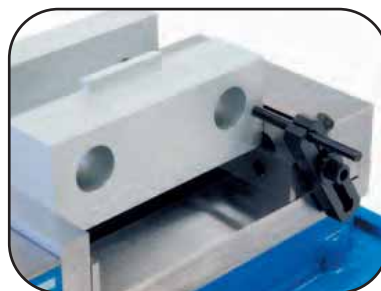
Ask about our
12 Station HD
CarvLock Towers



Clak Parallels, p.63



6AWS and 6AWSM Workstop, p.64



Spanner Wrench, p.65

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



HD & HDL JAW KITS & FIXTURE PLATES SEE PAGES 22-25

Model: CTHDM64

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.
- Can be converted to hydraulic actuation.
- Lifetime Iron Clad Warranty.



(shown with optional machinable aluminum jaws)

Model: CTHDHM64

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. This hydraulic system has the added advantage of converting easily in minutes to manual operation by swapping out internal components. 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.

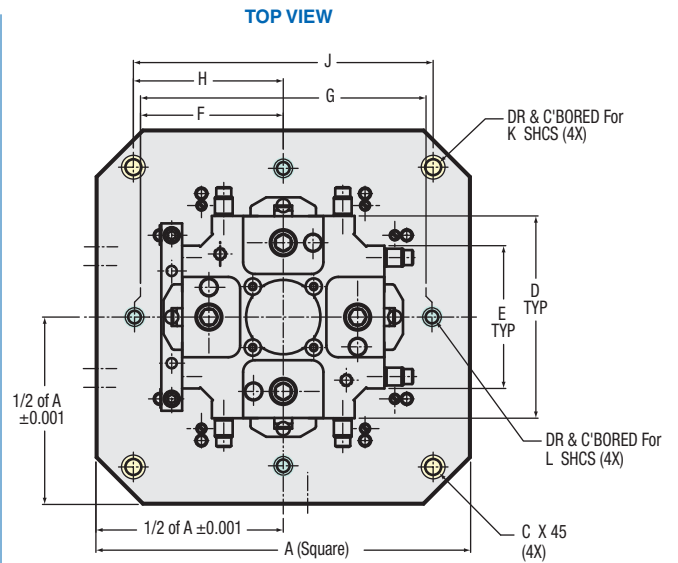
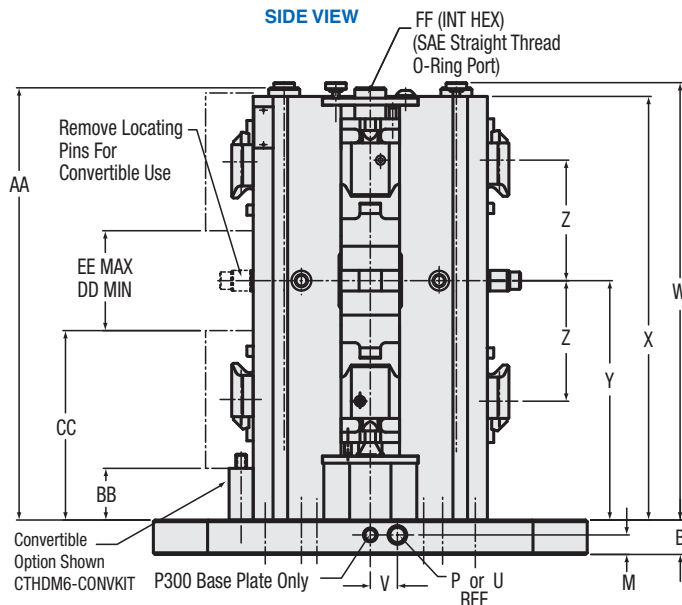
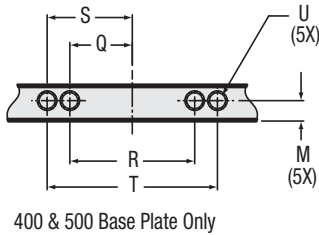
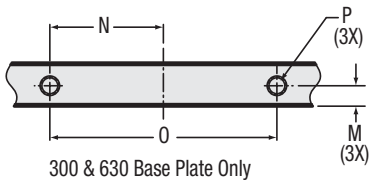


(shown with optional machinable aluminum jaws)

CTHDHM64 SPECIFICATIONS SEE PAGE 18

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 with jaw sets	139.7	308	161.0	355	183.7	405	239.5	528



HD & HDL Jaw Kits & Fixture Plates SEE PAGES 22-25



HD CARVLOCK® TOWERS

Hydraulic

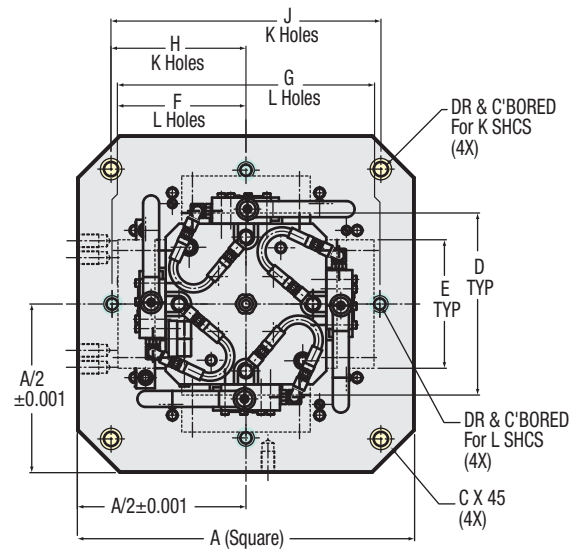
CTHDHM64 Specifications

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 with jaw sets	148.8	328	170.1	375	192.8	425	248.6	548

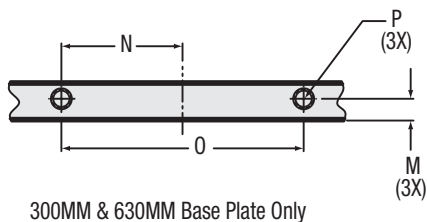
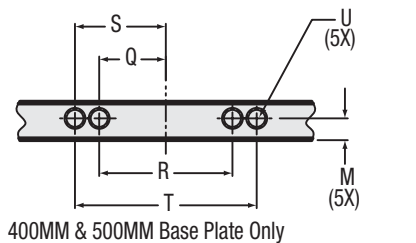
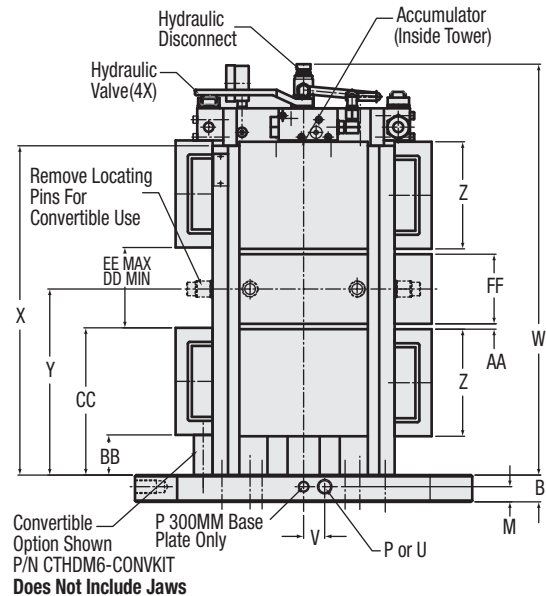
CLAMPING FORCE LBS.	
Hydraulic PSI	HDHM6
500	875
1000	1600
1500	2330
2000	3130
2500	3950
3000	4750
3500	5475
4000	6350
4500	7100
5000	7800
Hyd. Displacement cu. in.	1.08



TOP VIEW



SIDE VIEW



HD CARVLOCK® TOWERS

CTHDHL64 Hydraulic Tower – English CTHDLM64 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.

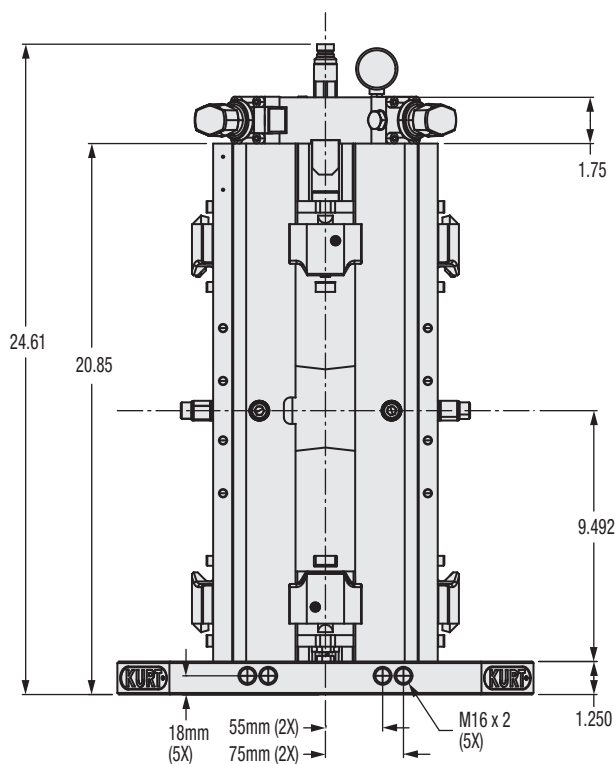
Features:

- Hydraulically operated eight station CTHDLM64 ClusterTower.
- 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.
- Base sizes available: 400mm, 500mm, 630mm.
- Lifetime Iron Clad Warranty

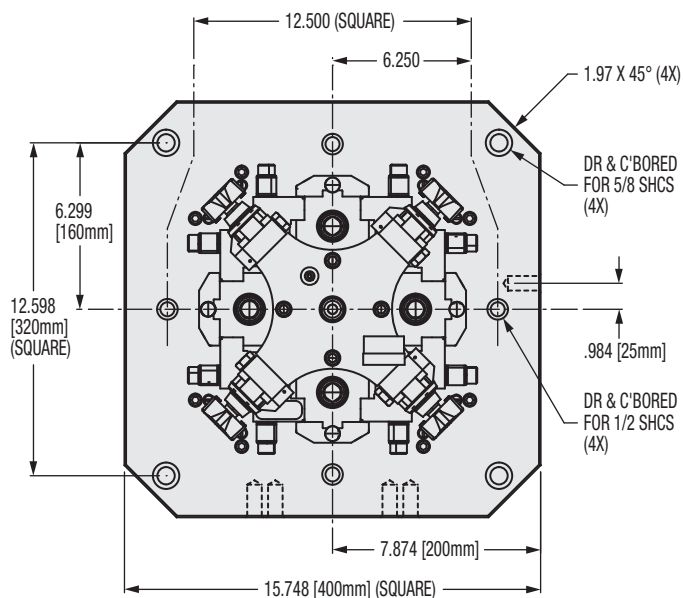


(shown with optional hard jaws)

SIDE VIEW



TOP VIEW



HD & HDL JAW KITS & FIXTURE PLATES SEE PAGES 22-25



KURT ROTARY TABLE WORKHOLDING SYSTEMS

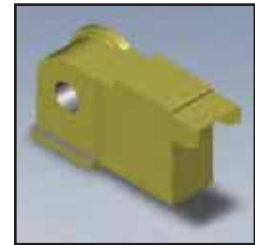
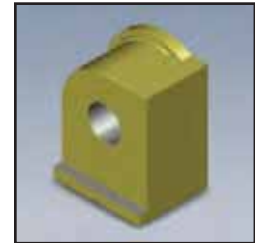
Features:

- 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.

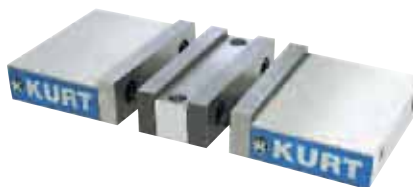
Kits are available for the following models:

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 22-25



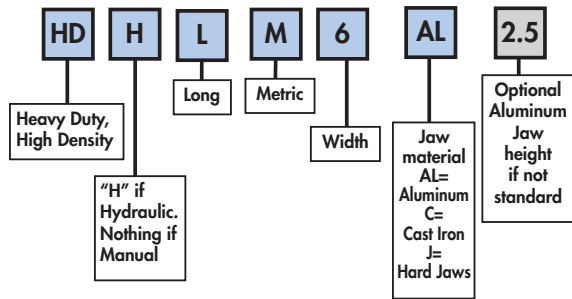
HDLM6J (Manual 6" vise with hard jaws.)
 HDLHM6AL2.5 (Hydraulic vise with optional height aluminum jaws.)



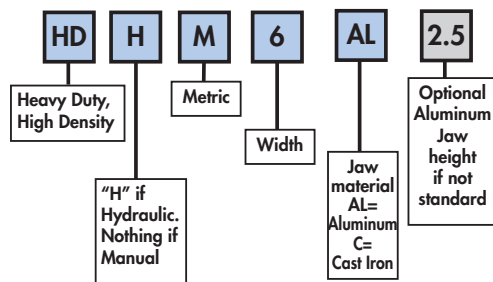
HDM6AL (Manual 6" vise with standard aluminum jaws.)
 HDHM6AL2.5 (Hydraulic vise with optional height aluminum jaws.)



HDL Double Station Vise Examples:



HD Double Station Vise Examples:



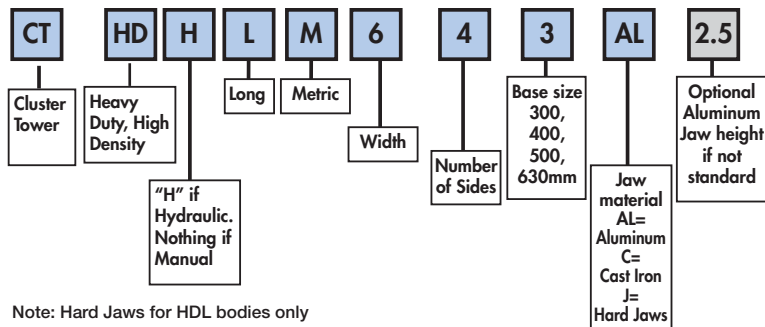
CTHDM643AL (Manual 6" tower with 4 sides, 300mm base with standard height aluminum jaws.)
 CTHDHM645AL2.5 (Hydraulic 6" tower with 4 sides, 500mm base with optional height aluminum jaws.)



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

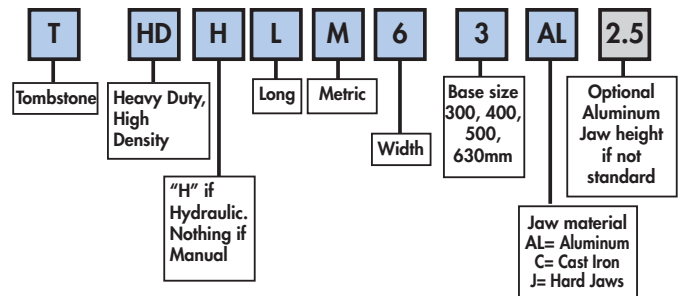


HD and HDL ClusterTower Examples:



Note: Hard Jaws for HDL bodies only

HD Back-To-Back Vises 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 22-25

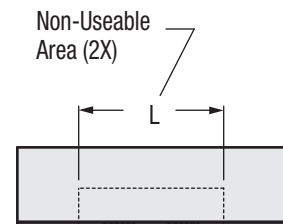
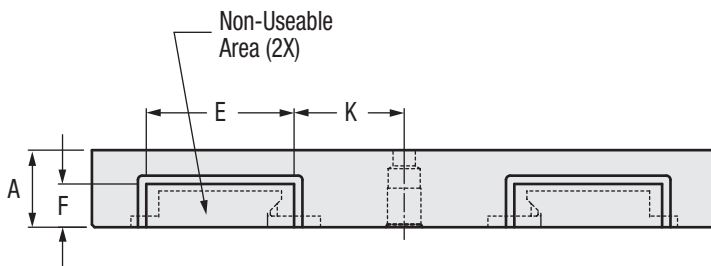
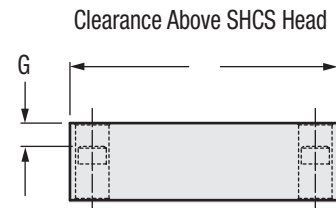
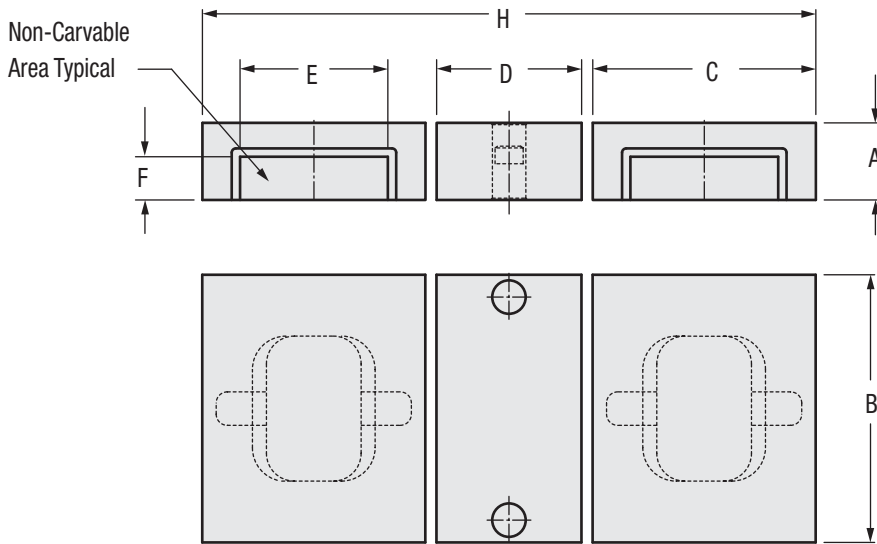


HD & HDL JAW KITS



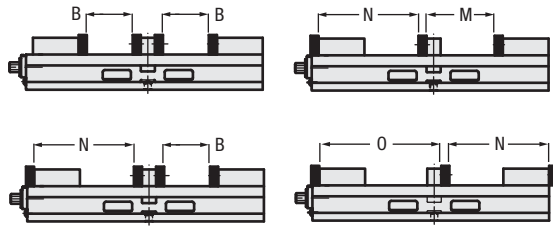
MACHINABLE JAWS Jaw Kit Dimensional Data for High Density 6" HD & HDL Vises						
	HD6AL Jaw Kit		HD6AL2.5 Jaw Kit		HD6C Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	43.891	1.728	60.960	2.400	43.891	1.728
B	152.400	6.000	152.400	6.000	152.400	6.000
C	127.000	5.000	127.000	5.000	127.000	5.000
D	82.550	3.250	82.550	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

Note: For threaded style stationary jaws, add an "M" after the "D" to the part number above.



