



DT20 DoveTail Vise

Operating Instructions Manual



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Vise 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 DT20 DoveTail vise.

Versatile, quick mounting 5-axis vise will work above jaws when gang mounting vises and space for a workstop does not exist. This Kurt workstop permits fast, accurate positioning on repetitive work. It can be used with your AngLock precision vise for accurate parts production.

Installation & Assembly Guide

This workstop is a precision tool and must be handled carefully. You will need a set of Hex wrenches to install it properly.

Begin by following the steps listed.

1. Using one of the $\frac{1}{2}$ -13 SHCS, attach item 3 (Body Clamp) to the vise with the 45-degree angle down and in towards the body of the vise. Do not tighten the SHCS at this time.
2. Using the other $\frac{1}{2}$ -13 SHCS, attach item 5 (Pivot Body Clamp) to the vise with the 45-degree angle down and in towards the body of the vise as shown in fig. 3. Then insert item 6 (Pivot Stop Collar) into item 5 as shown in fig. 1. Do not tighten the SHCS at this time.
3. With both the Body Clamps in place, you can slide item 1 (Mounting Rod) through the clamps. Tighten the SHCS finger tight at this time.
4. With item 4 (Rod Clamp) in hand, you can install the two 10-24 x 7/8 SHCS. Take note of the threads in the rod clamp so you are sure that the screw is installed from the correct end. Finger tight only.
5. Slide the Rod Clamp on to the mounting rod on the side you wish to use the stop.
6. With the Rod Clamp in place, tighten slightly so it does not rotate on the mounting rod. Slide the Stop Rod into the Rod Clamp and slightly tighten the SHCS.
7. With the Stop Rod in place you can install the last two SCH screws (item 9: 10-24 x 5/8) into the end of the Stop Rod. (It enters from the side with the flat on it.) Then install item 11 (5/16-18 x 1.00), the SHSS into the other hole perpendicular to item 9. This acts as the stop point for the workstop.

NOTE: The installation is done by assembly the unit on the backside of the vise (the end opposite the handle).

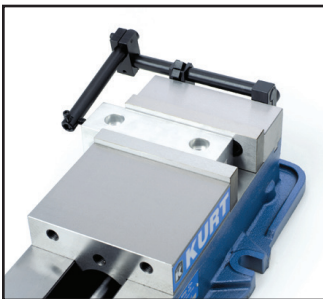
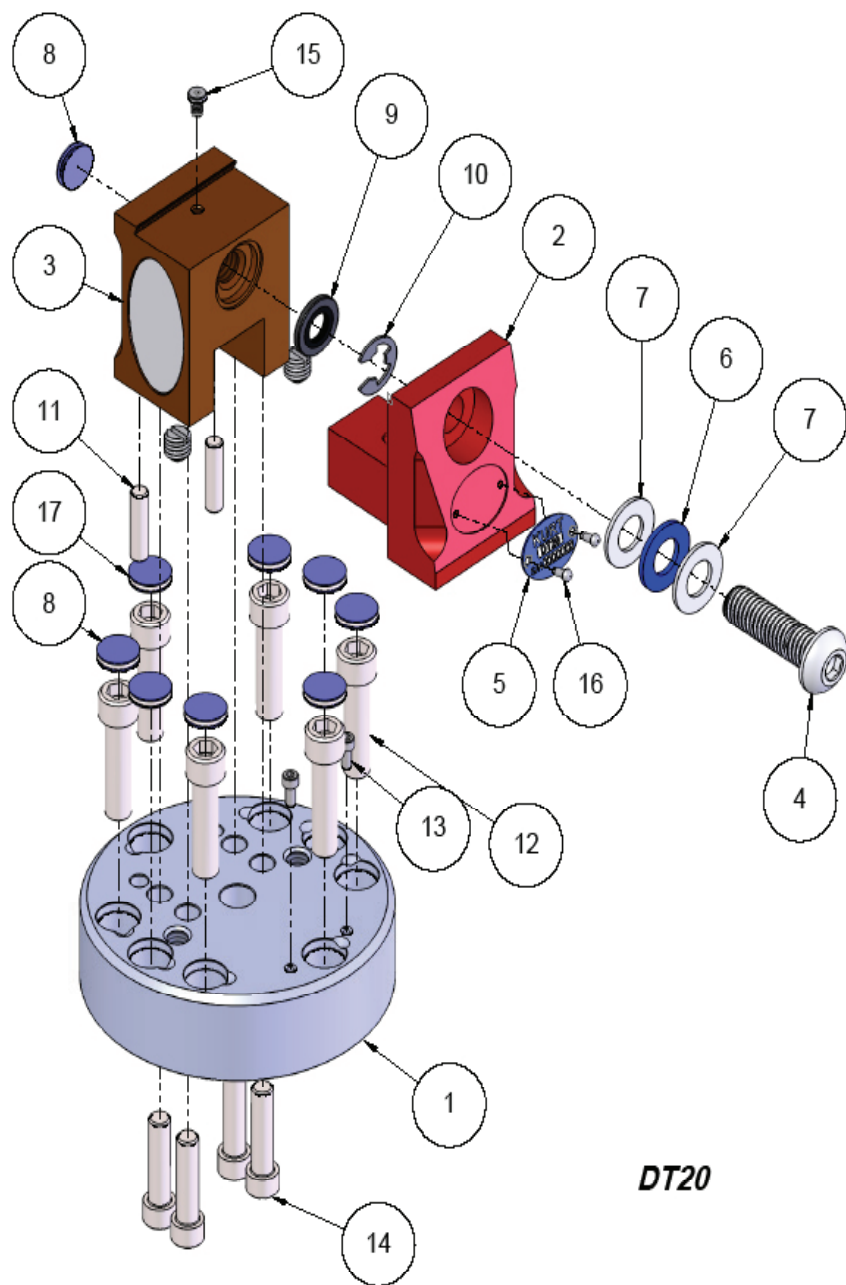


