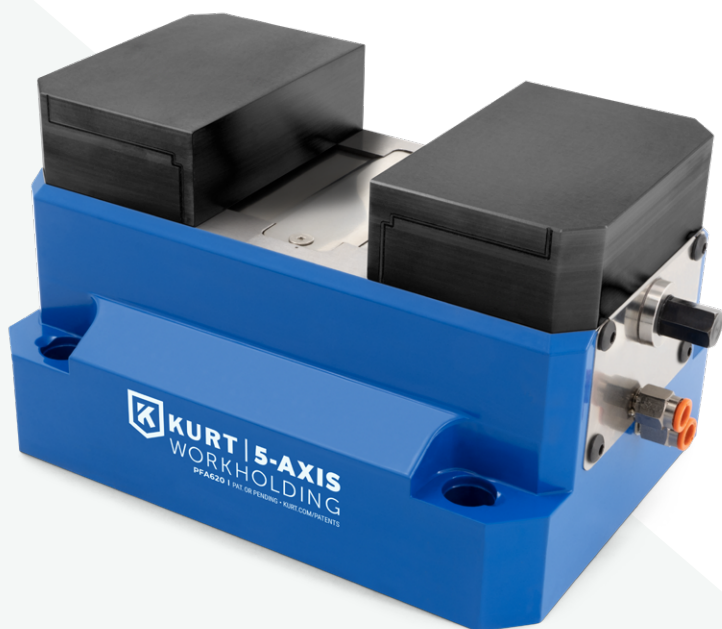


# PFA620 PRECISION FORCE AIR OPERATED VISE

Operating Instruction Manual



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## WISE DATA

Use this to fill out information about your vise for quick reference.

Purchase Date:    \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Purchase Order:    \_\_\_\_\_

Purchased From:    \_\_\_\_\_

Delivery Date:    \_\_\_\_\_

Serial No.:    \_\_\_\_\_

**NOTE: MAKE SURE TO REGISTER YOUR WARRANTY ONLINE AT  
KURTWORKHOLDING.COM**

# INTRODUCTION

Thank you for purchasing a Kurt PFA620 Pneumatic 5-Axis Vise. Backed by a lifetime warranty against workmanship and material defects, these vises will perform at the highest levels of precision and reliability for years to come, when used and maintained properly.

Kurt AngLock maintains it's time tested design, which gives you the part pull down that you need when machining high end parts.

The PFA620 vise comes standard with carvable 4140 prehard jaws.

PFA620 CLAMPING FORCE	
PNEUMATIC PSI	FORCE IN LBS.
50	925
60	1,025
70	1,275
80	1,475
90	1,675
100	1,875
110	2,000

# OPERATING INSTRUCTIONS

To properly clamp a part in your Kurt vise you should place the part in the center of the jaws. Clamping only on one side can result in loss of accuracy. If one-sided clamping is necessary you **MUST** use a dummy part on the other side.