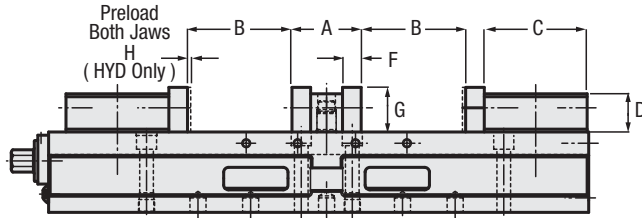
HD & HDL JAW KITS

HARDENED JAW POSITIONS (MANUAL VISE SHOWN)

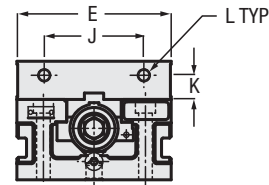


Hard Jaw Kit Part Numbers				
PART NO.	DESCRIPTION	LBS	KGS	
HDL4J-JAWKIT	INCH J STYLE HARD JAW KIT	10	5	
HDLM4J-JAWKIT	METRIC J STYLE HARD JAW KIT	10	5	
HDL6J-JAWKIT	INCH J STYLE HARD JAW KIT	27	13	
HDLM6J-JAWKIT	METRIC J STYLE HARD JAW KIT	27	13	

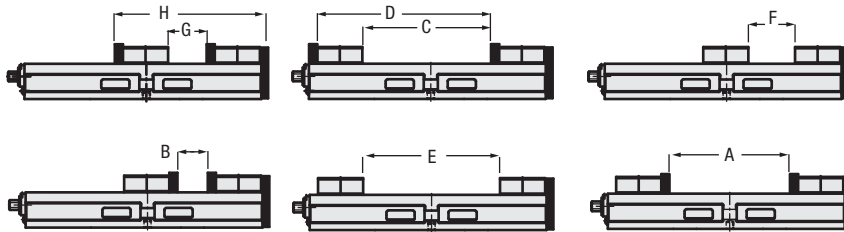
HARD JAWS (MANUAL VISE SHOWN)



FRONT VIEW



HARDENED JAW POSITIONS (MANUAL VISE SHOWN)

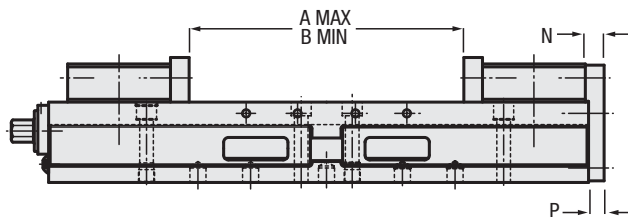


Machinable Jaw Kit Part Numbers				
PART NO.	DESCRIPTION	LBS	KGS	
HDLM4AL-JAWKIT	1.40 HIGH ALUMINUM JAW KIT	6	3	
HDLM4AL1.9-JAWKIT	1.90 HIGH ALUMINUM JAW KIT	8	4	
HDLM4C-JAWKIT	1.40 HIGH IRON JAW KIT	14	7	
HD6AL-JAWKIT	1.73 HIGH ALUMINUM JAW KIT	14	7	
HD6AL2.5-JAWKIT	2.4 HIGH ALUMINUM JAW KIT	19	9	
HD6C-JAWKIT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

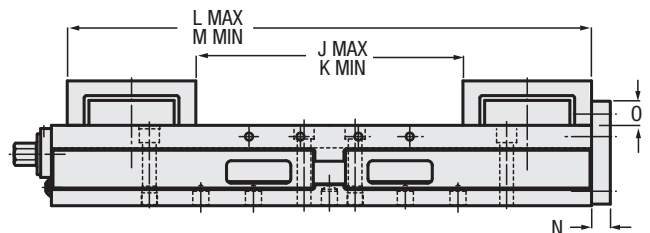
CONVERTIBLE OPTIONS – DIMENSIONAL DATA FOR HARD AND CARVABLE JAWS

	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)

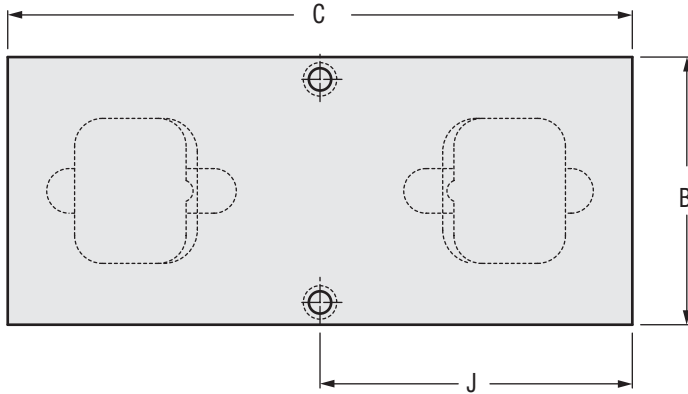


CONVERTIBLE OPTION FOR CARVABLE JAWS (MANUAL VISE SHOWN) HDLM4-CONVKIT AND HDLM6-CONVKIT

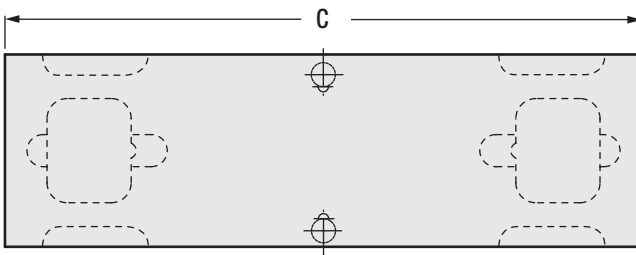
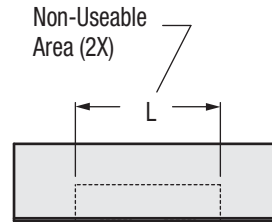
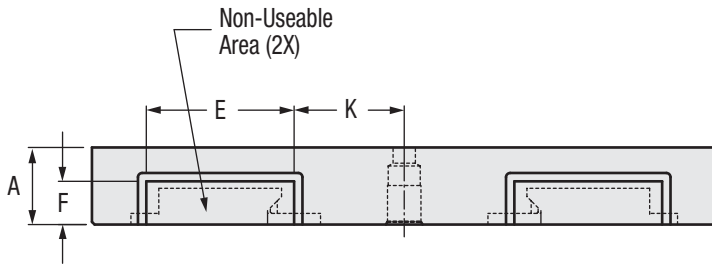




HD & HDL FIXTURE PLATES

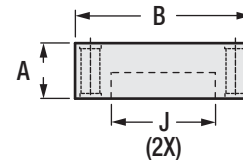
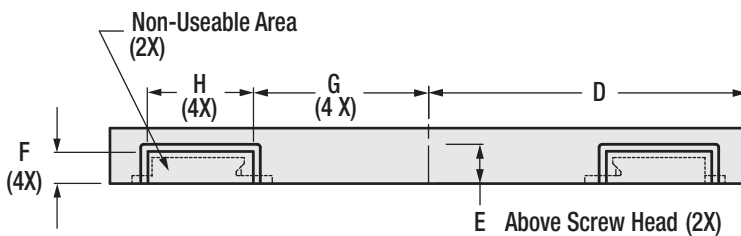


HD6ALP620-239 Fixture Plate		
	MM	Inch
A	50.290	1.980
B	152.400	6.000
C	355.600	14.000
E	84.120	3.312
F	24.610	0.969
J	177.800	7.000
K	62.710	2.469
L	82.550	3.250
Est Ship Wt.Kgs/Lbs.	6.4	14



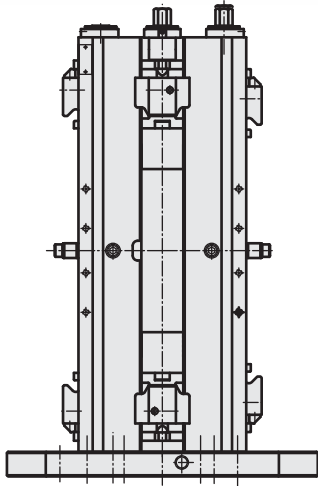
Aluminum Fixture Plate Accessory for HDLM Vise & CTHDLM Tower 4"		
HDLM4ALP419		
	MM	Inch
A	48.26	1.900
B	101.60	4.00
C	393.70	15.500
D	196.85	7.750
E	40.54	1.596
H	20.57	0.810
J	65.07	2.562
K	100.84	3.970
L	65.02	2.560

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

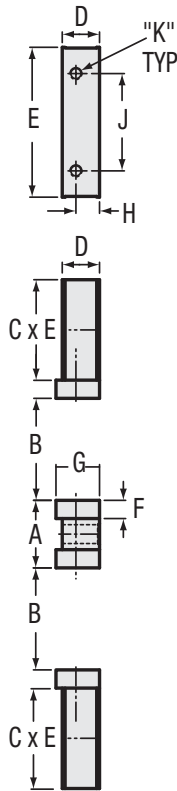


4 Inch Jaw Accessories						
	HARD JAWS		MACHINABLE JAWS			
	HDLM4J-Jaw Kit		HDLM4AL-Jaw Kit		HDLM4AL1.9-Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	59.538	2.344	63.500	2.500	63.500	2.500
B	76.200	3.000	66.675	2.625	66.675	2.625
C	73.812	2.906	101.600	4.000	101.600	4.000
D	28.321	1.115	35.560	1.400	48.260	1.900
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

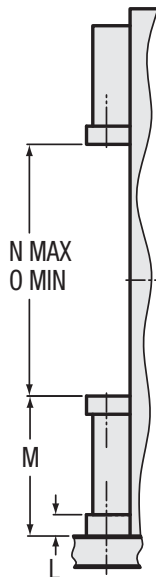
6 inch Jaw Accessories						
	HARD JAWS		MACHINABLE JAWS			
	HDLM6J-Jaw Kit		HD6AL-Jaw Kit		HD6AL2.5-Jaw Kit	
	MM	Inch	MM	Inch	MM	Inch
A	68.326	2.690	82.550	3.250	82.550	3.250
B	103.170	4.062	90.630	3.568	90.630	3.568
C	101.600	4.000	127.000	5.000	127.000	5.000
D	37.719	1.485	43.890	1.728	60.960	2.400
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	-	-	-	-

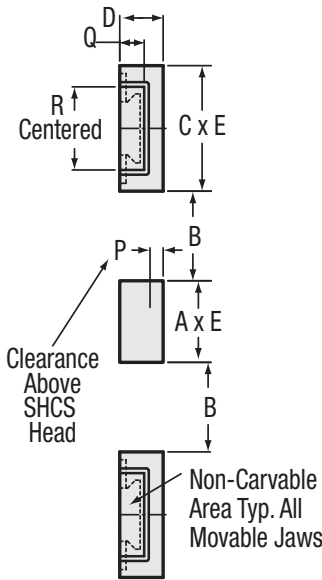
6 Inch Jaw Accessories Convertible Option				
	HARD JAWS		CARVABLE JAWS	
	CTHDLM6J-CONVKIT		CTHDLM6-CONVKIT	
	MM	Inch	MM	Inch
A	-	-	-	-
B	-	-	-	-
C	-	-	-	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-
L	21.590	0.850	18.415	0.725
M	141.605	5.575	145.415	5.725
N	254.640	10.025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



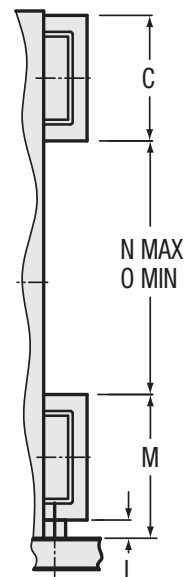
HARD JAWS TYP.



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:

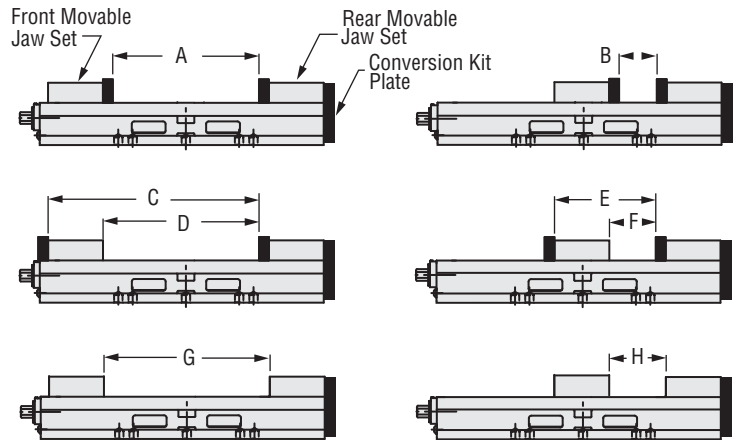
- Large Capacity
-DL800 8" wide x 6" opening each station.
- Productivity – multiple part workholding for better spindle utilization, reduced tool change time, and reduced machine travel from part to part.
- Accuracy – repeatable clamping to 0.0002".
- Durability – 80,000-PSI ductile iron body and steel 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.



OPTIONAL CONVERTIBLE KIT – JAW POSITIONS



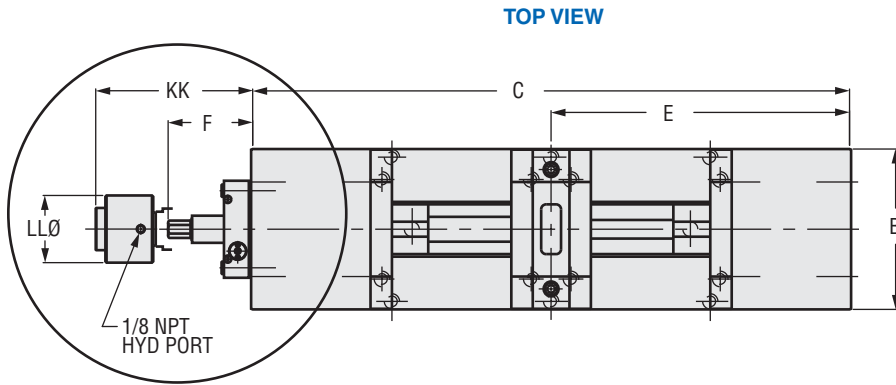
OPTIONAL CONVERTIBLE KIT - JAW OPENING POSITIONS

	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

DLH800 Features:

- Repeatable clamping (0.002") 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 12,600 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.

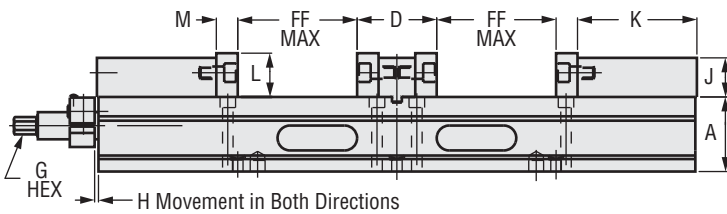
Intensifier, APD50-112, available in either hand (APD50-112-Hand) or foot (APD50-112-Foot) option. Each vise must have it's own intensifier.



VISE CLAMPING FORCE-LBS	
Manual torque Ft.-lbs.	DL800
10	-
20	2023
30	-
40	3578
50	-
60	5136
70	-
80	6883
100	8997

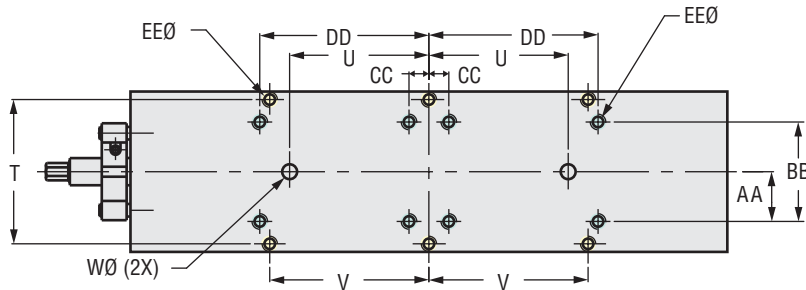
VISE CLAMPING FORCE-LBS.	
Hydraulic PSI Max.	DLH800
400	1575
800	3150
1200	4725
1600	6300
2000	7875
2400	9450

SIDE VIEW



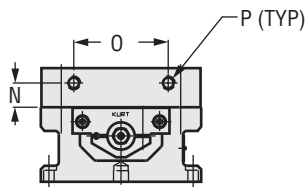
BOTTOM VIEW

(Mounting hole pattern is designated by color code)

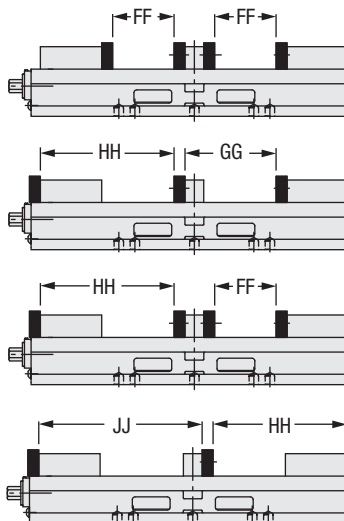


DIMENSIONAL DATA		
	DL800	DLH800
A	3.750	3.750
B	8.060	8.060
C	30.000	30.000
D	4.000	4.000
E	15.000	15.000
F	4.250	-
G	3/4	-
H	0.190	0.190
J	1.965	1.965
K	6.000	6.000
L	2.200	2.200
M	1.075	1.075
N	1.220	1.220
O	4.750	4.750
P	5/8-11	5/8-11
Q	0.750	0.750
R	2.375	2.375
S	1/2-13	1/2-13
S1	5/8-11	5/8-11
T	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

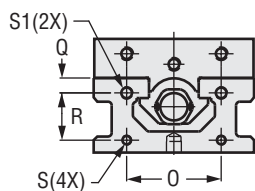
FRONT VIEW



JAW POSITIONS



REAR VIEW





CLUSTERLOCK CLUSTERTOWER®

Model:
CT2DC4B

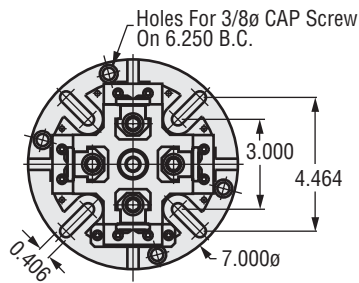


Features:

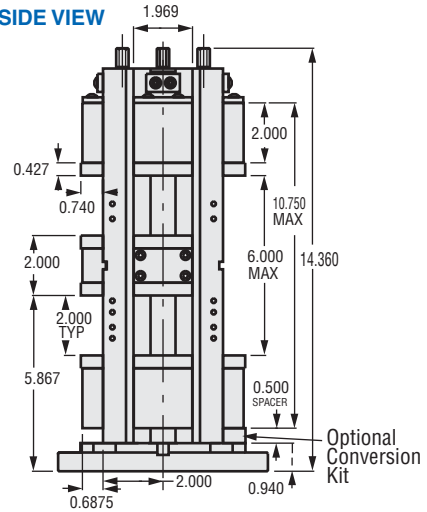
- Made from ductile iron and steel, a stiffness of 2.5 times aluminum is achieved. Vibration damping of ductile iron is 20 times higher than aluminum. Includes hardened bed and jaws.
- Four double vises with 50mm (1.968") wide jaw and 50mm (2") opening.
- Pilot (0.8768") in both ends. Four and six bolt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

CT2DC4B CLUSTER TOWER DOUBLE MANUAL VISE CLAMPING FORCE	
Torque- Ft. Lbs.	lbs.
9	1000
14	1500
19	2000
25	3000
Maximum Force	3000

TOP VIEW



SIDE VIEW



Model:
CT2SH4A

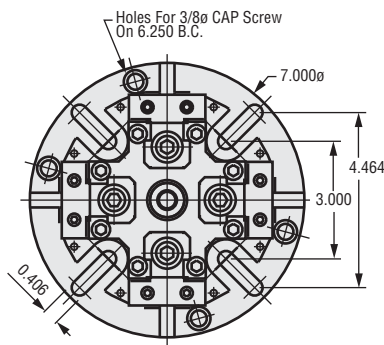


Features:

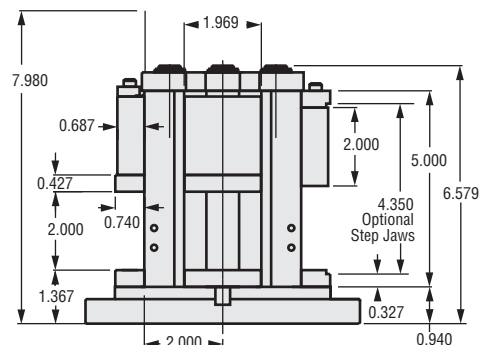
- Made from ductile iron and steel, a stiffness of 2.5 times aluminum is achieved. Vibration damping of ductile iron is 20 times higher than aluminum. Includes hardened bed and jaws.
- Four single vises with 50mm (1.968") jaws and 50mm (2") opening.
- Pilot (0.8768") in both ends. Four and six bolt mounting 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	1000
15	1500
20	2000
25	3000
Maximum Force	3000

TOP VIEW



SIDE VIEW



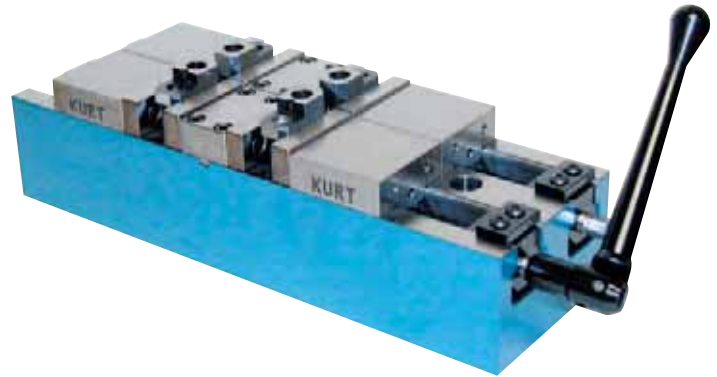
CLUSTERLOCK

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.

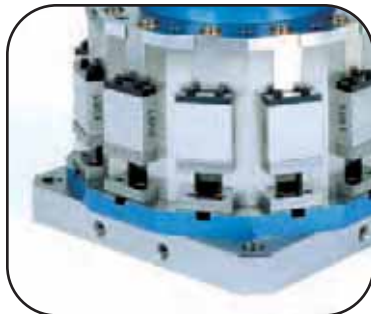
Features:

- 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.

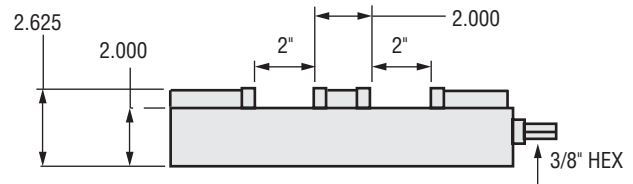


Part #	Ship Wt. Lbs.
CL2D1-2A	12
CL2D2-2A	24
CL2D4-2A	48
CL2D6-2A	72
CL2D8-2A	96
CL2D10-2A	120

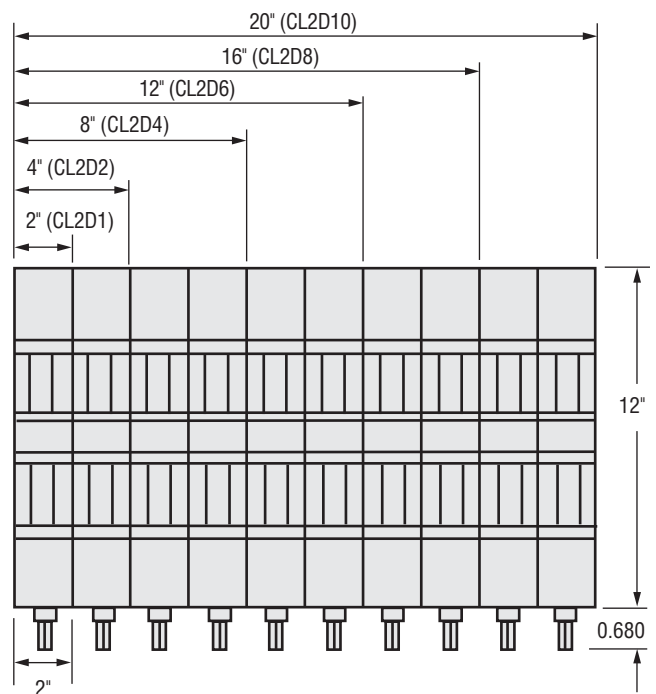
CLUSTERLOCK MANUAL VISE CLAMPING FORCE	
Torque- Ft. Lbs.	lbs.
9	1000
14	1500
19	2000
25	3000



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.

