

KURT

Hydraulic DoubleLock



Model:
DLH640

Installation & Operation Guide



DOUBLE LOCK HYDRAULIC INSTALLATION AND OPERATING GUIDE

INTRODUCTION

The DLH640 Hydraulic DoubleLock from Kurt offers two clamping stations with part capacity of 4" x 6". This vise is ideal for clamping parts of the same size or dissimilar size, and can perform first and secondary operations simultaneously. The DLH640 provides repeatable clamping for high accuracy machining and handles a higher horsepower cut than other vises. The compact design features a 1/4 " clamping stroke (1/8" per station) and a wide range of clamping forces. The DLH640 can also be used for manual clamping.

CLAMPING PRESSURES

The clamping pressure exerted on the workpiece is directly related to the amount of hydraulic pressure used to operate the hydraulic unit. It is important that the operator understand the amount of clamping pressure being applied to the workpiece. Excessive clamping pressure may cause distortion of the part being held for machining. Not enough clamping pressure could cause the part to be thrown from the machine during cutting. The following chart shows the amount of force in pounds exerted on the workpiece in relation to the hydraulic pressure.

<u>Hyd. PSI</u>	<u>Force LBS</u>
400	1,575
800	3,150
1,200	4,725
1,600	6,300
2,000	7,875
2,400	9,450
2,800	11,025
3,200	12,600

**CAUTION: Do not exceed 3,200 PSI hydraulic pressure
(Minimum hydraulic pressure 200 PSI)**

To index the cylinder the procedure is as follows:

- Open vise jaws so there is approximately 2” opening in rear jaw set.
- Completely unscrew the knurled nut located between the hydraulic cylinder and the vise body.
- Slide the hydraulic cylinder and connector away from vise body approximately $\frac{3}{4}$ of an inch.
- Rotate the cylinder to desired port alignment. Note: There are keyways broached at 60-degree increments for alignment.
- Slide the hydraulic cylinder and connector towards the vise body. It may be necessary to rotate the cylinder left or right slightly to align the key with the keyway. **(Care should be taken not to loose key.)**
- Retighten the knurled nut.

SETTING THE JAWS

In setting the jaws, unless both parts are the same size, the widest part must always be mounted in the rear jaw set.

Setup for hydraulic operation:

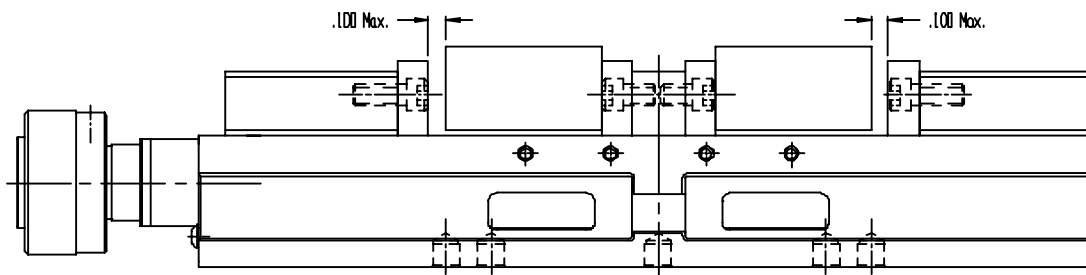
1. Manually clamp a part in each station.
2. Open vise just enough to free ONE part and remove it.
3. Close vise 1 $\frac{1}{4}$ turns.
4. Open vise 2 turns and return part to empty station.

Note: Do not exceed .100” clearance between jaws and parts.

Jaws are now timed and parts can be hydraulically clamped.

Production part size variation not to exceed $+.06/-0.03$. If greater variation is being experienced, parts must be sorted for size and new jaw position setup be made to accommodate the different size groups. Failure to do so may result in parts dislodging during machining operations.

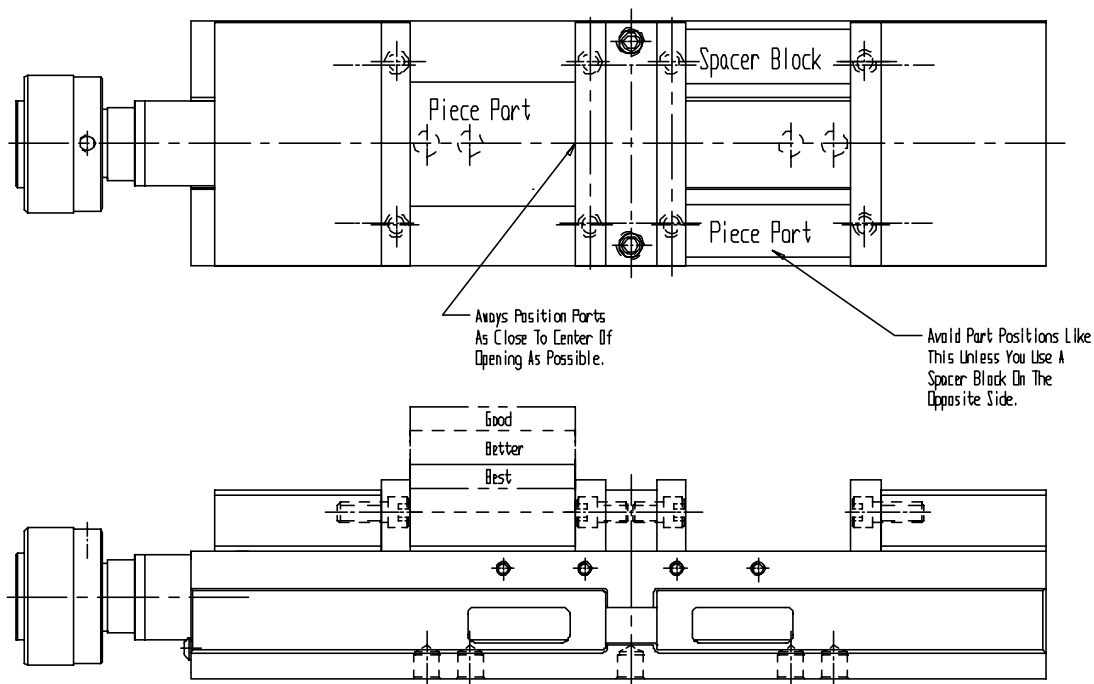
Follow this procedure for each new setup