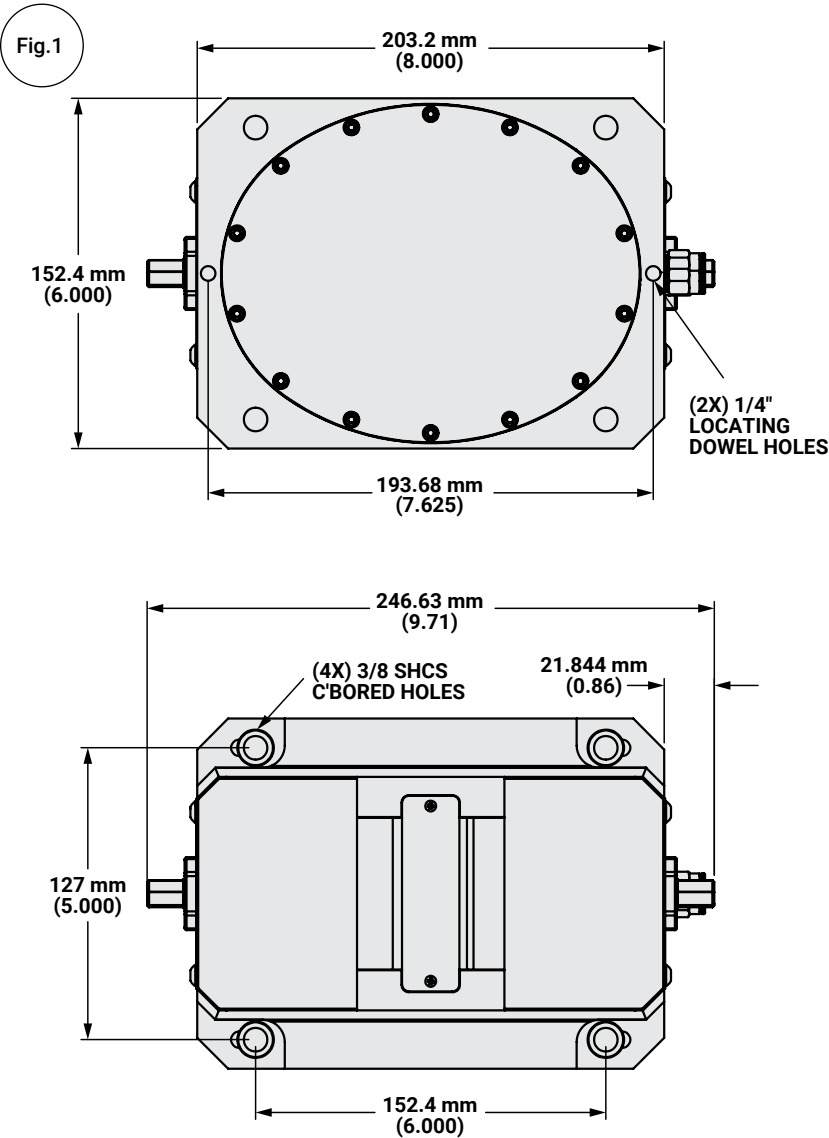


**WARNING**

When clamping parts, only use the hex to pre-position the jaws. Tighten to approximately 0.06 inch from touching the part, then use pneumatics to clamp the part.

# INSTALLATION & MOUNTING

The PFA620 vise is mounted using the counterbores machined into the vise body, which are sized for 3/8 SHCS. To locate the vise precisely, two 0.250" dowel holes are also located on the centerline of the bottom surface of the vise body.



# JAW INSTALLATION

The PFA620 vise must be all the way open to install jaws on the vise.

Failure to do this will result in damage to the chip guards.

Never try to open this vise beyond its limits as this will result in damage to the chip guards located at the end of the vise.

The jaws of this vise can be easily installed and removed by hand.

1. Grasp the jaw with two hands with your fingers towards the center of the vise and your thumbs to the back.
2. Place the forward bottom edge of the jaw against the vise as shown and slide jaw back to hook jaw on nut.
3. Snap the back of the jaw down and over the spring-loaded plungers to finish installation.
4. Reverse installation steps to remove jaws.