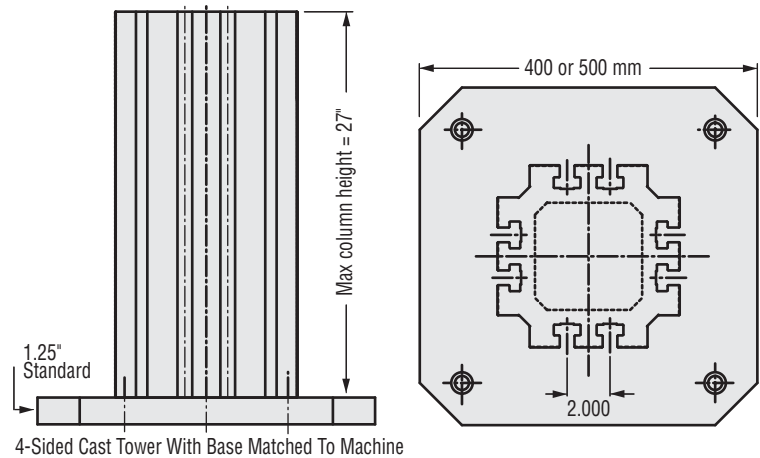
A custom, high density workholding system can be configured quickly when our WedgeLock modular system of single and double sided clamping jaws are used with the SeraLock Tower or SeraLock Pallet.

SeraLock features:

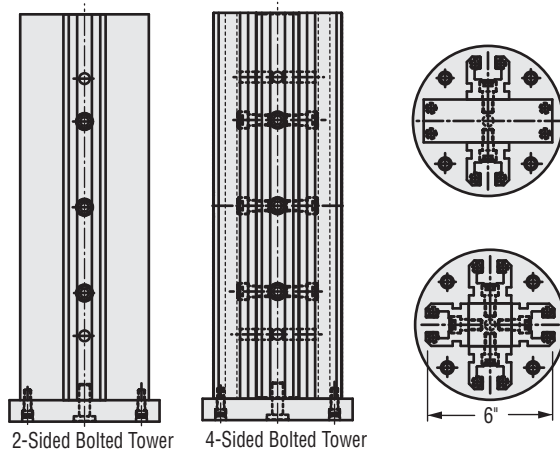
- Self-aligning.
- Multiple components may be used at the same time.
- Like and unlike workpieces may be machined all in the same setup.
- Mix and match components.
- Allows creation of the equivalent of a custom fixture in less time than the custom fixture can be designed.
- Modular components can be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



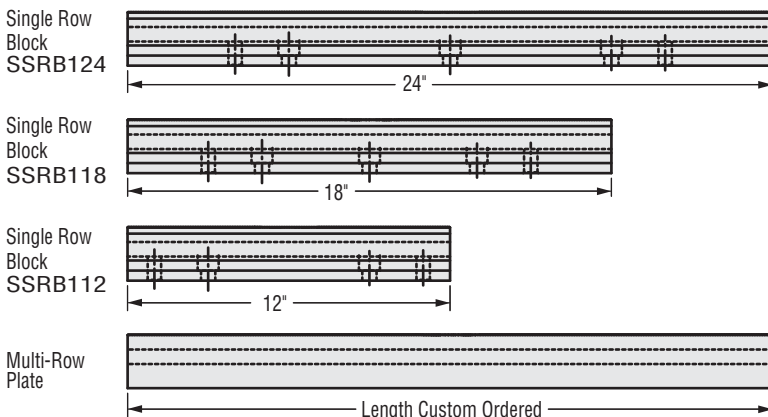
Tower & Base Options



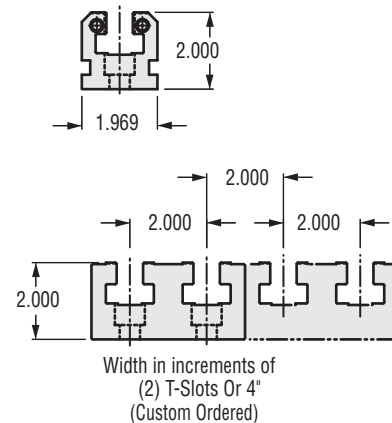
4-Sided Cast Tower With Base Matched To Machine



Pallet length options



Pallet T-slot options

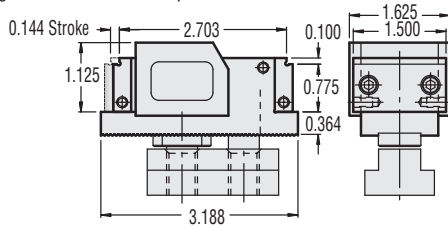


WEDGELOCK CLAMPING MODULES

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.

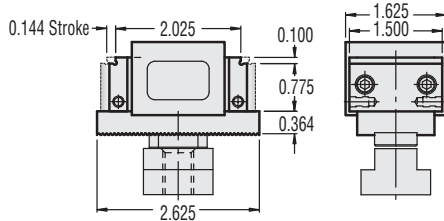


SWSC1



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.

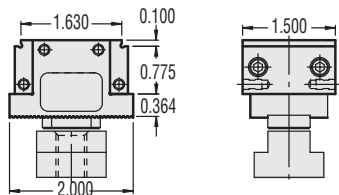


SWDC1



STATIONARY BLOCK

Used with single or double clamp.

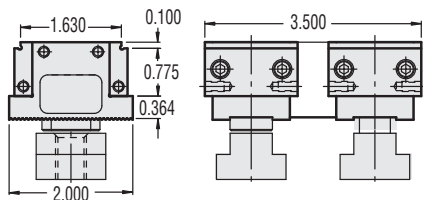


SWSB1



DOUBLE STATIONARY BLOCK

Use when double clamps are used side by side.

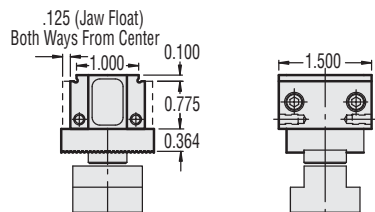


SWDSB1



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.

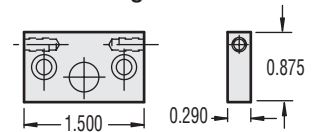


SWDJ1

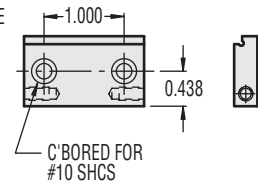


Jaw Plates Standard Length

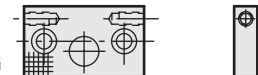
Flat Jaw Plate
W/MAGNET
SW1-7-SAMAG



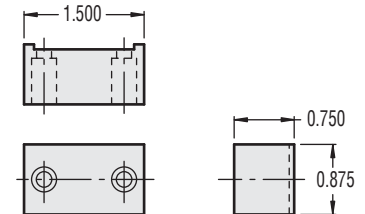
STEPPED/REVERSIBLE
Stepped/Reversible
Jaw Plate
SW1-32



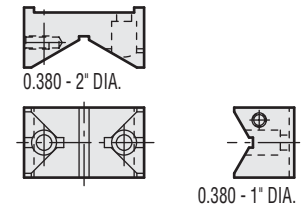
Serrated Jaw Plate
W/Magnet
SW1-47-SAMAG



Carvable/Reversible
Aluminum Jaw Plate
SW1-317

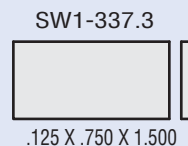
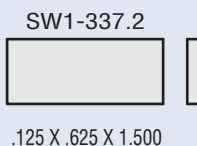
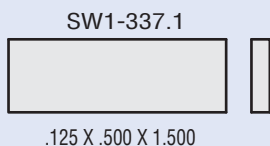


"V" Jaw Plate
SW1-237

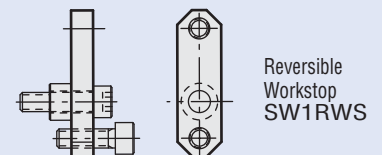


MoveLock System
SEE PAGE 44

PARALLELS STANDARD LENGTH



WORKSTOPS



Reversible
Workstop
SW1RWS



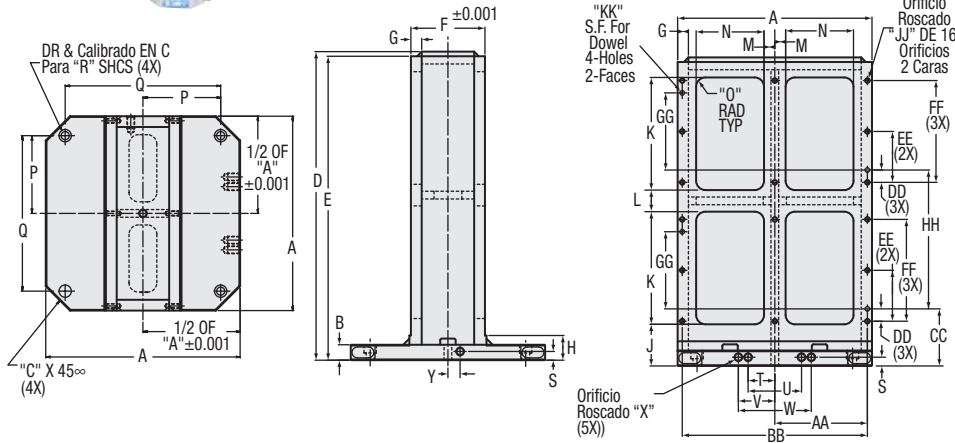
MODULAR TOOLBLOX™

2 Face and 4 Face Modular ToolBlox™, Sub-Plates



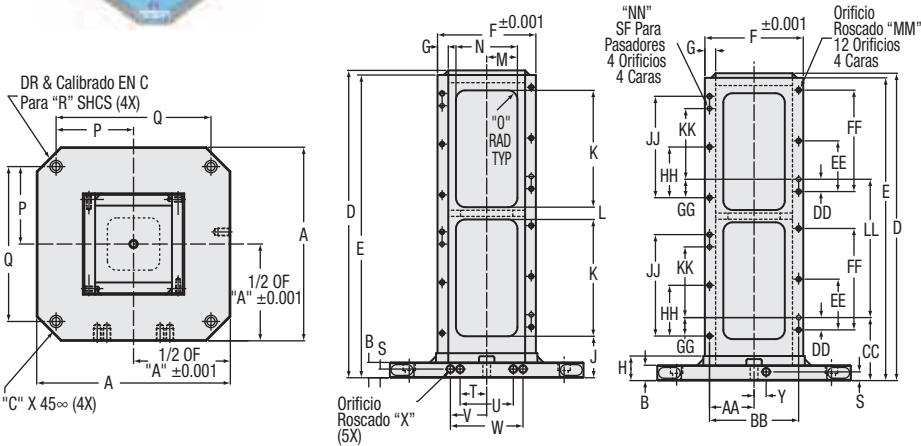
2 Face Modular ToolBlox™

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.

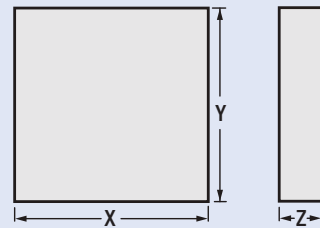


4 Face Modular ToolBlox™

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

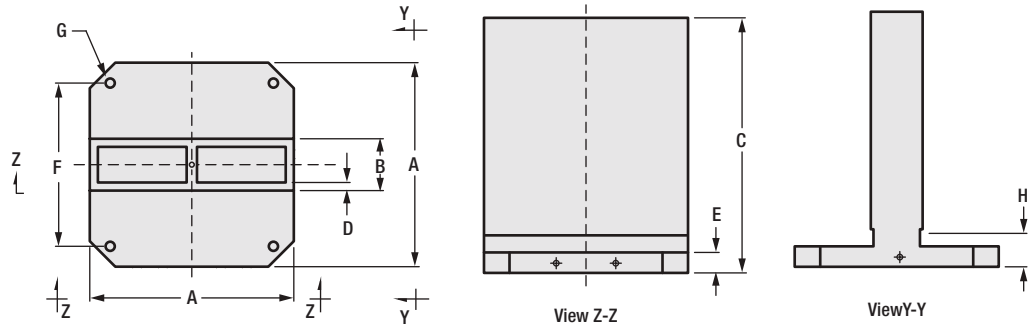
MODEL	TC2C40616	TC2C50820	TC4C40808	TC4C51010
X	15.700	19.600	8.000	10.000
Y	23.700	26.700	23.700	26.700
Z	0.940	0.940	0.940	0.094

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.



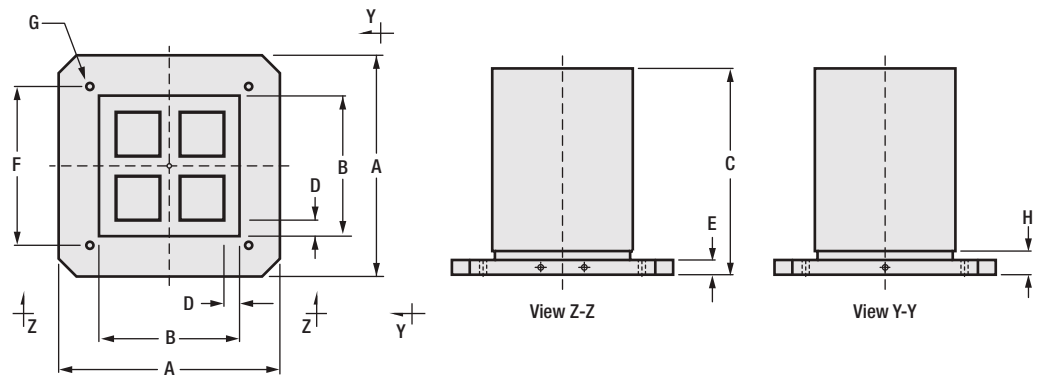
MODEL	A	B	C	D	E	F	G	H	Est. Wt Kgs/Lbs.	Surface Datum A Base Flatness	Face Perp. to Base	Edge Locator Perp	Face Dimension	Face Locator to Edge Parallelism
TB2C40616	400mm X 400mm	6	26	1.500	1.500	320mm	5/8" or M16	2.250	234.1 / 516	0.001	0.003	0.0015	6.000 ±0.002	0.001
TB2C50820	500mm X 500mm	8	34	1.500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



VERSATILE LOCK[®] VISES

Standard (3600) and Short (3620)

PATENTED

Models:
Manual
Hydraulic
Air



3600V
3600VM - (Metric)



3600H - Standard Hydraulic



3600A - Standard Air

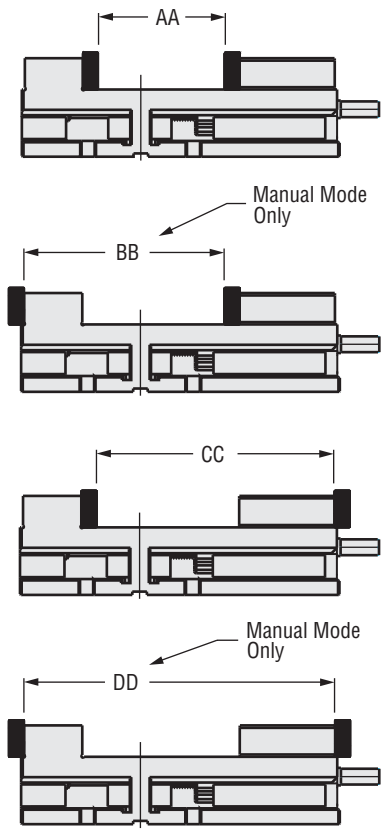
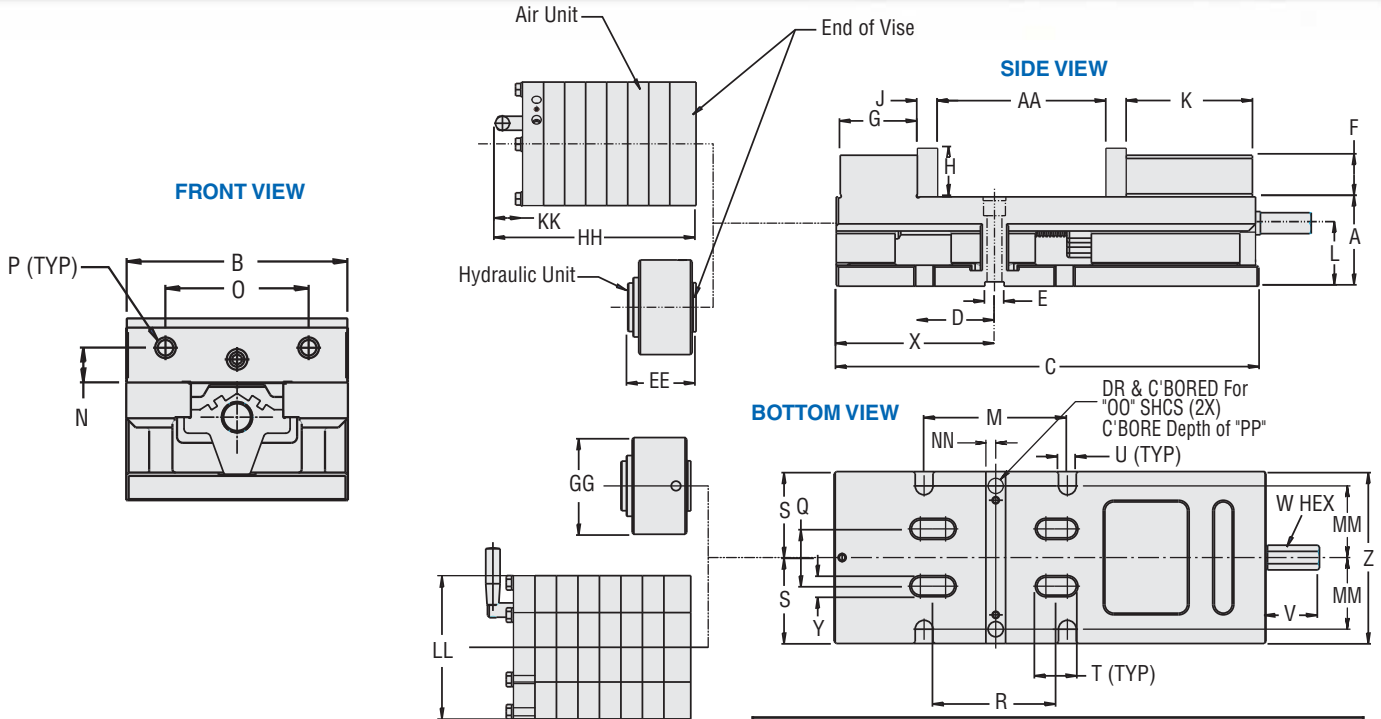
The Versatile Lock vise is the industry's ultimate single station CNC vise. It offers ultra-precision function through these important design features: The original, time proven Kurt AngLock design prevents parts from lifting upward under heavy clamping loads. The "pull-type" jaw clamping reduces jaw 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 as a complete package including the intensifier (specify foot or hand actuation). (See Page 67). Each vise must have it's own intensifier.
- 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 43



Repair Kits

MODEL	REPAIR KIT
3600V	*3600V-KIT

* = Same as Metric Vise

WISE CLAMPING FORCE-LBS.

Manual Torque Ft.-Lbs.	Manual	
	3600V	3620V
10	653	653
20	1743	1743
30	2234	2234
40	3015	3015
50	3833	3833
60	4438	4438
70	5528	5528
80	6356	6356

WISE CLAMPING FORCE-LBS.

Hydraulic PSI	Hydraulic	
	3600H	3620H
400	1575	1575
800	3150	3150
1200	4725	4725
1600	6300	6300
2000	7875	7875
2400	9450	9450
2800	11025	11025
3200	12600	12600
Hydraulic Displacement cu. In.	1.18	1.18

WISE CLAMPING FORCE-LBS.