Fig.1



DT20

DT20 Parts List

ITEM#	PART#	DESCRIPTION	QTY.
1	DT20-1	Body	1
2	DT20-2	Movable	1
3	DT20-6	Stationary	1
4	DT20-18	BHCS	1
5	DT20-102	Serial Tag	1
6	DT20-231	Retaining Ring	1
7	SDW25-41	Thrust Bearing	1
8	SDW25-42	Thrust Washer	2
9	3400V-191	Protective Plug	9
10	SDW25-211	Brush Seal	1
11	04-0043	Dowel Pin 1/4"	2
12	00-1159	SHCS 6-32 x .312LG	2
13	00-3189	LHCS 8-32 x 1/4LG	1
14	07-0230	Drive Screw	2
15	00-1359	SHCS 3/8 x 1.50LG	6
16	DT20-196	SCPSS 3/8-16	2
19	00-0357	SHCS 5/16-24 x 1.25LG	4
20	AS568-014	O'ring -014	9
21			
22			
23			
24			
33			
34			
35*Handle assembly not shown on exploded view.			

DT20 Mechanical Drawing

Maintenance Schedule

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

Daily / Weekly

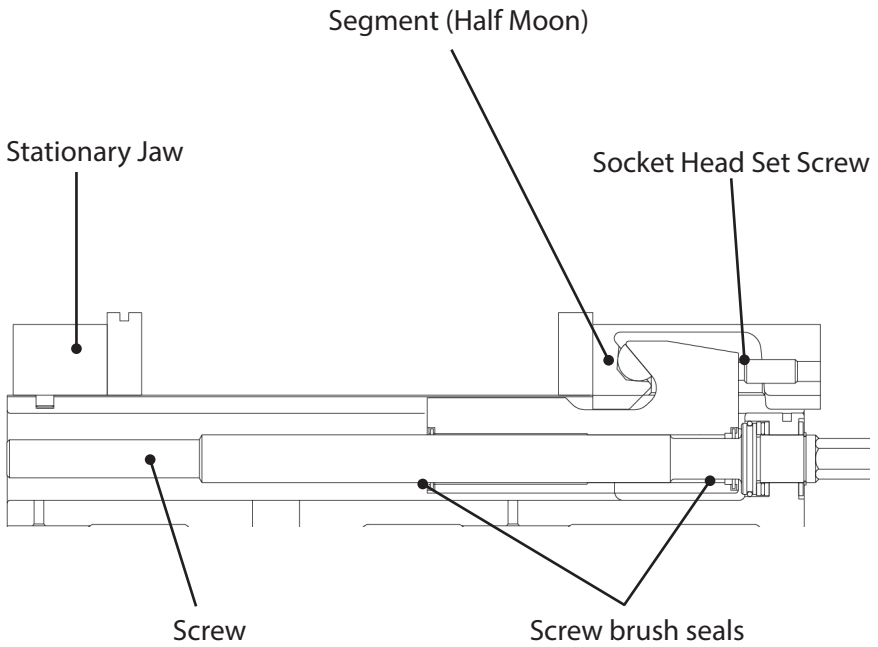
1. Remove chips from surface of vise.
2. Visually inspect for chips, seals for damage and cleanliness.
3. Visually inspect for chip entrapments and remove when necessary.
4. Air-dry and apply rust inhibiting oil to the machined surface of the vise.

Monthly

1. Open the vise to the maximum opening.
2. In the back of the movable jaw (handle end, center hole) loosen the socket head set screw (approx. 6 turns) With the hex key (Allen wrench) in the set-screw socket lift up and forward to pivot the Jaw off of the vise bed.
3. Slide the Jaw slightly toward the stationary jaw and lift up to remove the jaw from the "hook" of the nut. Note: A spherical segment (shaped as $\frac{1}{2}$ of a steel ball) is inside the cavity of the movable jaw and may fall out as the jaw is removed. Take care not to lose or misplace the spherical segment.
4. Turn the movable jaw over and clean the inside cavity. Also clean the spherical segment.
5. Remove chips, clean and apply a light coat of machine oil to the machined surface of the following items:
 - a. Nut & Screw assembly (clean exposed threads on the screw)
 - b. Bed of vise (top of "rails")
 - c. Inside of the vise between the center ways.