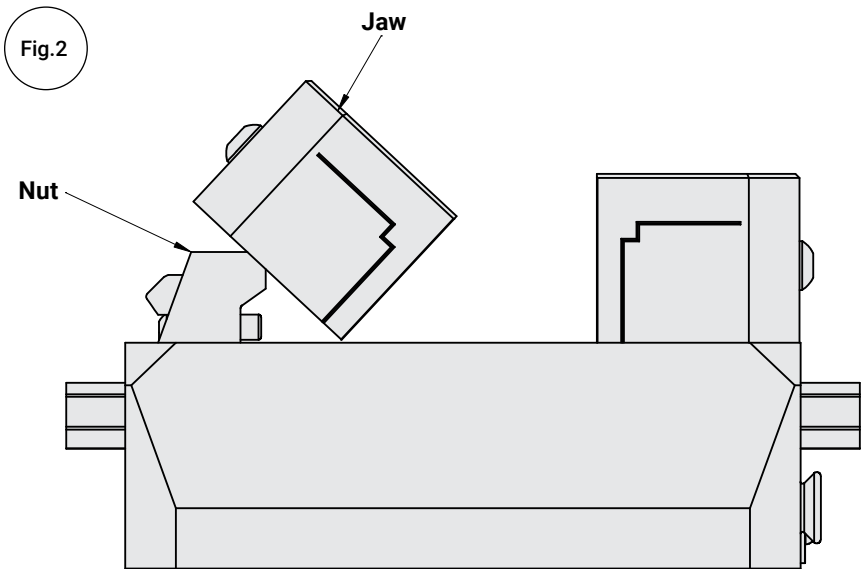
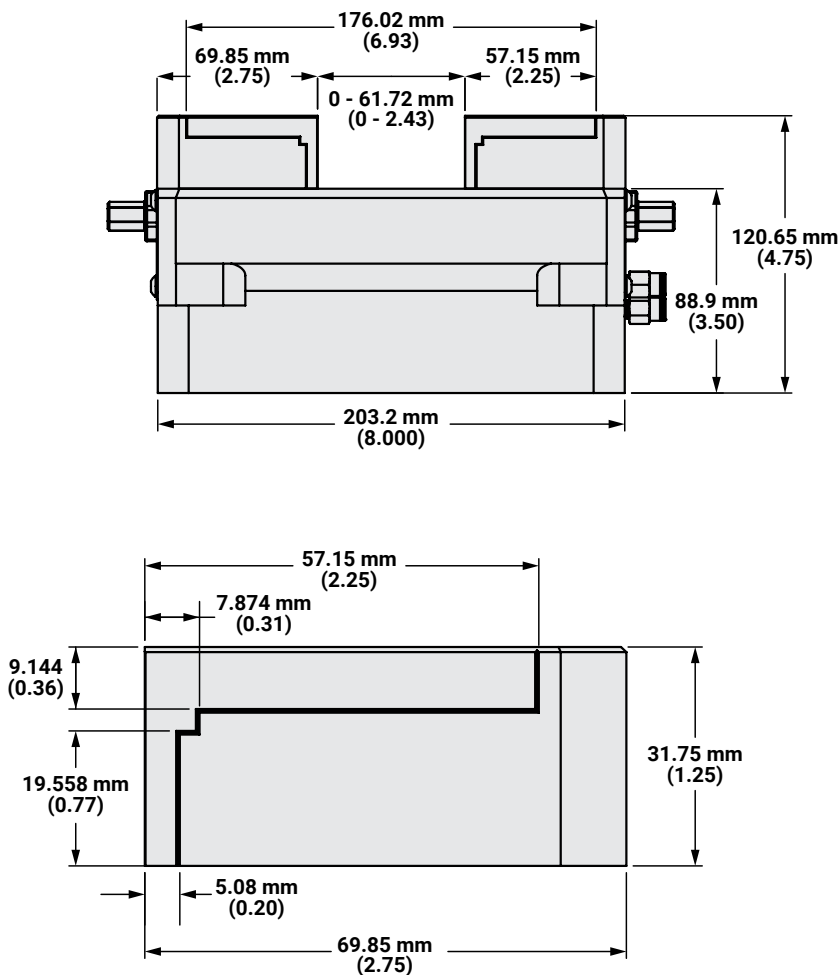


Fig.3

# JAW POSITIONING

**Note:** Dimensions below are in inches unless specified.

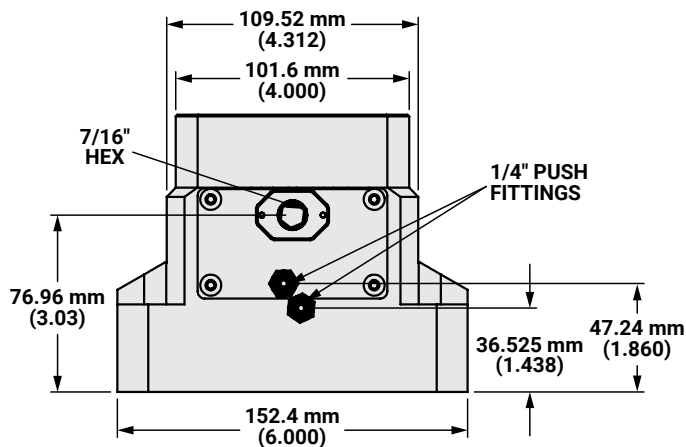
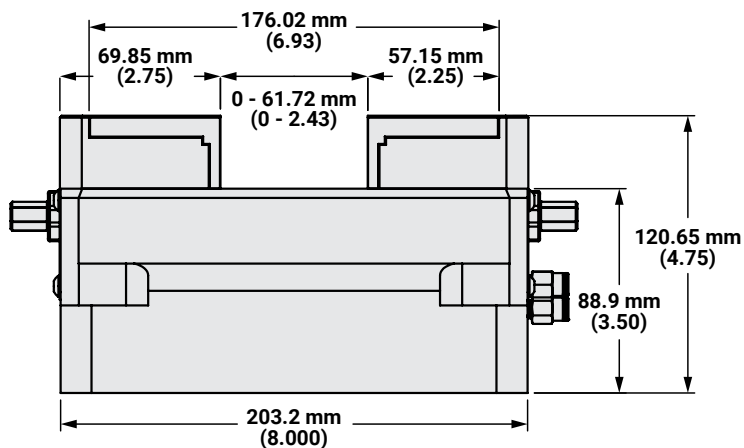