Air PSI	Air	
	3600A	3620A
10	320	320
20	840	840
30	1280	1280
40	1780	1780
50	2200	2200
60	2720	2720
70	3240	3240
80	3800	3800
90	4380	4380
100	5000	5000

DIMENSIONAL DATA

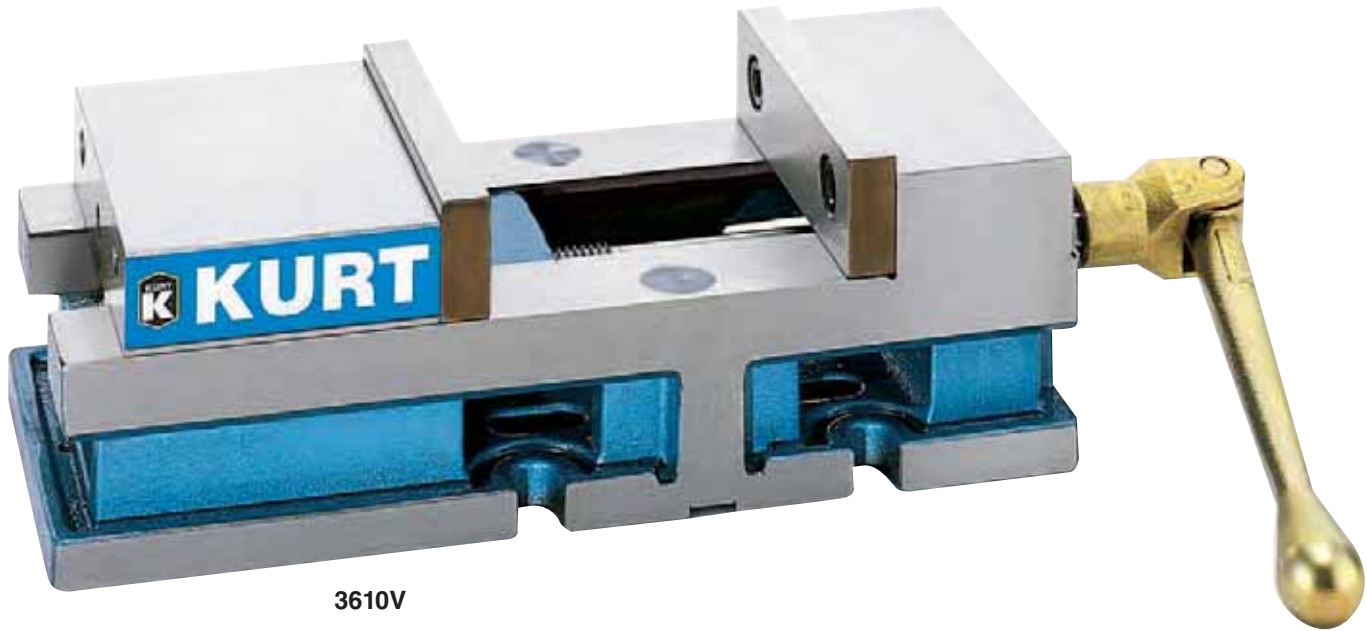
	Manual		Hydraulic		Air		
	3600V	3600VM	3620V	3600H	3620H	3600A	3620A
	Inch	MM	Inch	Inch	Inch	Inch	Inch
A	3.187	80.949	3.187	3.187	3.187	3.187	3.187
B	6.000	152.400	6.000	6.000	6.000	6.000	6.000
C	15.060	382.524	12.940	15.060	12.940	15.060	12.940
D	2.750	69.850	2.750	2.750	2.750	2.750	2.750
E	0.688	17.475	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



VERSATILE LOCK[®] VISES

Reverse (3610) and Short Reverse (3630) PATENTED

Models:
Manual
Hydraulic
Air



3610V

Use the Versatile Lock 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.
- Hydraulic option is available as a complete package including the intensifier (specify foot or hand actuation). Each vise must have it's own intensifier.
- 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.

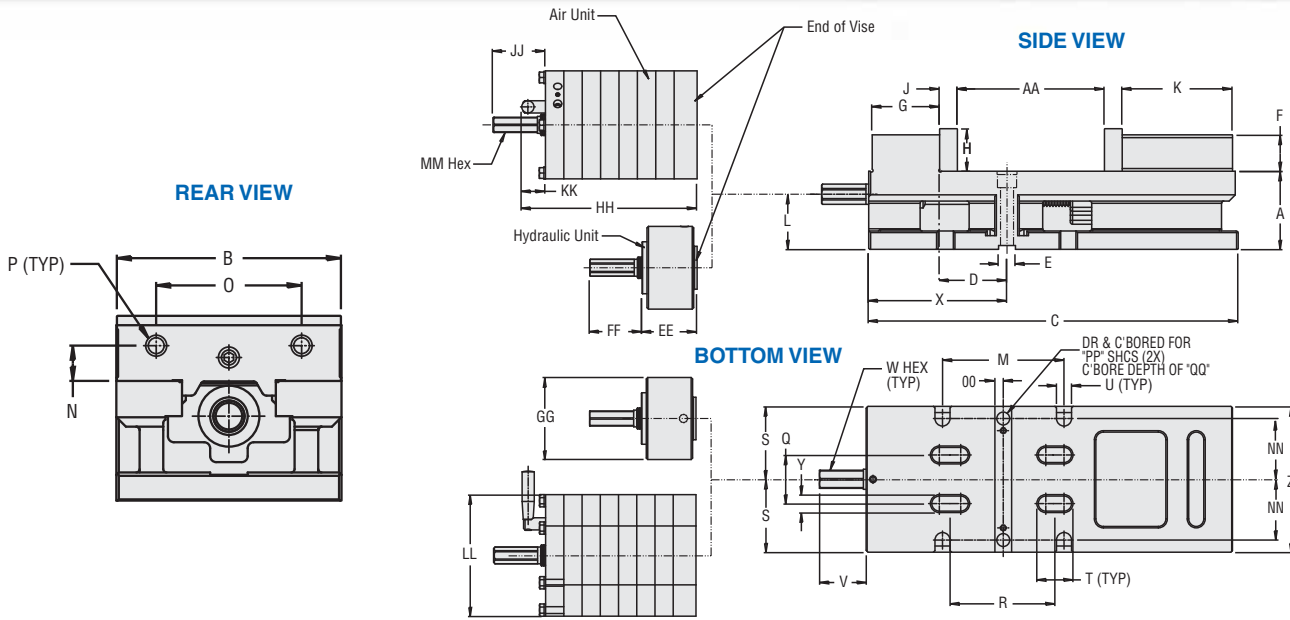


Intensifier, p.67

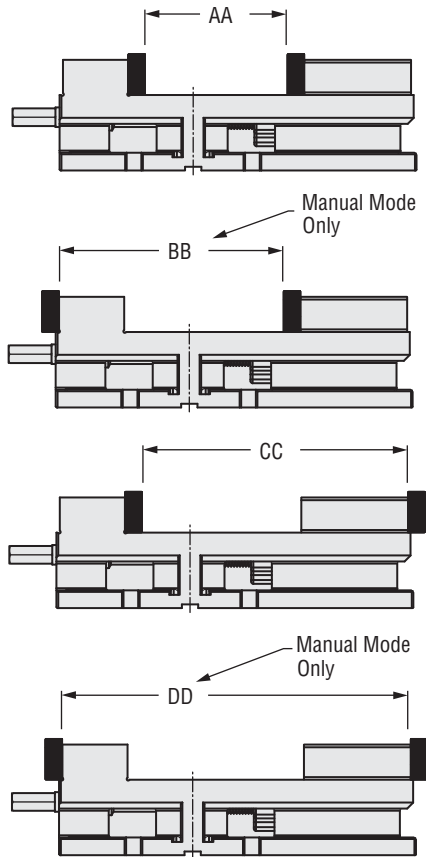
APD50-112-Hand
APD50-112-Foot



KHP5000 Hydraulic Pump, p.67



JAW POSITIONS



VISE CLAMPING FORCE-LBS.		
Manual torque Ft.-Lbs.	Manual	
	3610V	3630V
10	653	653
20	1743	1743
30	2234	2234
40	3015	3015
50	3833	3833
60	4438	4438
70	5528	5528
80	6356	6356

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	3610H	3630H
400	1575	1575
800	3150	3150
1200	4725	4725
1600	6300	6300
2000	7875	7875
2400	9450	9450
2800	11025	11025
3200	12600	12600
Hydraulic Displacement cu. In	1.18	1.18

VISE CLAMPING FORCE-LBS.		
Air PSI	Air	
	3610A	3630A
10	320	320
20	840	840
30	1280	1280
40	1780	1780
50	2200	2200
60	2720	2720
70	3240	3240
80	3800	3800
90	4380	4380
100	5000	5000

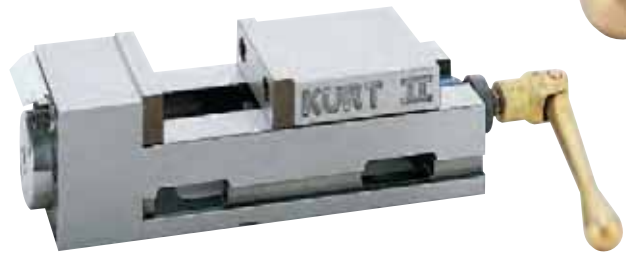
	DIMENSIONAL DATA					
	Manual		Hydraulic		Air	
	3610V	3630V	3610H	3630H	3610A	3630A
A	3.187	3.187	3.187	3.187	3.187	3.187
B	6.000	6.000	6.000	6.000	6.000	6.000
C	15.060	12.940	15.060	12.940	15.060	12.940
D	2.750	2.750	2.750	2.750	2.750	2.750
E	0.688	0.688	0.688	0.688	0.688	0.688
F	1.485	1.485	1.485	1.485	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	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



ANGLOCK® PT-SERIES VISES

Manual and Hydraulic

Models:
PT400A
PT800A
PTH400A
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.
- Hydraulic option is available as a complete package including the intensifier (specify foot or hand actuation). Each vise must have it's own intensifier.
- 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 43

Accessories:



APD50-112 Hand or Foot, for PTH400A vises, p.67

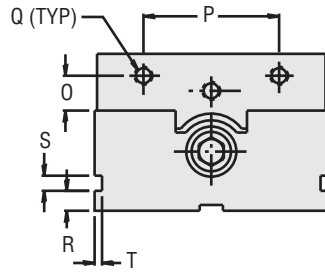


APD60-112 Hand or Foot, for PTH800A vises, p.67

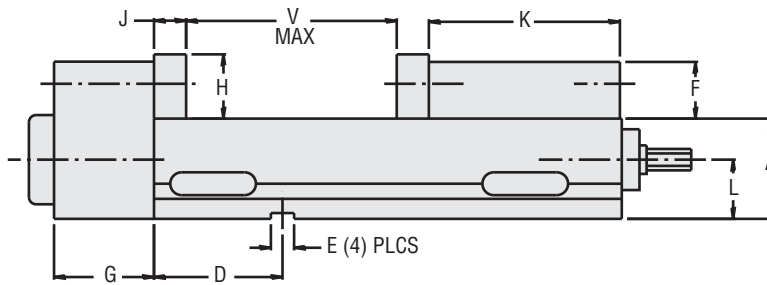


KHP5000 Hydraulic Pump, p.67

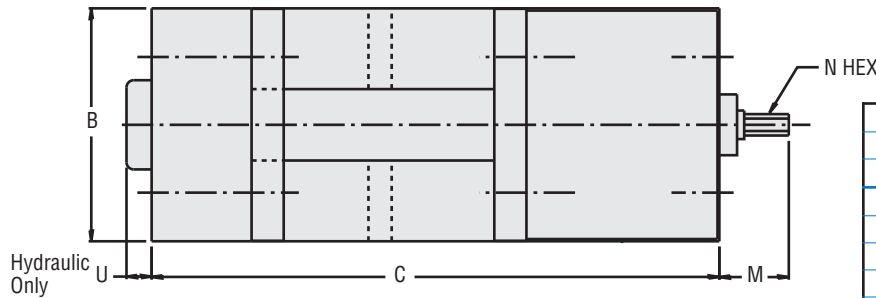
FRONT VIEW



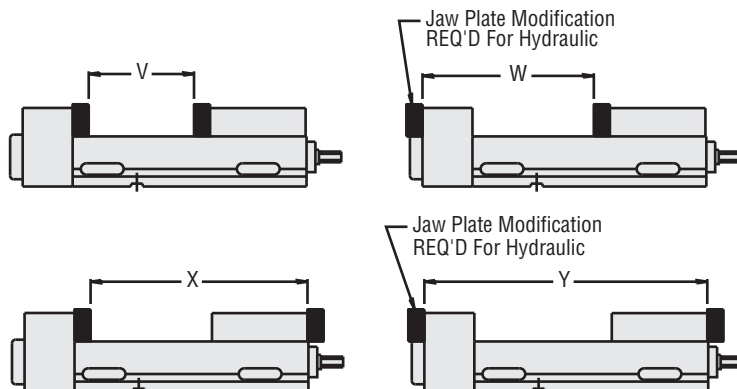
SIDE VIEW



TOP VIEW



JAW PLATE POSITION AND OPENING-INCHES



VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	PTH400A	PTH800A
1400	2380	-
1800	3100	-
2200	3820	-
2800	4880	-
2900	-	9100
3000	5240	-
3400	6100	-
3500	-	11560
4400	-	14620
5300	-	17560
6200	-	20120

VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	PT400A	PT800A
10	1453	-
20	2740	1637
30	4090	-
40	5257	3447
50	6297	-
60	-	3895
80	-	4764
100	-	6065
120	-	8023
140	-	8947
160	-	10337

	DIMENSIONAL DATA			
	Manual		Hydraulic	
	PT400A	PT800A	PTH400A	PTH800A
A	2.375	3.500	2.375	3.500
B	4.093	8.156	4.093	8.156
C	11.438	19.875	11.438	19.875
D	2.750	4.500	2.750	4.500
E	0.500	0.816	0.500	0.816
F	1.115	1.985	1.115	1.985
G	2.188	3.500	2.188	3.500
H	1.235	2.200	1.235	2.200
J	0.547	1.075	0.547	1.075
K	4.000	6.690	4.000	6.690
L	1.410	2.062	1.410	2.062
M	2.060	3.120	2.060	3.120
N	9/16	7/8	9/16	7/8
O	0.687	1.220	0.687	1.220
P	2.500	4.750	2.500	4.750
Q	3/8-16	5/8-11	3/8-16	5/8-11
R	0.500	0.700	0.500	0.700
S	0.530	0.530	0.530	0.530
T	0.250	0.250	0.250	0.250
U	-	-	0.750	0.875
V	4	7-3/8	4	7-3/8
W	6-3/4	12	6-3/4	12
X	8-9/16	15-3/16	8-9/16	15-3/16
Y	11-5/16	19-13/16	11-5/16	19-13/16
Ship Wt. Lbs.	32	159	46	180
Hydraulic Displacement cu. In.	-	-	0.55	0.98



CUSTOM ENGINEERED WORKHOLDING

VMC Applications

Kurt brings more than four 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**



Industry: Medical Device



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

VMC Applications Call for vacuum workholding

Application: Commercial Industry



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

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 Call for vacuum workholding



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

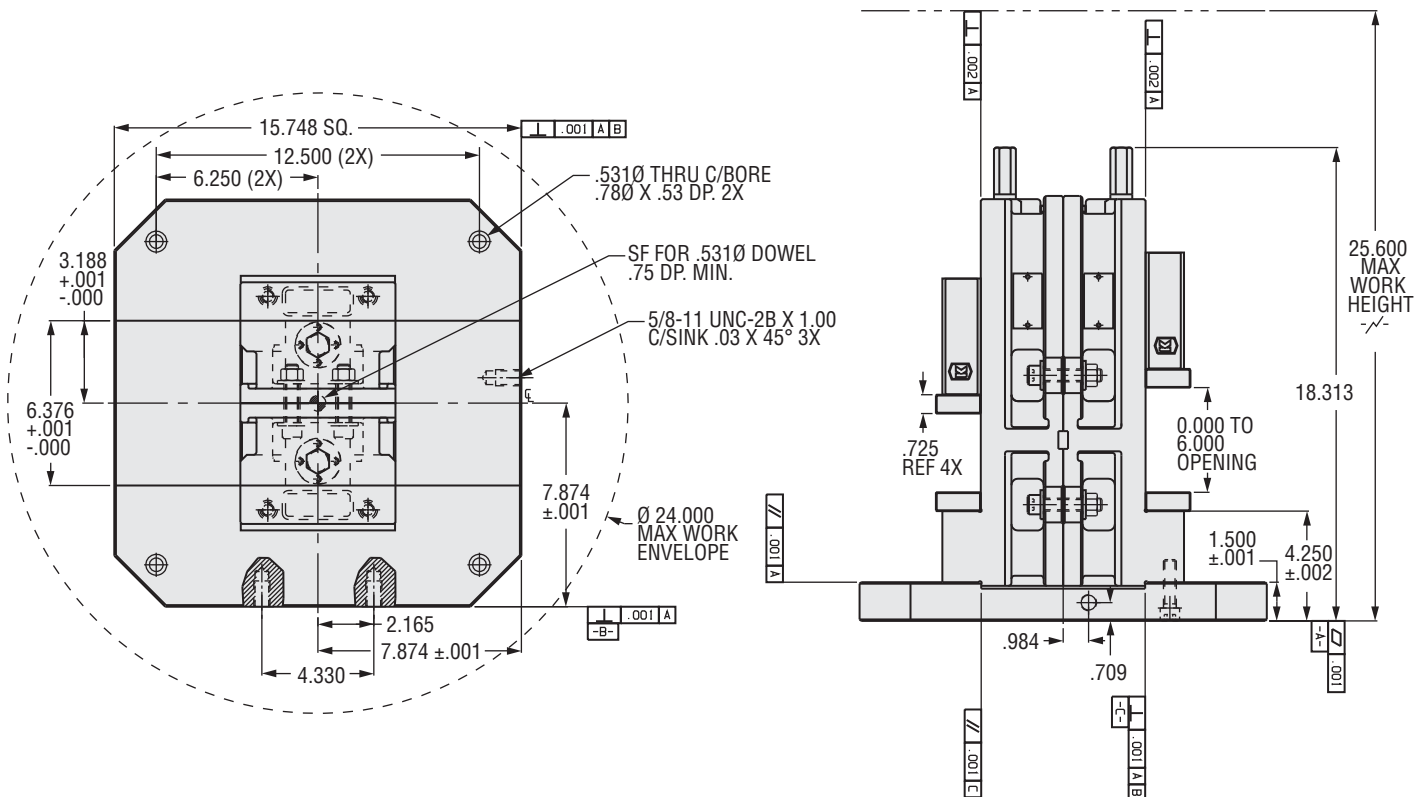


HDLM6



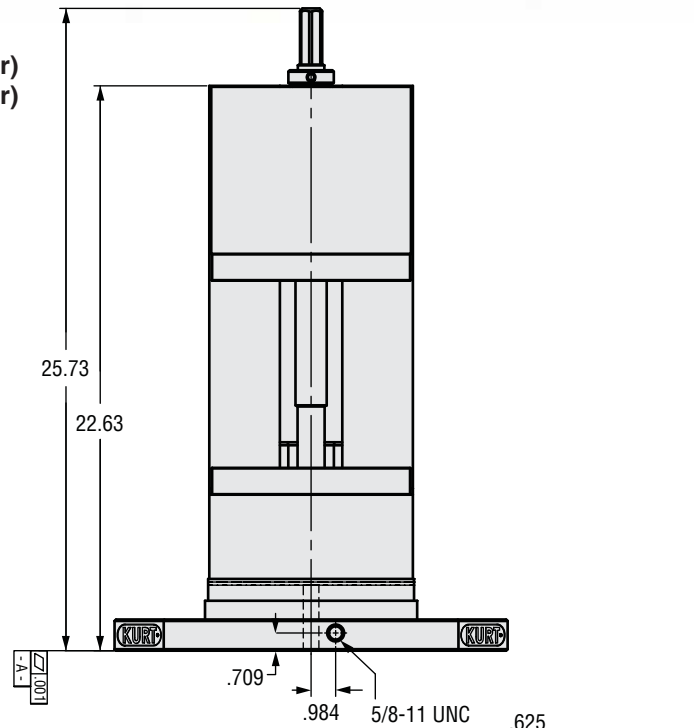
3600V

#36V2T400 - #3600V mounted back to back on a 400 mm pallet (without a riser)
#36V2T500 - #3600V mounted back to back on a 500 mm pallet (without a riser)

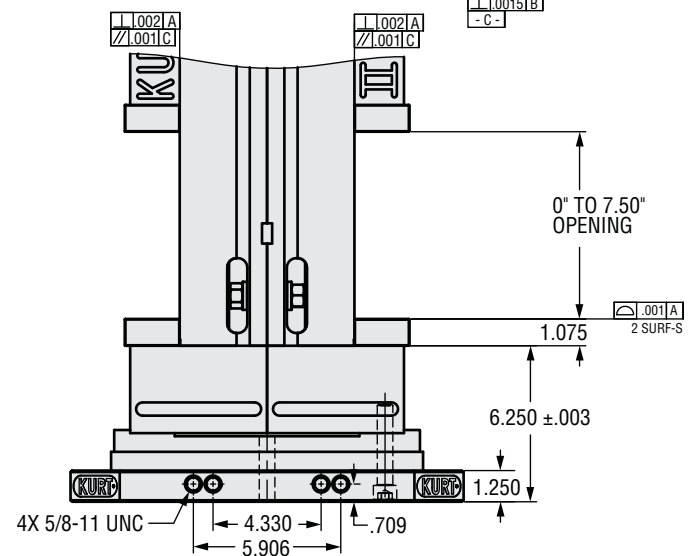
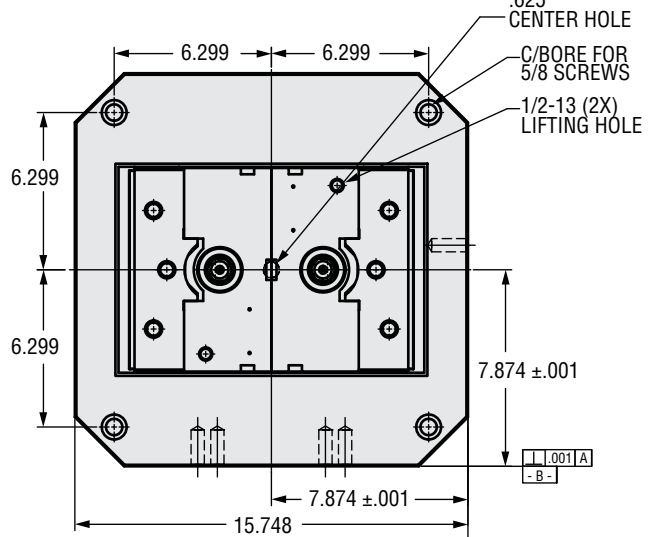


BACK TO BACK

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



PT800A BACK TO BACK ON 400MM
 RISER BASE PLATE





MoveLock Modular System

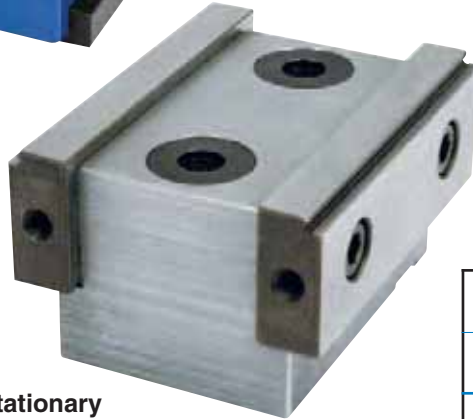
PATENTED



Hydraulic Movable Jaw MLH35



Manual Movable Jaw ML35



Stationary Jaw MLS351

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 30-31)
- 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.