PRECAUTIONS

When using the Hydraulic DoubleLock Vise in production, remember the following precautions:

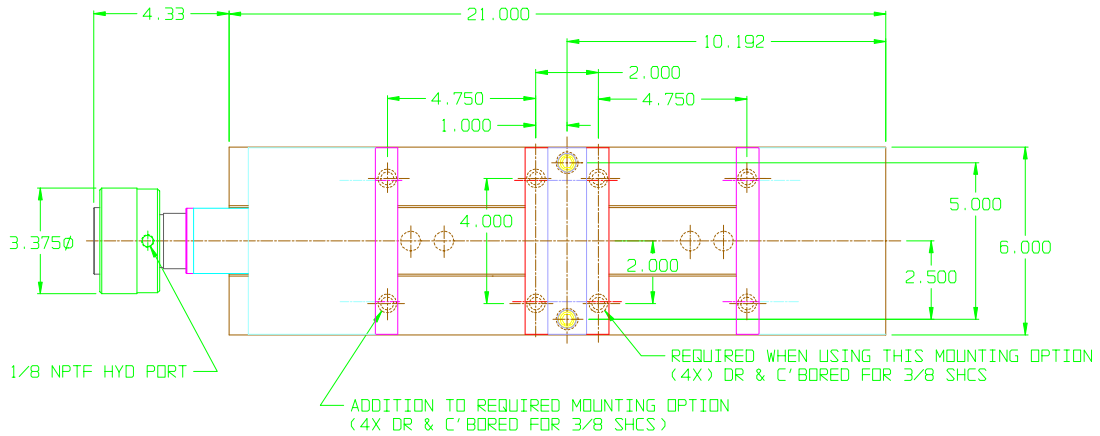
- Never exceed 3,200 psi hydraulic pressure to the vise.
- Never exceed a .100" gap between the part being clamped and the jaw plates. The hydraulic cylinder has a ¼" stroke, or 1/8" per side. Exceeding the .100" gap will not allow the jaws to make contact with the work piece and/or parts may dislodge during machining operations.
- Keep the distance between the workpiece and the jaws as small as possible thereby reducing the chance for fingers to get pinched by the hydraulic clamping motion.
- Clamp parts to the lowest position possible. Part nesting at the vise base increases clamping forces and decreases the possibility of part distortion. See diagram below.
- Always clamp the part with the part at or near center of the vise width wise. Clamping a part beyond center may cause inconsistent part clamping pressures. See diagram below.
- When using parallels or step jaws, select a size that keeps the bottom of the clamped part at or below the top surface of the movable jaw.
- Always clamp directly across from each other or use a spacer to even clamping pressure.



PRIMARY MOUNTING HOLE PATTERN (TOP VIEW)

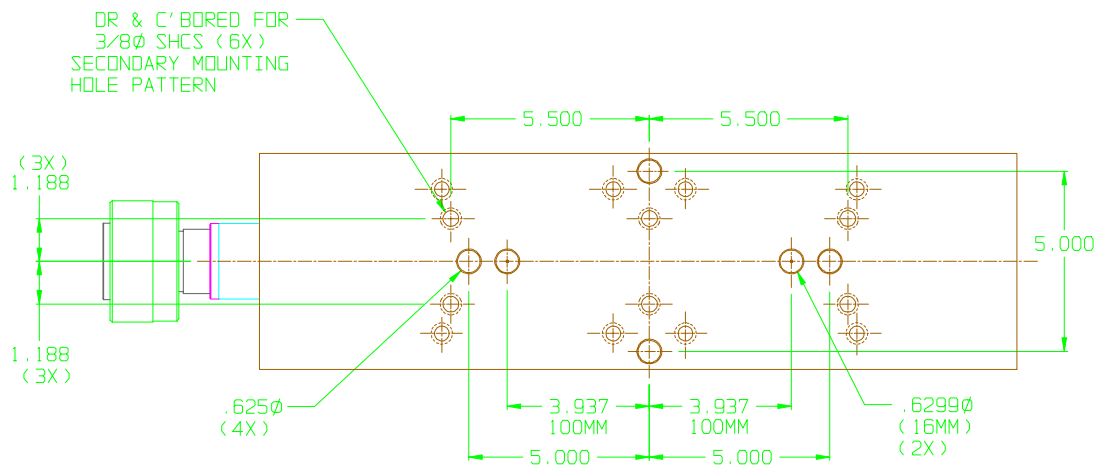
Figure 1

(See figure 2 for optional secondary mounting hole pattern)



LOCATING HOLE PATTERN (BOTTOM VIEW)

Figure 2



CUSTOMER SERVICE

For additional information or question about your vise, Please contact Kurt Manufacturing at 1-800-328-2565 between the hours of 7:30 a.m. and 4:30 p.m. Central Standard Time.

REPLACEMENT PARTS

Contact your Kurt Manufacturing representative for a complete list of DoubleLock replacement parts and pricing. Your representative can also provide you with a Kurt Manufacturing Product Catalog containing all products and accessories for your Workholding needs.

FACTORY CONTACT

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