6. To re-assemble the movable jaw, apply a "glob" of grease to the under side of the movable jaw in the pocket. Place the spherical segment in the mating pocket and push into the grease. The grease will hold the segment in place when the jaw is turned over to replace.
7. Tip the jaw so the front of the jaw (the side with the jaw plate) is on the vise bed. Lower the jaw on to the bed so that the segment contact the hook part of the nut and rest the jaw on to the vise bed.

8. Tighten the setscrew to firmly contact the nut. Back off the setparallel, sawed, or cast parts.
9. 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. (See Fig. 2 below)

Fig.2



3 to 6 months

1. Open vise to maximum opening.
2. Remove spiral snap ring and washer from hex end of the vise screw.
3. Slide the movable jaw toward the stationary.
4. Remove the thrust bearing assembly consisting of (2) thrust washers and (1) thrust bearing from the counter bore in the end of the body.
5. Clean and inspect the counter bore, thrust washers and thrust bearing.
6. Apply water resistant grease to the thrust washer (i.e. marine grade grease)
7. Install thrust bearing assembly on the screw and slide movable jaw back.
8. Install washer and spiral retaining ring.
9. Your vise is now ready to use.

Troubleshooting Tips

The Kurt D-Series vise will operate mostly trouble free for many years. If properly maintained, this product is indestructible. In some cases it will be necessary to troubleshoot. Use the information below to help in the process.

Problem: My vise turns hard.

Tip: As a new vise the brush seal could be stiff. Allow for break in of vise.

Tip: As a used vise, it could be filed with chips and threads could be jammed. Properly clean and grease vise.

Problem: My vise will not turn in either direction.

Tip: The vise is jammed with debris. Disassemble and clean as needed.

Problem: My vise won't hold tolerance.

Tip: You may be experiencing jaw lift from clamping too high or on one side of the jaw. Lower the part in the vise jaw and clamp more material.

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If you have any feedback or questions.**

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