MLH35 Hydraulic Pressure To Clamping Force Chart	
Hyd. Pressure (PSI)	Clamping Force (LBS)
400	200
800	500
1200	850
1600	1200
2000	1550
2400	1850
2800	2150
3200	2500

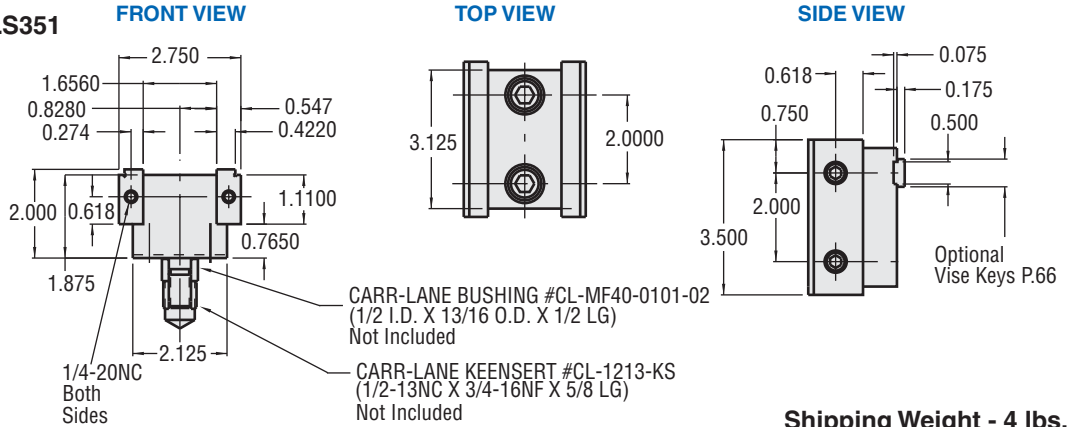
ML35 Torque/Clamping Force Chart	
Torque (FT LBS)	Clamping Force (LBS)
5	750
10	1550
15	2600
20	3550
25	4450
30	5400
35	6300
40	6900



MoveLock Modular System

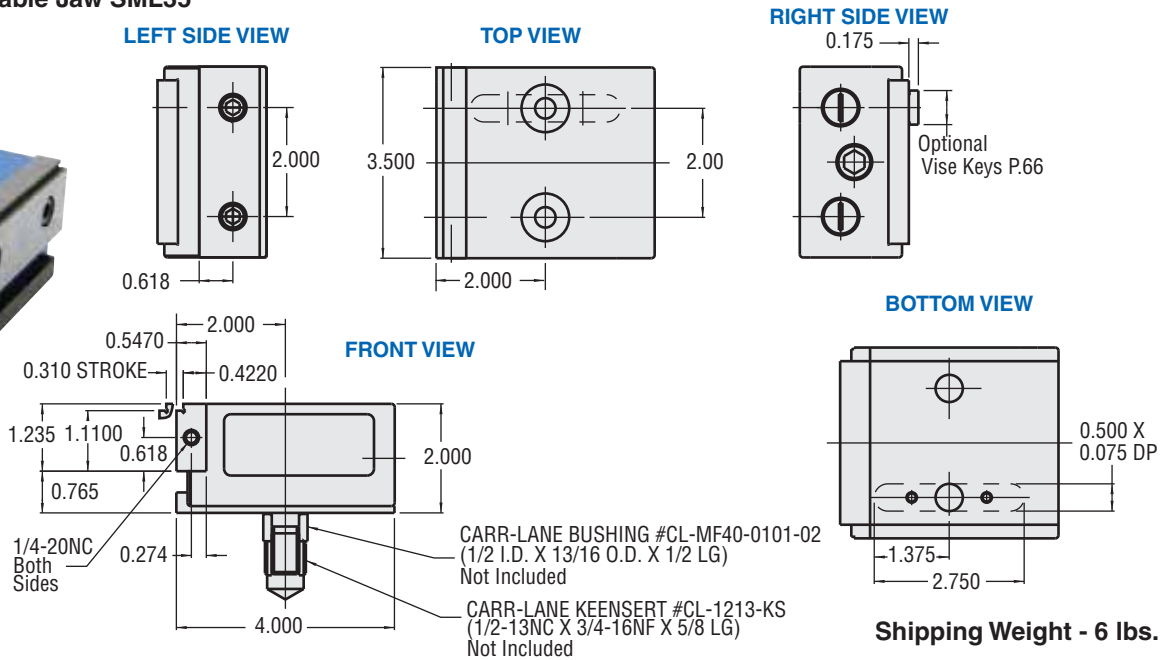
PATENTED

Stationary Jaw MLS351 Serrated Stationary Jaw SMLS351



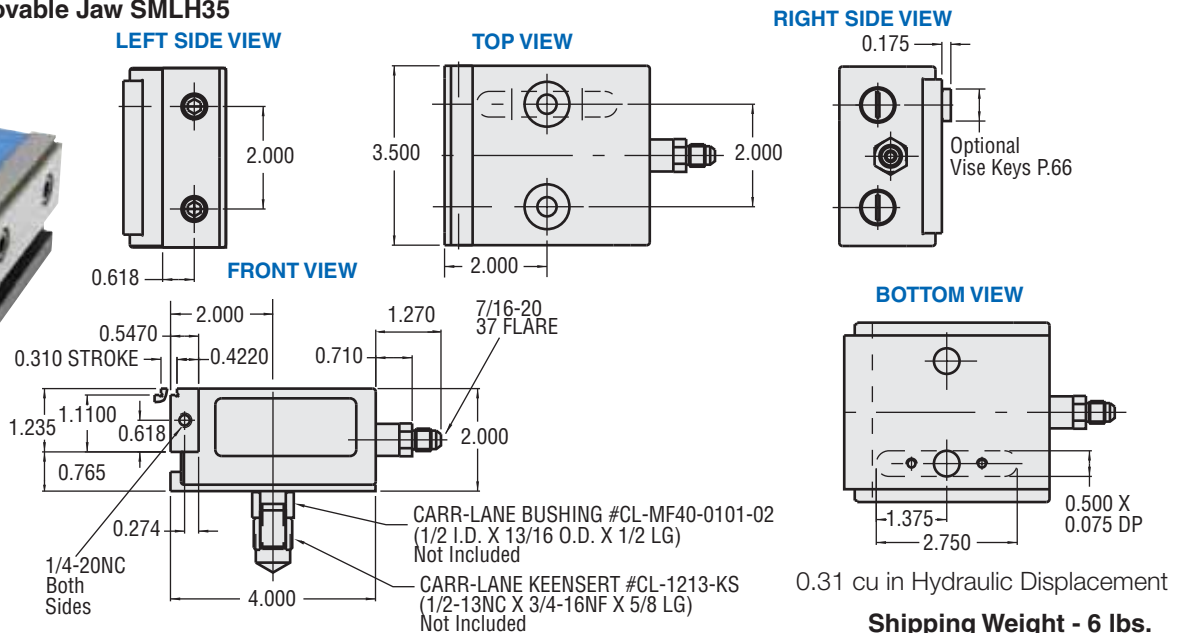
Shipping Weight - 4 lbs.

Manual Movable Jaw ML35 Serrated Manual Movable Jaw SML35



Shipping Weight - 6 lbs.

Hydraulic Movable Jaw MLH35 Serrated Hydraulic Movable Jaw SMLH35



Shipping Weight - 6 lbs.

Models: (Inch)

- MT4
- MT5
- MT6
- MT8

Models: (Metric)

- MTM4
- MTM5
- MTM6
- MTM8

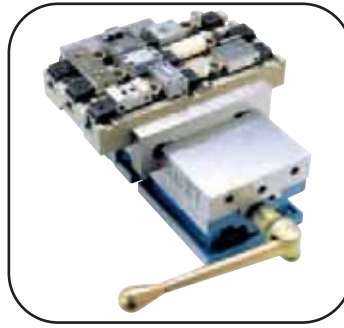
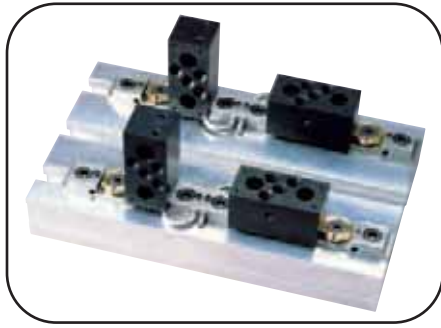


Unlike many competitive cam action models, this product employs the same AngLock concept as the world famous Kurt vises. When a quarter turn is applied to the screw, the split clamp jaw is forced both laterally and down, precisely clamping the part and preventing part lift at the same time. In-house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

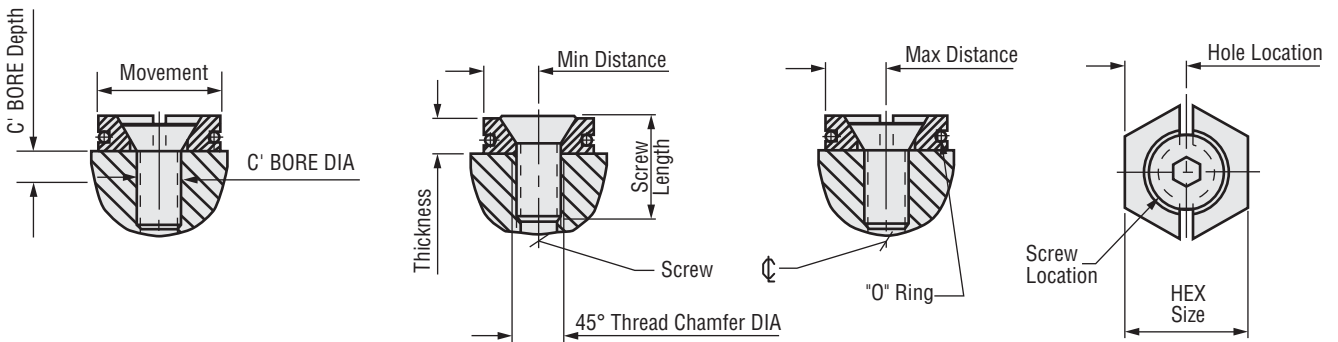
Features:

- 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.





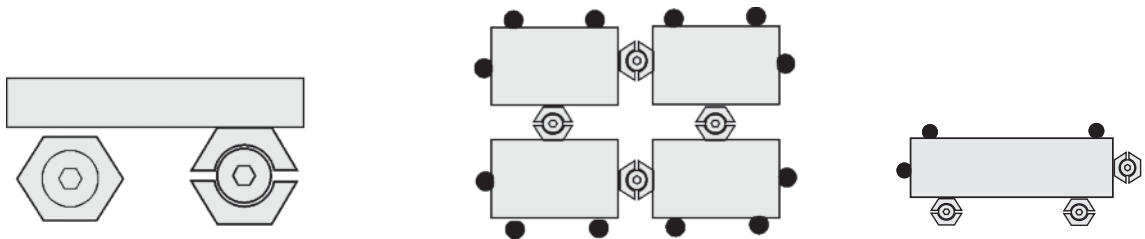
MINILOCK																
Model Number	Hex Size	Hex Thickness	Screw Size	Hex Wrench Size	Screw Length	Suggested Tapped Hole Loc. From Edge of Part	Min. Distance From Screw CL	Max Distance From Screw Cl	45°/6° Thread Chamfer Dia.	Max part Size Differential Double Clamp	Optional C' Bored Tapped hole use for Larger part Tolerance Differential					
											C' Bore Dia. +.015-.005 (-.39-.13mm)	C' Bore Depth $\pm .020$ ($\pm .50$ mm)	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	1400
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	2200
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	2600
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	1400
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	2200
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	2600



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.



MiniLock before tightening clamp screw MiniLock after tightening clamp screw

Clamp multiple parts with several MiniLocks and workstops.

Three MiniLocks used to clamp one larger part.



SELF-CENTERING VISE

Models:
SCD430
SCD640

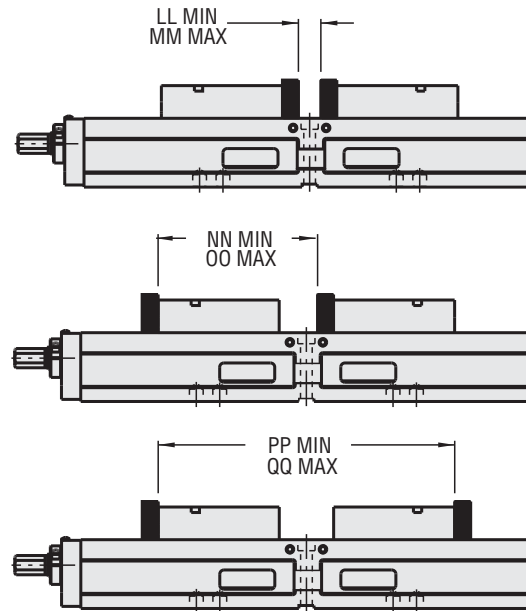


Kurt has two Self-Centering vises, a 4" jaw width (SCD430) and a 6" jaw width (SCD640). Jaw opening on the 4" model is 6.25" and 8" on the 6". Centering accuracy from minimum to maximum opening is 0.0006" with 0.0002" repeatability. Both movable jaws are Anglock design with zero lift. A unique feature 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:

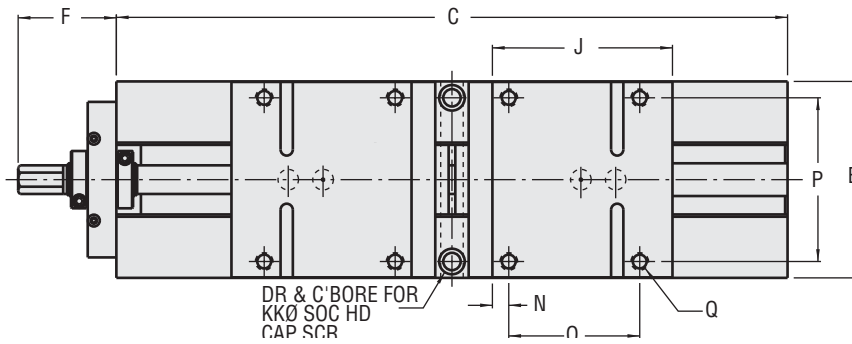
- Lip seals on main screw.
- Chip guards.
- Hardened jaws.
- Hardened bed ways.
- 80,000-PSI ductile iron construction.

JAW POSITION

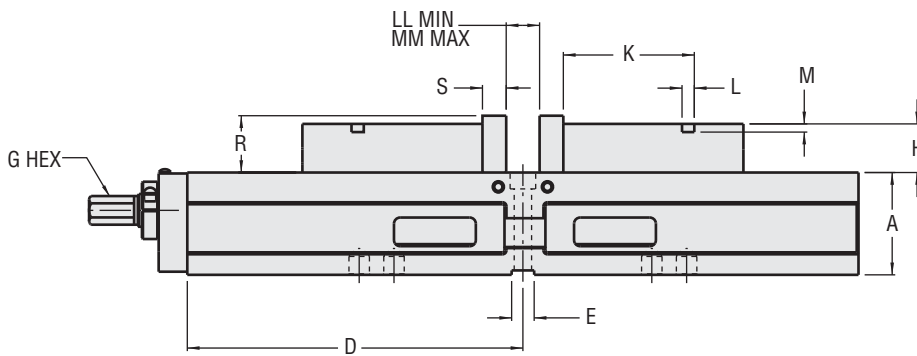


SELF-CENTERING VISE

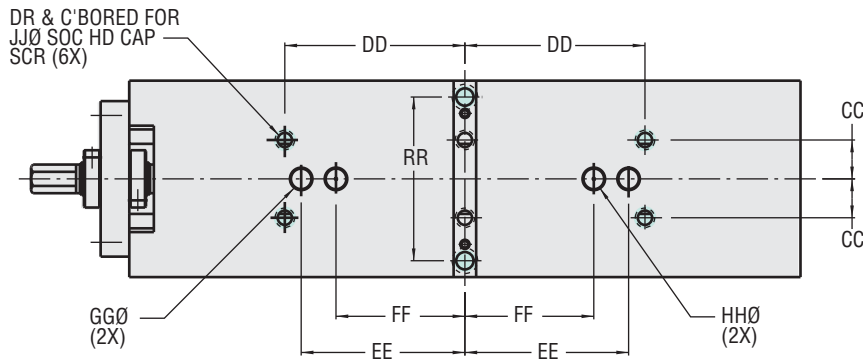
TOP VIEW



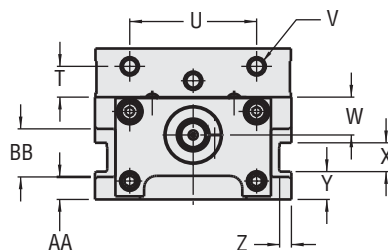
SIDE VIEW



BOTTOM VIEW
(Mounting hole pattern)



FRONT VIEW



WISE CLAMPING FORCE-LBS.

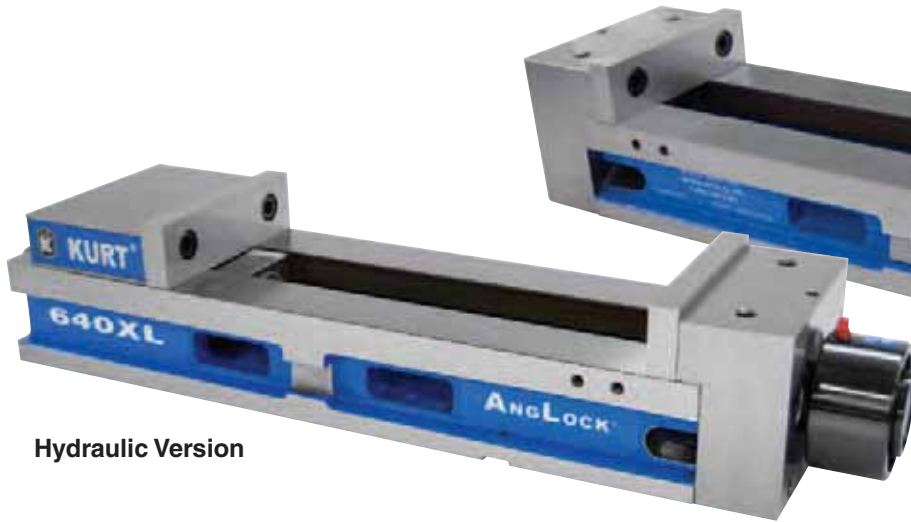
Torque-Ft. Lbs.	SCD430	SCD640
10	912	985
20	1757	1760
30	2410	2576
40	2935	3770
50	3549	4382
60	4902	5764

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	1.150	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 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.
- Intensifier available in either hand or foot option. Purchase separately. Each vise must have it's own intensifier. (See Page 67).
- Internal hex screw available.