CARVABLE JAW DETAIL

Fig.4

## SIDE & END VIEW

**Note:** Dimensions below are in inches unless specified.

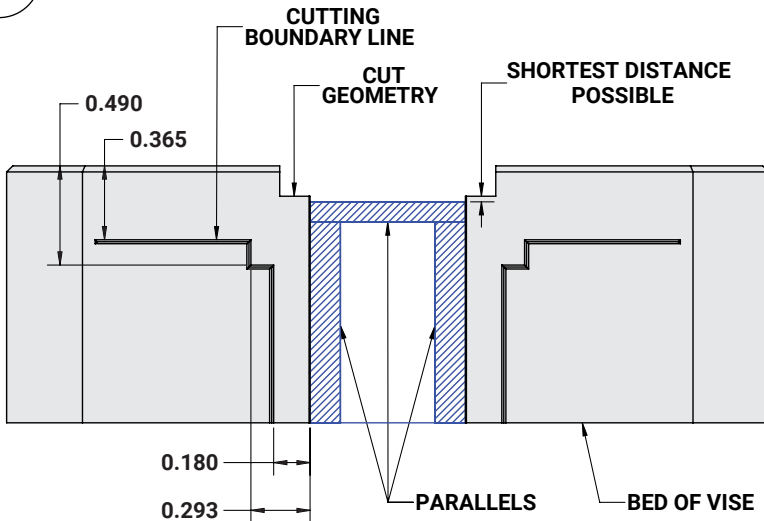


# MACHINING THE CARVABLE JAWS

For the best results when machining the carvable jaws for Kurt vises, follow the procedure below.

1. Use parallels, vise hard jaws, or other precision cut blocks that are set just below the cut surface as shown in the Fig.5 below.
2. Clamp your precision blocks in the vise. For the best accuracy, clamp the vise to the same amount of torque you will be using during production when cutting your jaws.
3. **DO NOT** cut inside the boundaries of the scribed lines on the jaw blanks. Cutting inside of these lines will damage the internal features of the jaw. Dimensions are shown below.

Fig.5





# MAINTENANCE SCHEDULE

It is very important to perform regular maintenance on your Kurt vise to assure proper operation. Improper maintenance will result in poor vise performance and may void your warranty.

## Daily/Weekly

1. Remove chips from surface of vise.
2. Visually inspect for chips, seals for damage and cleanliness.
3. Visually inspect for chip entrapments and remove when necessary.
4. Air-dry and apply rust inhibiting oil to the machined surface of the vise.

## Monthly

1. Open the vise to the maximum opening.
2. Remove the movable jaws using the procedure on page 10.
3. Turn the movable jaw over and clean the inside cavity.
4. Remove any chips, clean and apply a light coat of machine oil to the machined surface of the following item
  - a. Nut and Screw assembly (clean exposed threads on the screw)
  - b. Bed of vise (top of "rails")
  - c. Inside of the vise between the center ways.
5. Your vise is now ready for use. Open and close your vise to check for proper operation. Center the part to be clamped in the vise and close. Your parts should be centered from side to side to insure proper clamping.

## Yearly

The chip guards can be removed to allow access to the internals of the vise.

At this point you can grease some of the internals.

Use great care in returning the chip guards to their original positions.

**Note:** Only qualified professionals should attempt a full disassembly.

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Manual Revision:  
02.27.2025