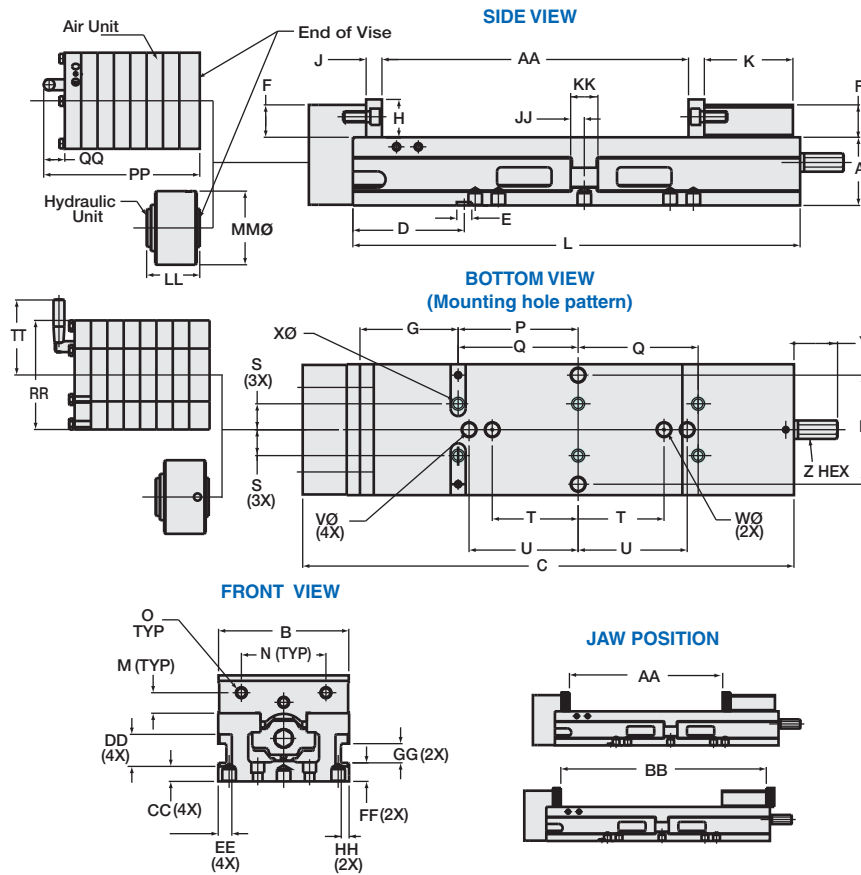
VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	640XLS	640XLR
10	989	989
20	1768	1768
30	2586	2586
40	3731	3731
50	4398	4398
60	5785	5785
70	6235	6235
80	6877	6877

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	640XLHS	640XLHR
400	1575	1575
800	3150	3150
1200	4725	4725
1600	6300	6300
2000	7875	7875
2400	9450	9450
2800	11025	11025
3200	12600	12600

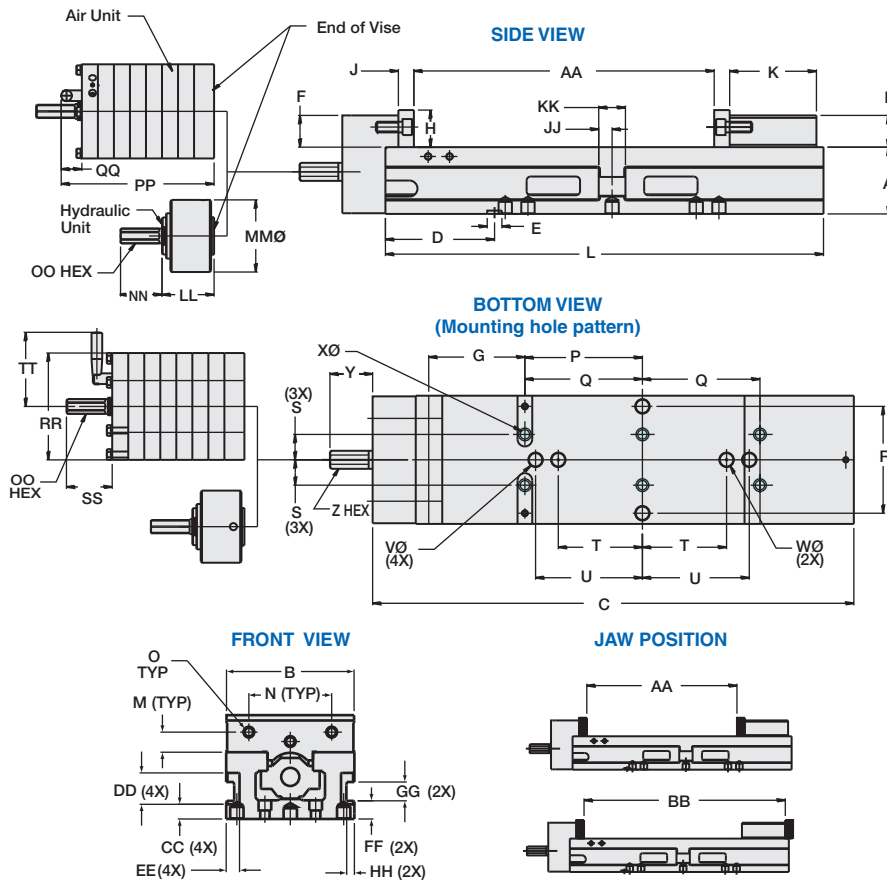
VISE CLAMPING FORCE-LBS.		
AIR PSI	Air	
	640XLAS	640XLAR
10	320	320
20	840	840
30	1280	1280
40	1780	1780
50	2200	2200
60	2720	2720
70	3240	3240
80	3800	3800
90	4380	4380
100	5000	5000

EXTRA CAPACITY 6" XL VISES

Standard (S)



Reverse (R)



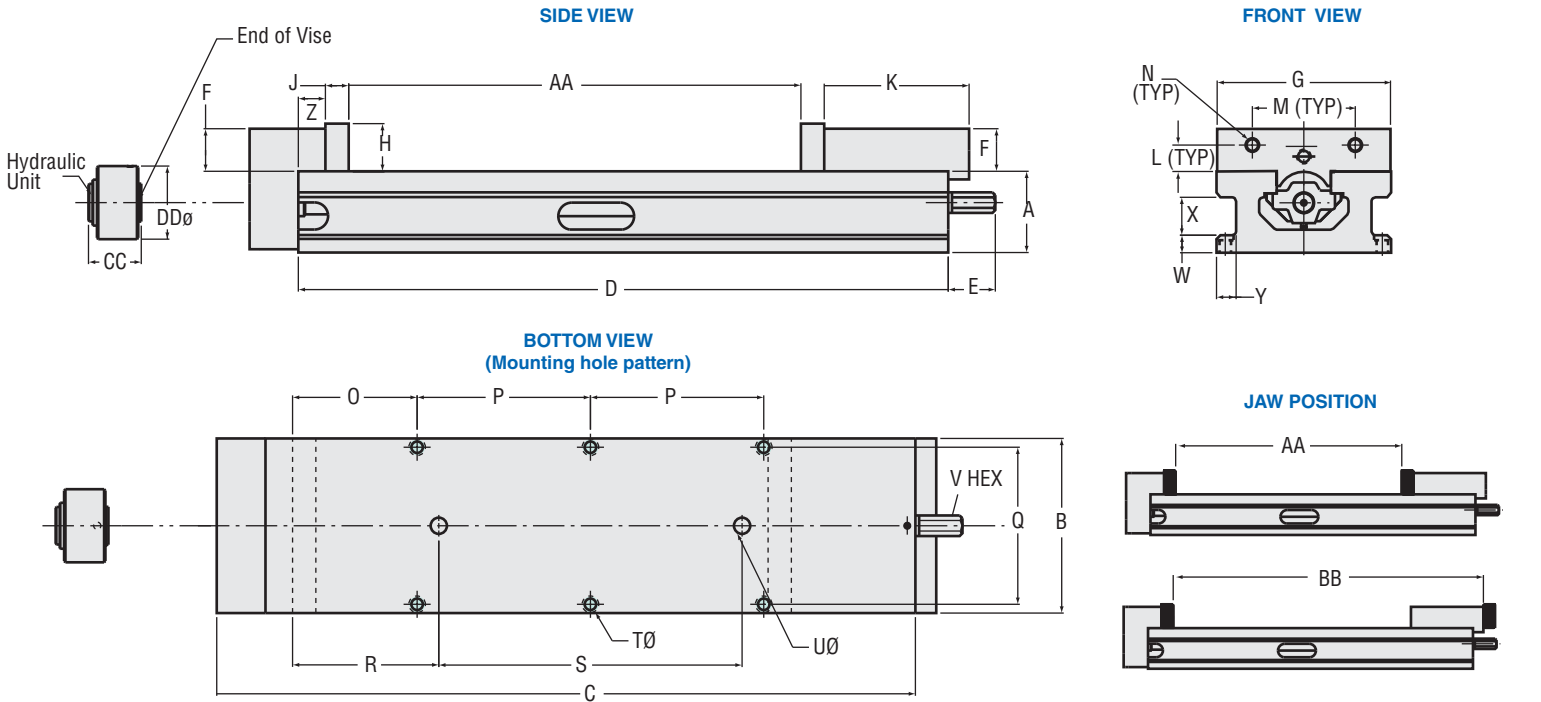
	DIMENSIONAL DATA					
	Manual		Hydraulic		Air	
	640XLS	640XLR	640XLHS	640XLHR	640XLAS	640XLAR
A	3.125	3.125	3.125	3.125	3.125	3.125
B	6.000	6.000	6.000	6.000	6.000	6.000
C	22.510	22.510	22.510	22.510	22.510	22.510
D	5.107	5.107	5.107	5.107	5.107	5.107
E	0.688	0.688	0.688	0.688	0.688	0.688
F	1.485	1.485	1.485	1.485	1.485	1.485
G	4.500	4.500	4.500	4.500	4.500	4.500
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	4.060	4.060	4.060	4.060	4.060	4.060
L	20.500	20.500	20.500	20.500	20.500	20.500
M	0.940	0.940	0.940	0.940	0.940	0.940
N	3.875	3.875	3.875	3.875	3.875	3.875
O	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13	1/2-13
P	5.500	5.500	5.500	5.500	5.500	5.500
Q	5.500	5.500	5.500	5.500	5.500	5.500
R	5.000	5.000	5.000	5.000	5.000	5.000
S	1.188	1.188	1.188	1.188	1.188	1.188
T	3.937	3.937	3.937	3.937	3.937	3.937
U	5.000	5.000	5.000	5.000	5.000	5.000
V	0.625	0.625	0.625	0.625	0.625	0.625
W	0.6299	0.6299	0.6299	0.6299	0.6299	0.6299
X	3/8	3/8	3/8	3/8	3/8	3/8
Y	2.000	1.920	2.000	-	2.000	-
Z	3/4	3/4	3/4	-	3/4	-
AA	14.000	14.000	14.000	14.000	14.000	14.000
BB	18.780	18.780	18.780	18.780	18.780	18.780
CC	0.690	0.690	0.690	0.690	0.690	0.690
DD	1.470	1.470	1.470	1.470	1.470	1.470
EE	0.630	0.630	0.630	0.630	0.630	0.630
FF	0.850	0.850	0.850	0.850	0.850	0.850
GG	0.880	0.880	0.880	0.880	0.880	0.880
HH	0.360	0.360	0.360	0.360	0.360	0.360
JJ	0.630	0.630	0.630	0.630	0.630	0.630
KK	1.250	1.250	1.250	1.250	1.250	1.250
LL	-	-	2.250	2.250	-	-
MM	-	-	3.375	3.375	-	-
NN	-	-	-	5/8	-	-
OO	-	-	-	5/8	-	-
PP	-	-	-	-	7.220	7.220
QQ	-	-	-	-	1.030	1.030
RR	-	-	-	-	5.000	5.000
SS	-	-	-	-	-	2.140
TT	-	-	-	-	3.470	3.470
Ship Wt. Lbs.	100	100	105	105	106	106
Hydraulic Displacement cu. In.	-	-	1.18	1.18	-	-



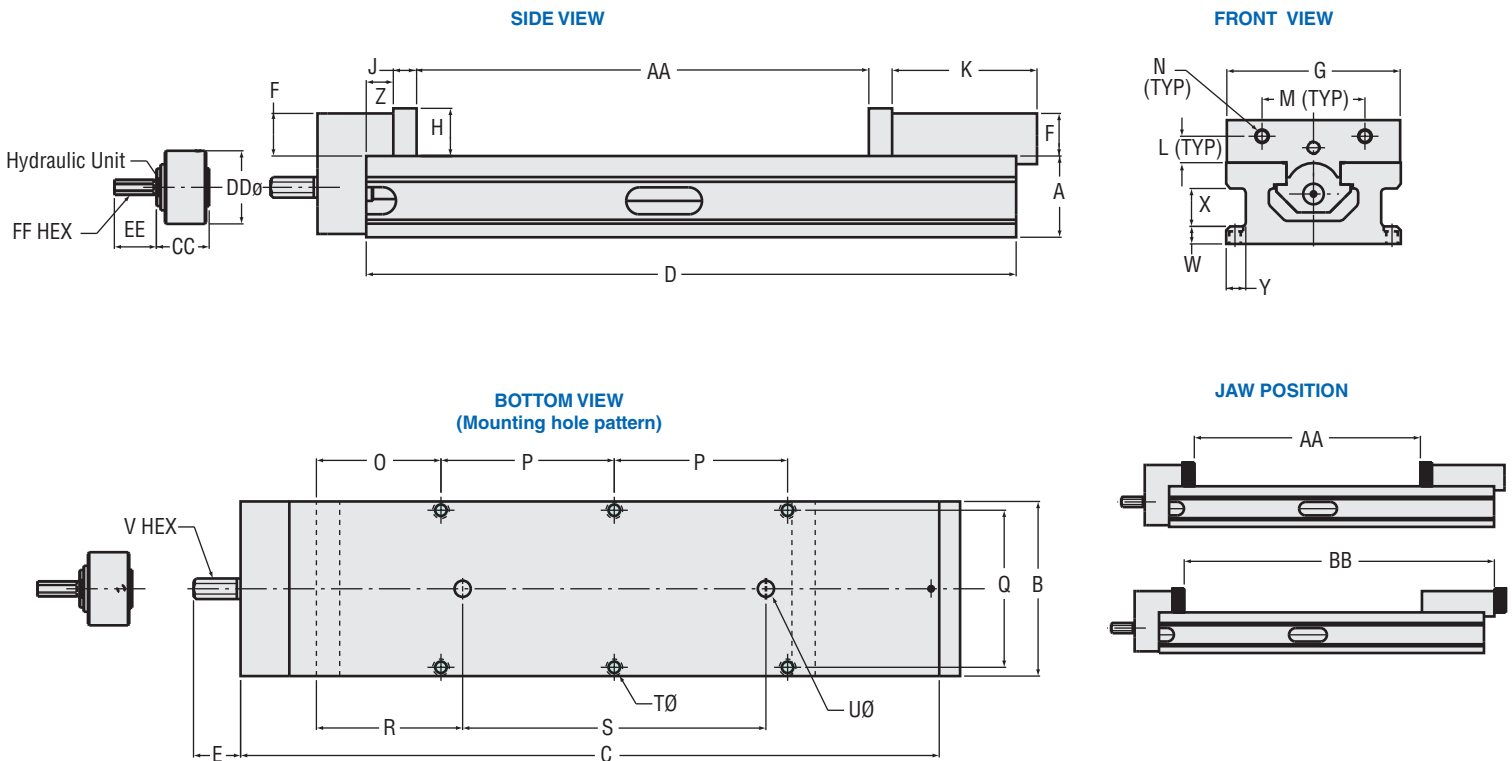
EXTRA CAPACITY 8" XL VISES

Model:
8XL

Standard (S)



Reverse (R)



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

EXTRA CAPACITY 8" XL VISES

VISE CLAMPING FORCE-LBS.		
Hydraulic PSI	Hydraulic	
	8XLPTLSHS	8XLPTLSHR
1400	5600	5600
1800	7490	7490
2200	8765	8765
2800	11250	11250
3000	12050	12050
3200	12780	12780

VISE CLAMPING FORCE-LBS.		
Manual Torque Ft.-Lbs.	Manual	
	8XLPTLSS	8XLPTLSR
20	2904	2904
40	5664	5664
60	7872	7872
80	10824	10824
100	13848	13848
120	16632	16632
140	19008	19008
160	20376	20376

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 D688® DM688 D810 D100

The original Kurt Anglock D-Series vises are designed for precision part clamping on basic machine tools such as knee-type mills, grinders 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.
- Hardened vise bed.
- Hardened jaw plates.
- Semi-hard steel screw.
- 80,000-PSI ductile iron body.
- Matching of bed height ± 0.001 " available at an additional cost for the D40 and D100 vises.
- Matching of the keyway to the stationary jaw ± 0.001 " is available at additional cost.



D40

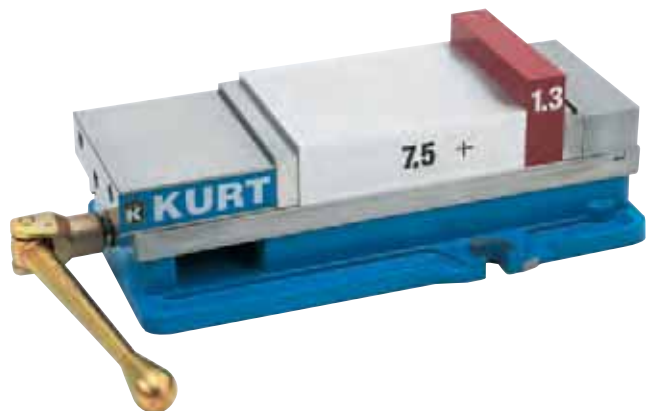
The D40 vise is recommended for intermediate milling and grinding work. It is an ideal vise for use in matched multiples for holding long parts. With jaw plates in their outside positions, this 4" vise has a 10-5/16" capacity.



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

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

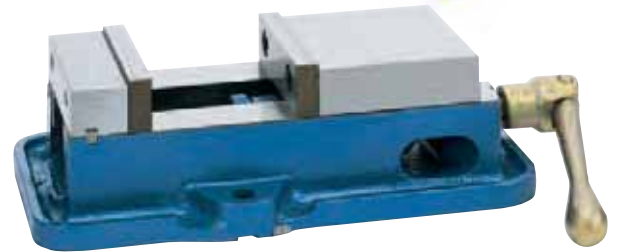
- Quick Set-up feature.
- Top down, four bolt design on the stationary jaw reduces vise deflection by 25 percent while allowing total disassembly of the vise without removing the body from the machine table. Special brush seals shield and protect vise screw threads from machined chips and residue.

- 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.

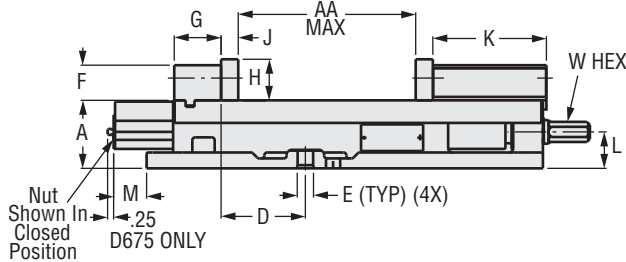


D100

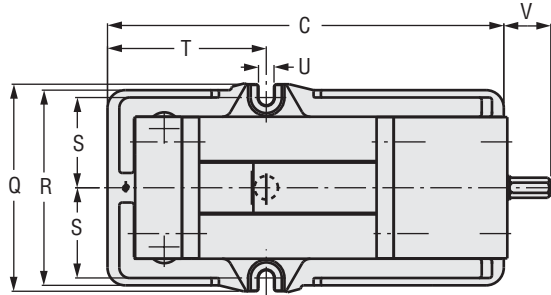
The D100 is the largest and strongest of our general purpose vises. With 9-3/4" of jaw opening, it has the capacity and strength to take on your highest horsepower milling cuts. It's the most precise and rugged 10" production vise in the world.



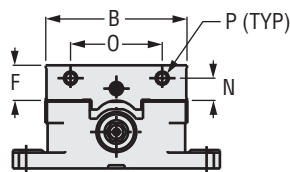
SIDE VIEW



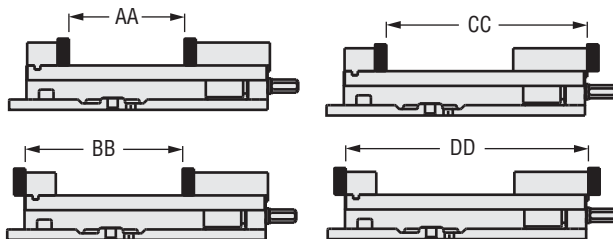
TOP VIEW



FRONT VIEW



JAW POSITION



MANUAL VISE CLAMPING FORCE-LBS.				
Torque Ft.-Lbs.	D40	D688	D810	D100
10	1653	1129	-	-
20	2923	2242	1834	1698
30	4103	3337	-	-
40	5241	4148	3843	3300
50	6513	5379	-	-
60	7807	6310	4349	4686
70	-	6977	-	-
80	-	7968	5706	6623
100	-	-	7042	7842
120	-	-	8688	9970
140	-	-	10413	11429
160	-	-	11596	12792
180	-	-	-	14681
200	-	-	-	16163
220	-	-	-	18124
240	-	-	-	20563
260	-	-	-	22093
280	-	-	-	24077
300	-	-	-	26277

	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	24.750
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 56 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	
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						PTH400-188 PTH400-187	
BRUSH SEAL			D688-211	PT400-211		PT400-211	PT800-211
CAP PLASTIC							
INTERNAL BRUSH SEAL	3600V-211 (x2)	3600V-211 (x2)					
O-RING AND/OR BACKER RINGS	3600V-99 3600V-128	3600V-99 3600V-128 360HU-187 PTH600-188 360HU-98 PTH600-96	3600V-99 3600V-128	PT400-99	PT800-99A	PT400-99 D50-68 PTH400-198 PTH400-197 PT400-97	PT800-99A PT800-97
PISTON						PTH400-93	PTH800-93A
POLYPAK PISTON SEAL							PTH800-198A PTH800-96A
SEGMENT	D60-9	D60-9		D40-9	D80-9	PTH400-42	D80-9
SPIRAL RETAINING RING	3600V-147 (x2)	3600V-147 (x2)					
THRUST BEARING	D80-41	D80-41	D80-41	PT400-41	PT800-41	D50-41	PT800-41
THRUST BEARING WASHER	3600V-42 (x2)	3600V-42 (x2)	3600V-42 (x2)	PT400-42 (x2)	PT800-42 (x3)	PT400-41 (x2)	D80-42 (x2)
THRUST WASHER							PTH800-42 (x2)

* = Same as Metric Vise



HDH Nut & Screw Assembly



HDLM Nut & Screw Assembly



HDH 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



Moveable Jaw w/Jaw Plate

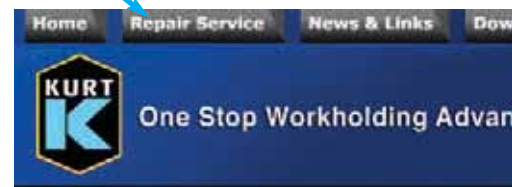


Rear Stationary Jaw



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	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	DL640-129 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	DL430-215A (?)	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		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 Metric Vise

REPLACEMENT PARTS	HD6-KIT1	HDH6-KIT1	HDL6-KIT1	HDHLM6-KIT1
BACK UP RING		HDH6-187 HDH6-188		HDH6-187 HDH6-188
FRICTION CLAMP			DL640-225A-P	HDHLM6-311A
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				HDHLM6-169
PROTECTIVE PLUG				3600V-191
RETAINING RING	DL640-217		DL640-217 DL640-231	DL430-217 DL430-231
SPRING CLUTCH/COMPRESSION			DL600-215 (x3)	
SPRING, PRE-LOAD			DL640-311A	DL640-311A
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 DL430-97	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



316-01 Filter-Lubricator



Drawbar



202-01-SA Upper Actuator Block Assembly



400-10 Universal Base



208-00 Drawbar Socket



DLU CARVLOCK VISE JAW KITS

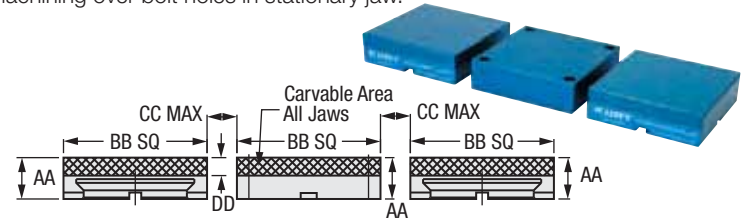
Select Your Choice of Jaw Kits for CarvLock® Vise and CarvLock® Towers

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

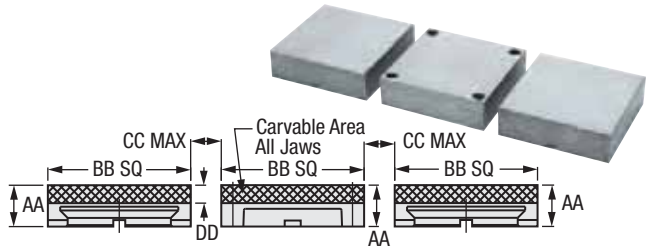


DLU4C - Jaw Kit • DLU6C - Jaw Kit

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

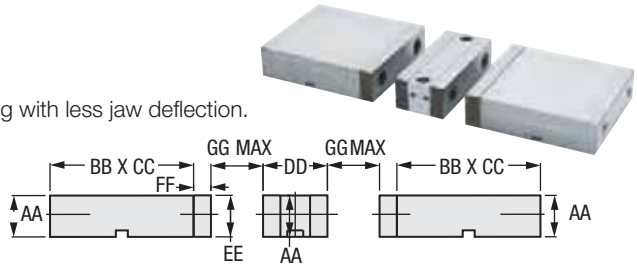


DLU6J - Jaw Kit

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



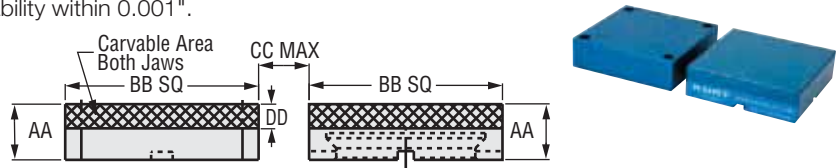
Select Your Choice Of Jaw Kits For DU68™ Fixture Vise

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

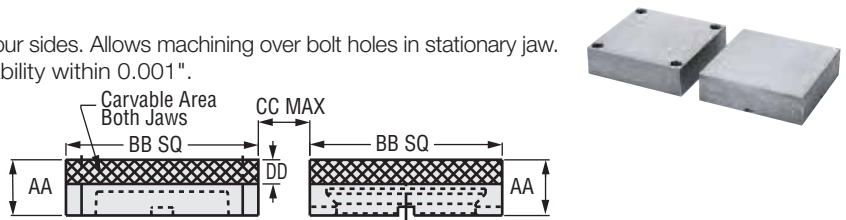


DU68C - Jaw Kit

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

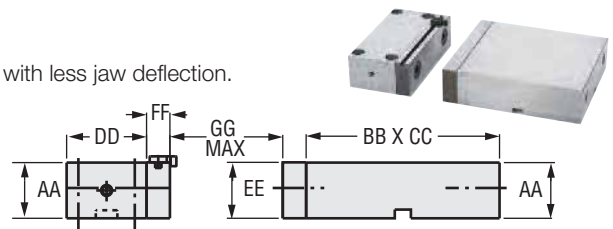


DU68J - Jaw Kit

Standard Jaws

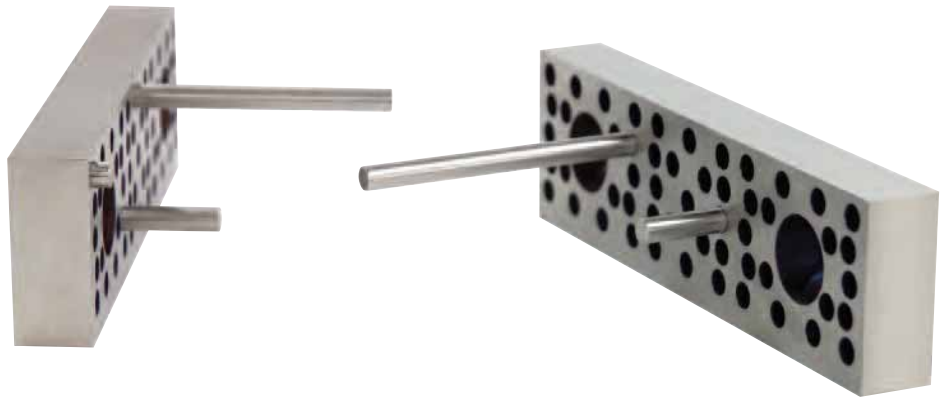
- Stationary and movable jaws 1.780" high. Extra height allows higher clamping with less jaw deflection.
- Stationary jaws are keyed to the vise base for repeatability within 0.001".
- Hardened steel jaw plates.

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



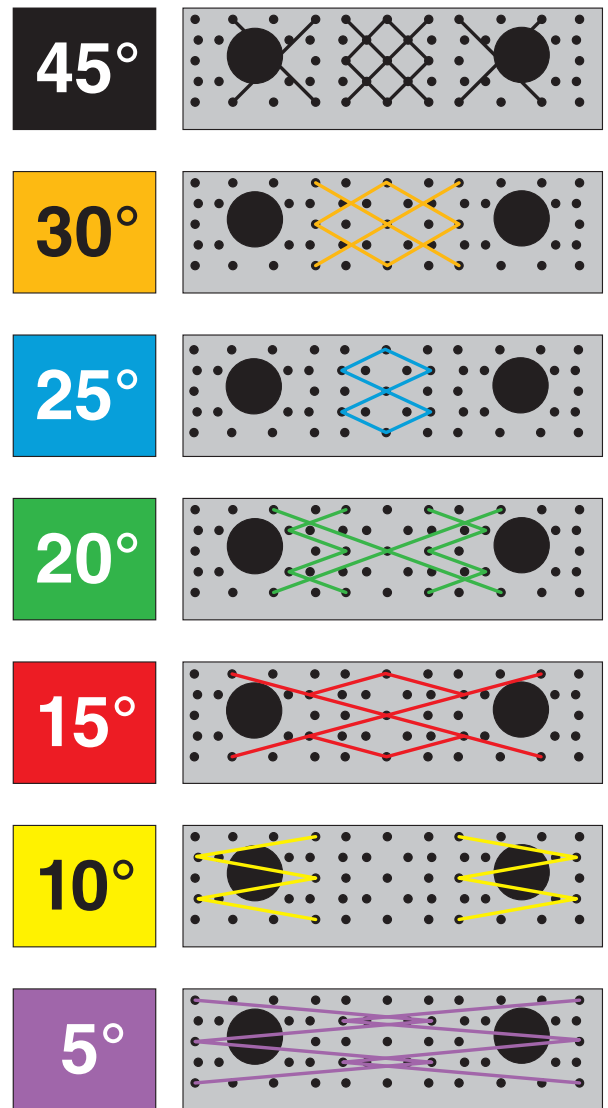
3-IN-ONE SYSTEM JAW PLATES

Model: KSJ6



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:
6" x 1.735" x 0.725" ±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.



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:

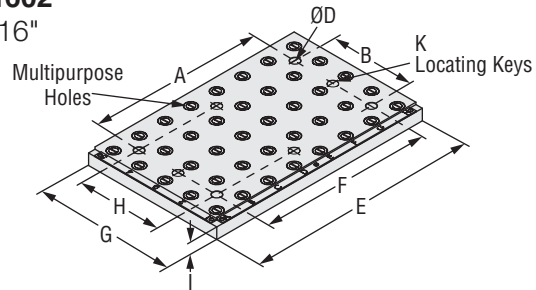
- Available in a variety of sizes (inch dimensions).
- Laser cut alpha/numeric indicator strips can be added/removed to adjust to needed size.
- Reduce set-up time.
- Multipurpose bushed and tapped holes held to true position 0.0008".
- Protection plugs included for every hole.
- Kurt HD and MoveLock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

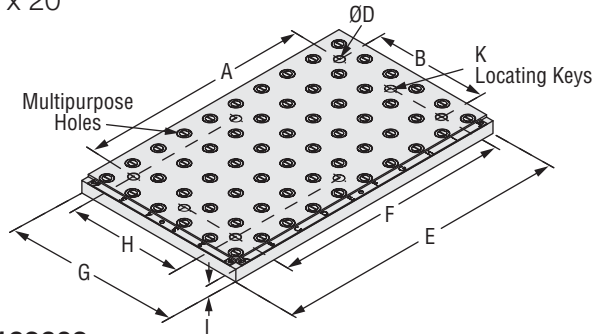
TP101602

10" x 16"



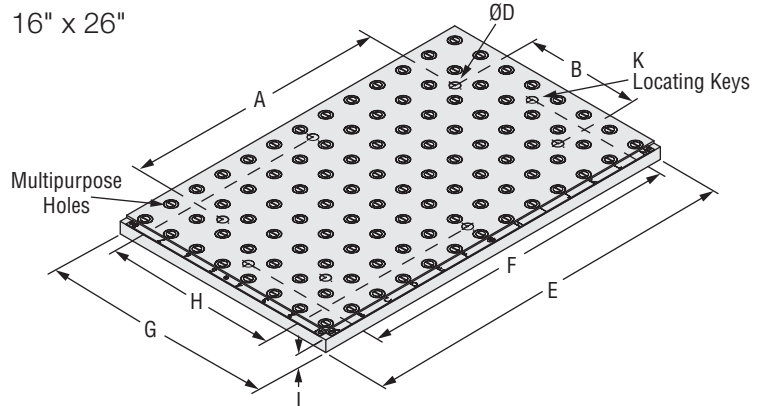
TP122002

12" x 20"

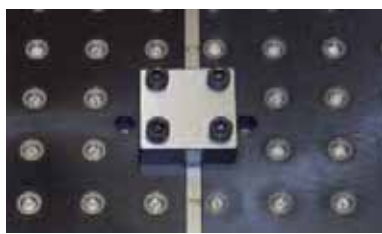
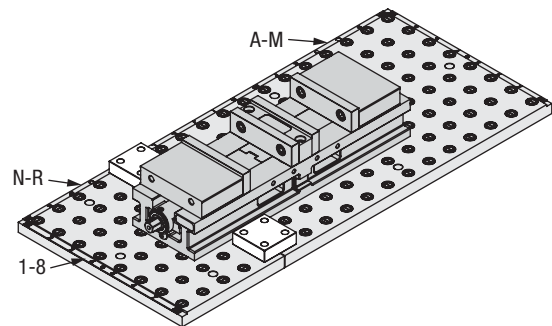


TP162602

16" x 26"



Example of two plates combined with HD Vise mounted

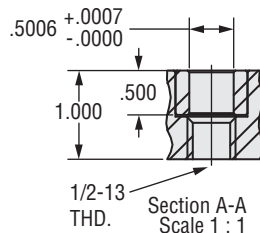


Locator Block shown connecting two grid plates.
Part No. TP400102 Locator Block (1)
Part No. TP400102-SC Screws (4)

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



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	44 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 (4) PIECES	00-3353	1 Lb.	00-3417	1 Lb.	00-3481	1 Lb.
BOLTS-PT (4) PCS.	00-3353	1 Lb.	00-3417	1 Lb.	00-3481	1 Lb.
BOLTS-DL (4) PCS. (STATIONARY)	00-3348	1 Lb.	00-3412	1 Lb.	-	-
BOLTS-DL (4) PCS. (MOVABLE)	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	STEP	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 silhouette SHCS.

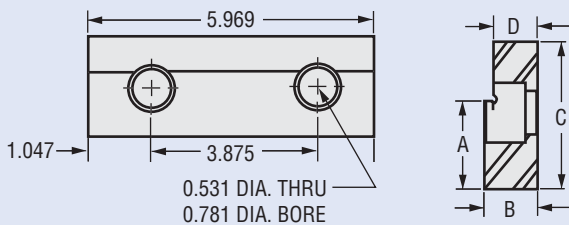
Machinable Aluminum Jaw Plate For All Kurt 6" Vises



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.

Standard Individual Jaw Plates



Part #	Dim "A"	Dim "B"	Dim "C"	Dim "D"	Description
60-32-1	1.693	0.725	1.880	0.610	STEPPED JAW
60-236-1	1.505	0.725	1.880	0.610	STEPPED JAW
60-236-2	1.130	0.725	1.880	0.610	STEPPED JAW
*60-234-1	NONE	0.980	1.880	0.980	ALUMINUM
*60-235-1	NONE	1.125	1.880	1.125	STEEL
LP60-32	1.469	0.725	1.635	0.610	STEPPED JAW
*60-47-1	NONE	0.725	1.735	0.725	SERRATED JAW

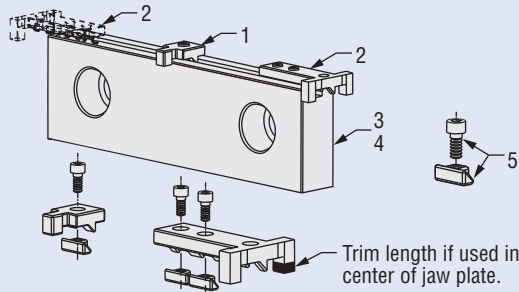
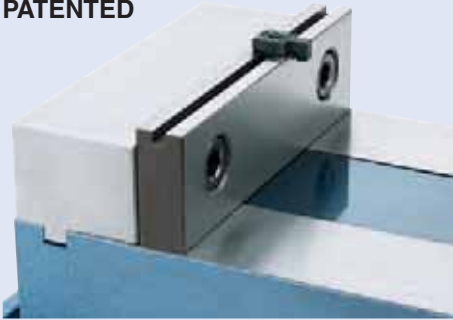
*60-234-1 is a carve your own pocket jaw plate.
 *60-235-1 is a carve your own pocket jaw plate.
 *60-47-1 Serrations are aggressive and will mark parts.

Jaw Type	4" Vise		6" Vise	
	Part #	Wt.	Part #	Wt.
HARDENED	D40-7	1 Lb.	D60-7	2 Lbs.
SOFT	D40-7-SOFT	1 Lb.	D60-7-SOFT	2 Lbs.
STEPPED	See InnerLock		See InnerLock	
SERRATED	See InnerLock		See InnerLock	

Jaw Type	8" Vise		10" Vise	
	Part #	Wt.	Part #	Wt.
HARDENED	D80-7	5 Lbs.	D100-7	6 Lbs.
SOFT	D80-7-SOFT	5 Lbs.	D100-7-SOFT	6 Lbs.
STEPPED	See InnerLock		-	
SERRATED	See InnerLock		D100-47	6 Lbs.

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

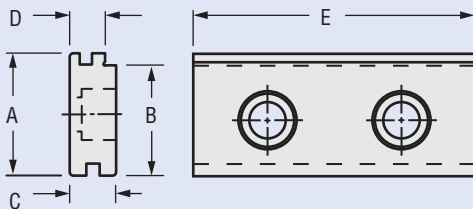


WSRL46

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" GrooveLock jaw plate (Not reversible)
4	D40-315	4" GrooveLock jaw plate (Not reversible)
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

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. 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**



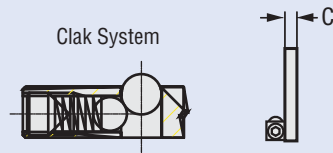
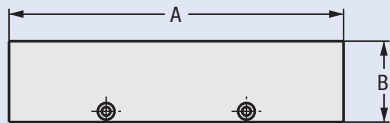
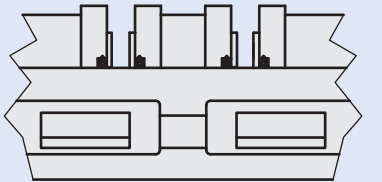
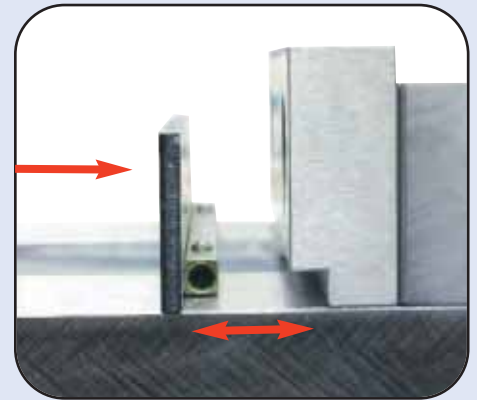
6" MAGNETIC JAW PLATES				
Part #	Description	Length	Width	Height
D60-7-SAMAG	6" Magnetic Jaw Plate	5.969	0.725	1.735
D60-315-SAMAG	6" Magnetic Jaw Plate Accepts Groove Lock Workstops	5.969	0.725	1.735

Workstop sold separately

Clak Parallels

Features:

- New patented system allows the quick change of parallels.
- Reduces downtime and set-up time.
- Eliminates clamps and locks thanks to the self locking system.
- Increases the accuracy of finished parts and reduces scrap.
- Convenient case for easy storage.
- Sets come complete with Jaw Plates, 6 Pair of Parallels and Storage Box.
- Kits come with 6 Pair of Parallels and Storage Box.
- All components hardened and precision ground.



Kurt Clak Ordering Information And Dimensional Data (inches)									
Part #	Description	A		B (+0 -0.0006)				C	
6KCK	6" Parallel Kit w/Storage Box	5.740	0.590	0.787	0.984	1.181	1.378	1.575	0.157
6KCS	6" Parallel Set w/Jaw Plates & Storage Box	5.740	0.590	0.787	0.984	1.181	1.378	1.575	0.157
D60-7-OML	6" Jaw Plate For Kurt Clak System	5.969	1.735	-	-	-	-	-	0.725 (±0.0005)
D60-315-OML	6" CLAK Groove Lock Jaw Plate	5.969	1.735	-	-	-	-	-	0.725 (±0.0005)



Quick Change Feature Reduces Set-up time

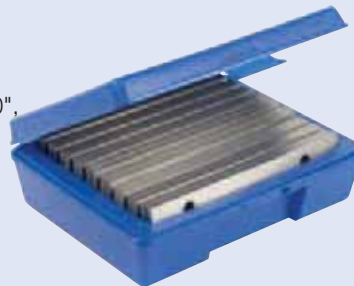
8" Parallel Sets

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



8PS6 6 Pair Set Features:

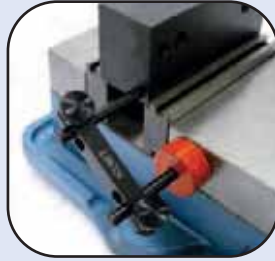
- 1.000", 1.250", 1.500", 1.750", 2.000", 2.125" Heights.
- 0.250" ±0.002" Thickness.
- 0.0002" Parallelism.
- 1 ea. Plastic storage box.
- Weight 12 lbs.



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



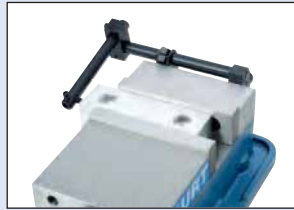
Features:

- 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 Short Spacer	6AWSM-288 Short Spacer
6AWS-289 Long Spacer	6AWSM-289 Long Spacer

Kits include the workstop and both long and short spacers.

Parallel Keeper

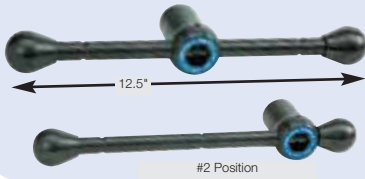
- Models:**
KPS-6000
KPS-8000

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". KPS-8000 model opens to 8". Your new revolutionary labor saver, your "machinists third hand," is at work, saving part change time. 1 lb. shipping weight.



Shown with 3610V

ArmLock® Handle AL6



ArmLock adjustable lever length handle is designed to allow spinning of the vise screw with the lever in the central position for fast jaw movement and light work clamping. Comfortable higher torque clamping is possible with the lever in the #2 position. By adding a hex extension, the handle can be used on 4" or 8" vises. The 3/4" hex portion of the AL6 has a set screw to prevent accidental removal. 2 lbs.

Kurt Speed Handle



Speed Handles reduce clamping time. The Speed Handles fit 4" and 6" Kurt AngLock vises. The Speed Handles do not interfere with the milling machine giving you rapid part loading and unloading. You get Kurt quality in this custom steel design, no aluminum hex to strip. By adding a hex extension the handle can be used on 8" vises. **D40SH.** 3 lbs. **D60SH.** 4 lbs.

Kurt Torque Handle TH6



KURT TORQUE HANDLE TH6				
Torque Vs. Position				
Position	1	2	3	4
Torque Ft. Lbs.	6	8	10	20

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



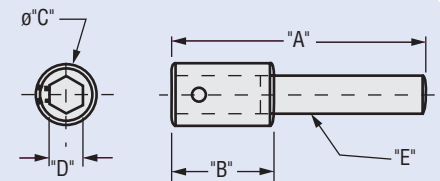
Kurt original equipment handles are solid cast iron for strength and durability and are plated for rust protection. The handle portion is one-piece with a machined ergonomic ball on the end.

Part #	Hex	Length
D40I-10-SA	9/16	6 in.
D60I-10-SA	3/4	8-5/8 in.
D80-10A-SA	7/8	16-1/8 in.
D100-10A-SA	1	16-1/8 in.

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"	6	HEX4A6	3.500	1.750	1.000	0.563	0.750	.5 lb.
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.
8"	6	HEX8A6	4.500	2.500	1.375	0.875	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.

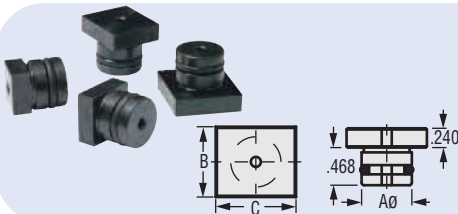


SWIVEL BASE		
Part #	Ship Wt.	Fits These Vise Models
D40-4-SA	16 lbs.	D40
D50-4-SA	20 lbs.	HD690
D60-4-SA	26 lbs.	D60, D675, D688
D80-4-SA	80 lbs.	D80, D810



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

Hydraulic Intensifier

This power source simply converts air pressure to useable hydraulic pressure. A compressed air source is needed along with a filter, regulator and lubricator unit (not included) to control clamping forces. Each vise must have it's own intensifier. Intensifier must be mounted same level or above the vise.

APD50-112-Hand or APD50-112-Foot



APD50-112	
Air PSI	Hydraulic PSI
30	1200
40	1600
50	2000
60	2400
70	2800
80	3200
Do not exceed 80 PSI Air	

Features:

- Air oil pressure ratio 40:1.
- 2.400 cubic inches usable hydraulic oil.
- 1/4 NPT outlet fitting.
- Liquid fill hydraulic sight tube.
- For use with 4" and 6" and 8XL series vises.
- Hand or foot operated.

APD60-112-Hand or APD60-112-Foot



APD60-112	
Air PSI	Hydraulic PSI
30	2900
40	3500
50	4400
60	5300
70	6200
Do no exceed 70 PSI Air	

Features:

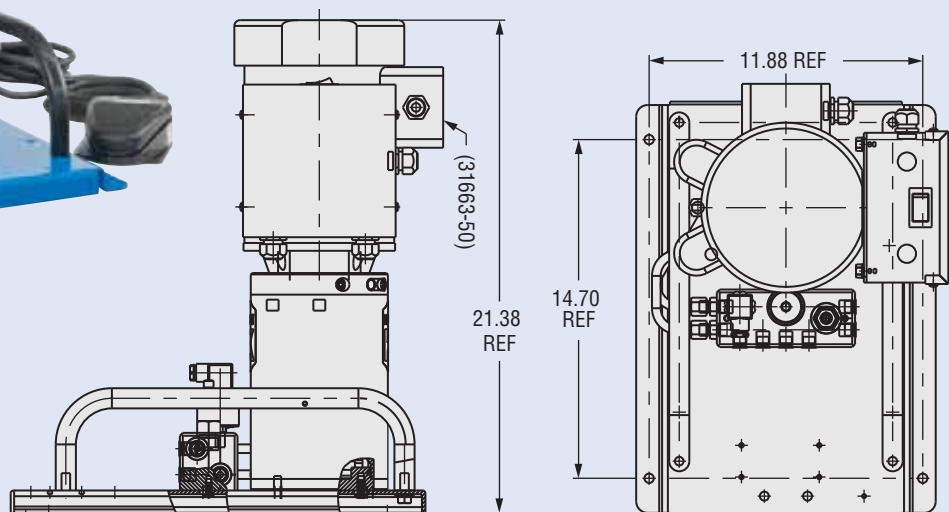
- Air oil pressure ratio 92:1.
- 2.072 cubic inches usable hydraulic oil.
- 1/4 NPT outlet fitting.
- Used with PTH800A vise only.
- Hand or foot operated.

KHP5000 Hydraulic Pump



- 1 HP Motor, 115/208-230 VAC
- Max Amps 11.1 @ 5000 PSI
- External safety relief is user adjustable from 500-5000 PSI
- Internal safety relief set at 5000 PSI
- Auto dump valve
- 127 cu. In. (.54 gal) total capacity
- 75 cu. In. (.32 gal) useable capacity
- Weight 82 lbs
- Average Pump Output Volume 31.3 cu. In.

NEW

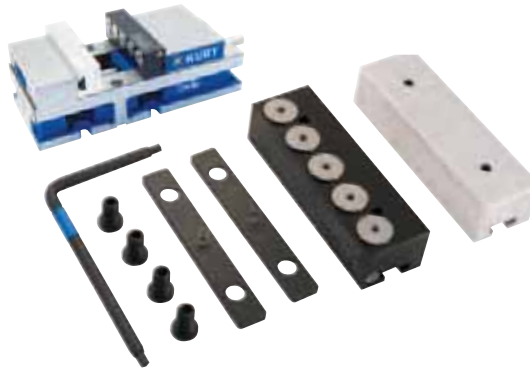




WISE ACCESSORIES

Hydramax™ Hydraulic Jaws, Hydramax™ X-Pander, FastDrill™

Hydramax™ for Kurt and other vises



Features:

- Ideal for holding multiple parts, castings, irregular shaped parts, or various sized parts in one clamping
- Independent pistons provide consistent clamping
- Available with 4, 5, 6, 7, 8, 10 and 12 piston models

- Aluminum jaw allows quick pocket machining
- Single stroke of the vise handle provides independent clamping of each piston

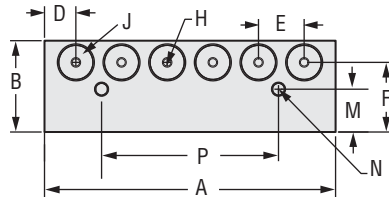
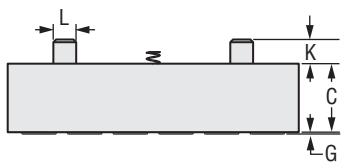
Accessories:

- Brass or Plastic contact pads (includes bolts)



Part #	# Pistons	Rows/Pistons	A	B	C	D	E	F	G	H	J	K	L	M	N	P
Hydra-5-4	5	1	4.000	1.445	1.445	0.500	0.750	1.120	0.060	8-32	0.500	0.420	3/8-16	0.687	0.220	2.500
Hydra-4-ST	4	1	6.600	2.000	2.000	0.900	1.600	1.150	0.060	5/16-18	1.500	0.530	1/2-13	N/A	N/A	N/A
Hydra-5-ST	5	1	6.375	2.000	1.500	0.688	1.250	1.400	0.060	1/4-20	1.000	0.530	1/2-13	0.938	0.310	3.875
Hydra-6-ST	6	1	6.375	2.000	1.500	0.687	1.000	1.525	0.060	10-32	0.750	0.530	1/2-13	0.938	0.310	3.875
Hydra-7-ST	7	1	6.375	2.000	1.500	0.712	0.825	1.525	0.060	10-32	0.750	0.530	1/2-13	0.938	0.310	3.875
Hydra-10-ST	10	1	6.375	2.000	1.500	0.515	0.594	1.650	0.060	8-32	0.500	0.530	1/2-13	0.938	0.312	3.875
Hydra-12-6-2	12	2	6.375	2.000	1.500	0.687	1.000	0.465 1st Row 1.525 2nd Row	0.060	10-32	0.750	0.530	1/2-13	0.938	0.315	3.875
Hydra-5-8	5	1	8.000	2.500	2.000	0.750	1.625	1.900	0.060	1/4-20	1.000	1.000	5/8-11	1.220	0.440	4.750
Hydra-8-8	8	1	8.000	2.500	2.000	0.675	0.950	2.025	0.060	10-32	0.750	1.000	5/8-11	1.220	0.440	4.750
FB-SJR	Replacement Aluminum Machinable Fast Back Jaw															

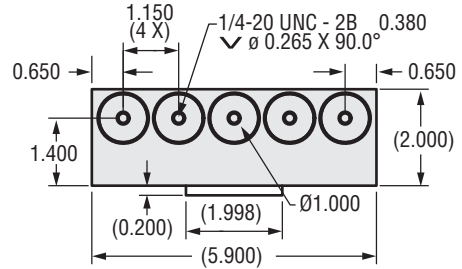
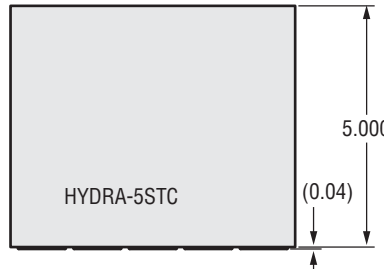
Accessories	
Brass	Plastic
Hydra-10BP	Hydra-10PP
N/A	N/A
Hydra-5BP	Hydra-5PP
Hydra-6BP	Hydra-6PP
Hydra-7BP	Hydra-7PP
Hydra-10BP	Hydra-10PP
Hydra-6BP (2 Sets)	Hydra-6PP (2 Sets)
Hydra-5BP	Hydra-5PP
Hydra-6BP (2 Sets)	Hydra-6PP (2 Sets)



Low Head Socket Cap Screws for Kurt HDLM Series Vises (Metric Threads)

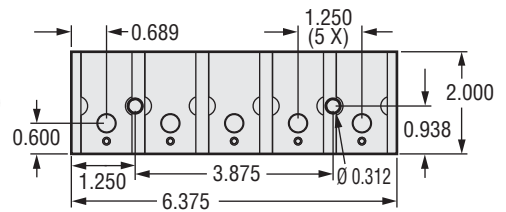
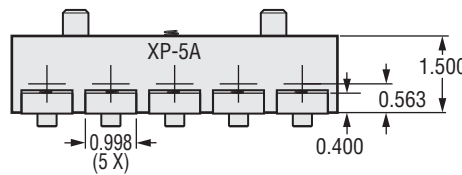
Part #	Description	Used With
21-0013-1	M12 x 1.75 x 16MM	HDL6 Stationary
21-0013-2	M12 x 1.75 x 30MM	HDL6 Movable
21-0013-3	M10 x 1.5 x 12MM	HDL4 Stationary
21-0013-4	M10 x 1.5 x 16MM	HDL4 Movable

Hydramax™ for Chick vises (fits QL6 & BL6)



Hydramax™ X-Pander for ID clamping in Kurt and other vises

The X-Pander system dramatically increases production of small, internally held parts, on manual or CNC milling machines. Used with the Hydra-5ST Jaw.



FastDrill™



Features:

- Pneumatic powered spindle
- Mounts to any gang tool lathe
- Ideal for light milling and drilling
- Runs at speeds up to 20,000 RPM
- Includes 1/4" and 1/8" collets
- Requires 120 PSI adjustable filter/regulator

90 Day Limited Warranty on all Hydramax™ products

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.

Outside Micrometers

Features:

- Hardened, precision ground spindle.
- Carbide tipped measuring face for long life.
- Spindle lock secures the spindle at the desired reading.
- Insulated Handle.
- Quick and easy zero adjustment on sleeve (includes wrench).
- Fitted plastic case included.
- Ratchet thimble assures consistent measuring at all times, vernier scale with microfine graduations in 0.0001".



Model MC01 0-1" Specifications:

- Range: 0-1".
- Graduation: 0.0001".

Model MC12 1-2" Specifications:

- Range: 1-2".
- Graduation: 0.0001".

- ### Additional Features:
- Calibration standard included.

Model MC23 2-3" Specifications:

- Range: 2-3".
- Graduation: 0.0001".

- ### Additional Features:
- Calibration standard included.

Model MCD01 0-1" Mechanical Digital Specifications:

- Range: 0-1".
 - Graduation: 0.0001".
- ### Additional Features:
- Mechanical counter to simplify reading measurements, displays increments of 0.001".

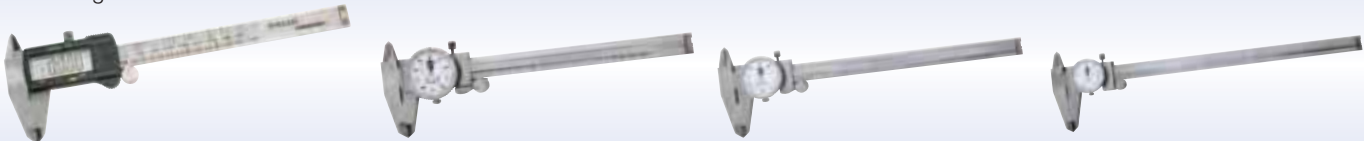
Model EM01 0-1" Electronic Micrometer Specifications:

- Range: 0-1".
 - Resolution: 0.0001".
- ### Additional Features:
- Double Function key (Function: Metric-Inch Conversion).

Dial Calipers

Features:

- Body and Main Beam are stainless steel with satin chrome finish, microfine engraved graduations.
- White face dial with distinctive, large numerals, easy to read graduations in black; Fully adjustable for zero or intermediate settings with thumb screw to lock the precise settings.
- Covered screw-on rack prevents dirt accumulation in rack gear teeth.
- Raised bearing surface prevents wear and defacement of graduations.
- Thumb Roller is knurled for one hand operation and rapid setting and easy adjustment.
- Measuring Faces are hardened, precision ground & microlapped for ultimate accuracy during measuring process.
- Case included.



Model EC6 6" Electronic Caliper Specifications:

- Range: 0-6".
 - Resolution: 0.0001".
- ### Additional Features:
- Large and clear LCD readout.
 - Inch-Metric conversion.
 - Zero-setting at any position.

Model DC6 6" Dial Caliper Specifications:

- Range: 0-6", 0.100"/Rev.
 - Graduation: 0.001".
- ### Additional Features:
- 4-way measurements: outside, inside, depth, step.
 - Depth of outside jaws: 1.57".

Model DC8 8" Dial Caliper Specifications:

- Range: 0-8", 0.100"/Rev.
 - Graduation: 0.001".
- ### Additional Features:
- 4-way measurements: outside, inside, depth, step.
 - Depth of outside jaws is 1.89".

Model DC12 12" Dial Caliper Specifications:

- Range: 0-12", 0.100"/Rev.
 - Graduation: 0.001".
- ### Additional Features:
- 4-way measurements: outside, inside, depth, step.
 - Depth of outside jaws: 2.44".

Precision Measuring Sets



Model KDMS1

3 Piece Set Includes:

- Dial Caliper: 6"/0.001".
- Outside Micrometer: 0-1"/0.0001".
- Rule: 6"/4R.
- Plastic fitted case included.



Model KMD1

Magnetic Base + Dial Indicator Set Includes:

- Magnetic Base with fine adjustment (MBF1).
- Dial Indicator 0-1"/0.001" (D1).
- Plastic fitted case included.

Standard and Custom Gaging Solutions for automotive, medical, aerospace, and other manufacturing applications.



Kurt Engineered Systems
Phone 877-226-7823
www.kurtengineeredsystems.com

Test Indicators



Model DT3
0.03" Test Indicator
Specifications:

- Range: 0.03".
- Graduation: 0.0005".
- Dial Reading: 0-15-0.

- Features:**
- Rotating Bezel and large diameter white dial face with distinctive, easy to read graduations sets to zero anywhere on the dial.
 - Jeweled Bearings provide low friction, high wear resistance, and maximum sensitivity.
 - Three dovetail mounts

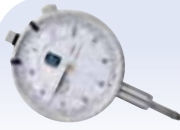


Model DT8
0.008" Test Indicator
Specifications:

- Range: 0.008".
- Graduation: 0.0001".
- Dial Reading: 0-40-0.

- Features:**
- for attaching to indicator holders and stands.
 - Two dovetail mounting clamps with mounting stem diameter 5/32" and 3/8".
 - Contact Point adjustable to 210° with auto-reverse, 0.078" dia. x 1/2" L.
 - Fitted plastic case included.

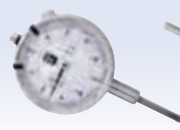
Dial Indicators



Model D05
0.5" Dial Indicator
Specifications:

- Range: 0-0.5".
- Graduation: 0.001".
- Dial Reading: 0-100.

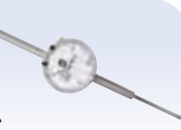
- Features:**
- AGD Group 2, meets AGD specifications.
 - Dial rotates with white face for easy to read graduations in black for continuous readings and red for balanced readings.
 - Contact Point is interchangeable hardened stainless steel with 4-48NF thread.
 - Lug-back positioned through 90° increments with a 1/4" diameter hole for mounting to



Model D1
1" Dial Indicator
Specifications:

- Range: 0-1".
- Graduation: 0.001".
- Dial Reading: 0-100.

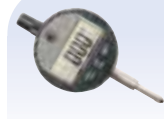
- Features:**
- indicator holders & stands.
 - Stem is 3/8" diameter, hard chrome plated, precision ground and lapped, for mounting to holders.
 - Bezel is easily adjusted thru 360°, with bezel clamp to lock the precise settings.
 - Tolerance Pointers: adjustable, mounted on bezel.
 - Fitted foam case included for storage.



Model D2
2" Dial Indicator
Specifications:

- Range: 0-2".
- Graduation: 0.001".
- Accuracy: ±0.003".
- Dial Reading: 0-100.

Electronic Dial Indicators



Model ED05
0-0.5" Electronic Dial Indicator
Specifications:

- Resolution: 0.0005".

- Features:**
- Large LCD display with 12.5mm characters' height.
 - Large "click" function buttons for easy operation.



Model ED1
0-1" Electronic Dial Indicator
Specifications:

- Resolution: 0.0005".

- Features:**
- Power supplied with one SR44 battery whose capacity is 165mAh.
 - Power on/off, zerosetting and Metric/Inch system conversion at any position with data output interference.

Magnetic Base

Model MBF1 Magnetic Base w/Fine Adjustment
Specifications:

- Power: 130 lbs. pull.
- Base Dimensions: 2.5" L x 2" W x 2.19" H.
- Upright Post: 15/32" dia. x 7" L.
- Indicator Holding Rod: 25/64" dia. x 6" L.

- Features:**
- Accepts all AGD dial indicators.
 - Easy tune fine adjustment.
 - V-base for placing on round surfaces.
 - Smooth and easy on/off switch.
 - Chrome plated rods & column.
 - Foam case included for storage.



Height Gages

Model HGD6 6" Height Gage w/Single Column
Specifications:

- Range: 0-6".
- Graduations: 0.001".

- Features:**
- White dial face with distinctive, easy to read graduations in black, fully adjustable for zero or intermediate setting with thumb screw to lock the dial for precise settings.
 - Column is hardened stainless steel with satin chrome finish for wear resistance, microfine engraved graduations.
 - Scriber with carbide tipped and clamp included.
 - Fine tuning adjustment and lock screw.
 - Fitted wooden case included.



Model HGDC12 12" Height Gage w/Digital Counter
Specifications:

- Range: 0-12".
- Graduations: 0.001".

- Features:**
- Indicator & Counter: a large white dial indicator with 0.001" graduations and a dual-directional error-proof mechanical digital counter can be set to zero at any position. The counter has two displays with 0.1" increments, one counts up, the other counts down.
 - Dual chrome plated beams.
 - Bottom surface of the base is hardened, ground and lapped for maximum flatness.
 - Scriber with carbide tipped with clamp.
 - Large feed wheel moves slider and switches from coarse to fine adjustment.
 - Fitted foam case included for storage.



Micrometer Sets

Model MC03
0-3" Outside Micrometer Set



- Includes:**
- 3 Piece Set.
 - Fitted plastic case included.
- Specifications:**
- Range: 0-1", 1-2", 2-3".
 - Graduation: 0.0001".
- Features:**
- Hardened, precision ground spindle.
 - Carbide tipped for a long life.
 - 2 calibration standards.

- Spindle lock secures the spindle at the desired reading.
- Ratchet thimble with satin chrome assures consistent measuring at all times, vernier scale with microfine graduations in 0.0001".
- Quick and easy zero adjustment on sleeve (wrench included).

Model MC06
0-6" Outside Micrometer Set



- Specifications:**
- 6 Piece Set.
 - Range: 0-1", 1-2", 2-3", 3-4", 4-5", 5-6".
 - Graduation: 0.0001".
- Features:**
- Hardened, precision ground spindle.
 - Carbide tipped for a long life.
 - Spindle lock secures the spindle at the desired reading.
 - 5 calibration standards.

- Quick and easy zero adjustment on sleeve (wrench included).
- Ratchet thimble with satin chrome assures consistent measuring at all times, vernier scale with microfine graduations in 0.0001".
- Fitted wooden case included.

Model MCDP62
0-6" Depth Micrometer Set



- Includes:**
- 7 Piece Set.
 - Fitted plastic case included.
- Specifications:**
- Range: 0-6".
 - Graduation: 0.001".
 - Accuracy: ±0.0002".
- Features:**
- 2-1/2" length; Hardened, precision ground and microlapped base.
 - Quick and easy zero adjustment on sleeve (wrench included).

- Ratchet thimble with satin chrome assures consistent measuring at all times.
- Six high accuracy interchangeable rods with 1" increments in length are fitted to the spindle against a positive stop and locked. Flat measuring surfaces are hardened, ground and lapped with .176" in diameter.



www.kurtworkholding.com

Kurt™ Manufacturing

Industrial Products Division

9445 E. River Road NW

Minneapolis, MN 55433

Tel: (763) 574-8309

Fax: (763) 574-8313

Toll Free (US Only): 1 (877) 226-7823

Toll Free Fax (US Only): 1 (877) 226-7828

email address: workholding@kurt.com

website address: www.kurtworkholding.com

Kurt, AngLock, ArmLock, CarvLock, ClusterTower, D688, DLU4, DL430, DoubleLock, Groove Lock, InnerLock, Versatile Lock, SeraLock, CT430, CTU4 are registered trademarks of Kurt Manufacturing.

PowerLock and ToolBlox are trademarks of Kurt Manufacturing.

Printed in USA © Copyright. All rights reserved
LIT.VCAT.0311.2

Distributor



On standard Kurt Workholding products



**Veteran Owned
Made In America
For Over 50 Years**