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MODEL T10065/T10066 HIGH-PRECISION DOUBLE- CLAMP MILLING VISE INSTRUCTIONS

Introduction

The 4" Model T10065 and 6" Model T10066 High-Precision Double-Clamp Milling Vise feature mobile jaws on each end and a removable fixed jaw in the center. This provides a wide variety of secure clamping options when working with complex workpieces, all while delivering over three tons of clamping pressure.

The vise can securely clamp onto a single workpiece using one set of mobile jaws, or clamp multiple workpieces of the same or different sizes. The vise can also be converted to a traditional vise by removing the fixed center jaw and fixing the step-side jaw to the body using the provided step-side lock plate.

Additionally, the vise can be fitted with different jaws and jaw plates, providing the most precise and secure holds possible for the workpiece. (Additional plates and jaws sold separately.)

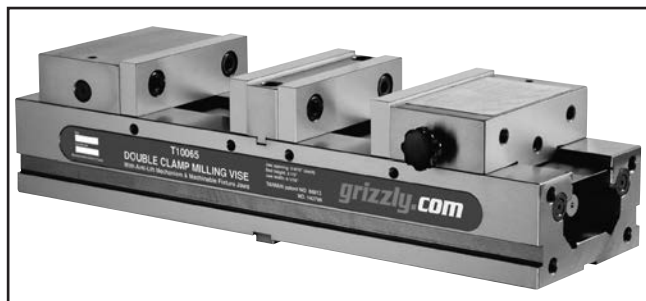


Figure 1. Model T10065 High-Precision Double-Clamp Milling Vise.

Maintenance

Keep all unpainted machined surfaces rust-free with regular applications of products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9.

Specifications

T10065:

Length.....	18"
Width	4"
Height	3 ¹³ / ₁₆ "
Jaw Opening	3 ¹ / ₂ "
Jaw Opening (With Center Removed).....	9 ¹ / ₄ "
Jaw Width.....	4"
Bed Height.....	2 ¹ / ₂ "
Maximum Pressure	4,945 lbs.
Limit Pressure.....	5,845 lbs.
Lockwell® Anti-Lift System.....	Yes
Down-Thrust Mechanism Ratio	1:1
Flame-Hardened Vise Bed.....	HRC 45°
Vise Body	Ductile Iron FCD60
Vise Tensile Strength	80,000 PSI
Meets or Exceeds JIS Grade 1 Standards....	Yes
Chip Covers Included	Yes
Weight	44 lbs.

T10066:

Length.....	21 ¹ / ₈ "
Width	6"
Height	4 ⁷ / ₈ "
Jaw Opening	4 ⁷ / ₈ "
Jaw Opening (With Center Removed).....	12 ¹ / ₄ "
Jaw Width.....	6"
Bed Height.....	3 ¹ / ₄ "
Maximum Pressure	6,744 lbs.
Limit Pressure.....	7,418 lbs.
Lockwell® Anti-Lift System.....	Yes
Down-Thrust Mechanism Ratio	1:1
Flame-Hardened Vise Bed.....	HRC 45°
Vise Body	Ductile Iron FCD60
Vise Tensile Strength	80,000 PSI
Meets or Exceeds JIS Grade 1 Standards....	Yes
Chip Covers Included	Yes
Weight	116 lbs.

!WARNING

Vise is very heavy! Get another person to help you or use hoist when lifting or placing vise. Wear heavy-duty leather boots for foot and toe protection, and keep hands and fingers away from all pinch points. Ignoring this warning can lead to severe pinching or crushing injuries!



Standard Operation

To open vise:

1. Rotate handle counterclockwise to open vise jaws. Step-side jaws (see **Figure 2**) will open slightly first, then fore-side will open.

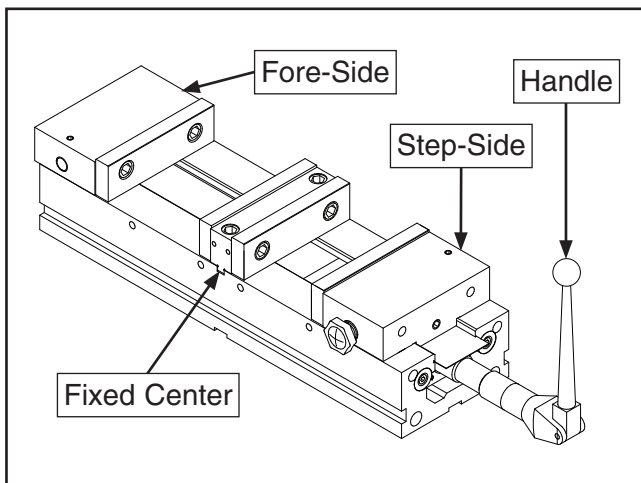


Figure 2. Identifying vise sides.

2. Once fore-side has opened completely, step-side will resume opening. Continue opening until there is adequate room to insert workpiece (see **Figure 3**). T10065 has maximum clamping range of 3½" using fixed center jaw, while T10066 can clamp up to 4⅞".

Note: There will be increased resistance when turning handle once fore-side has been opened completely and step-side begins to open. This is normal.

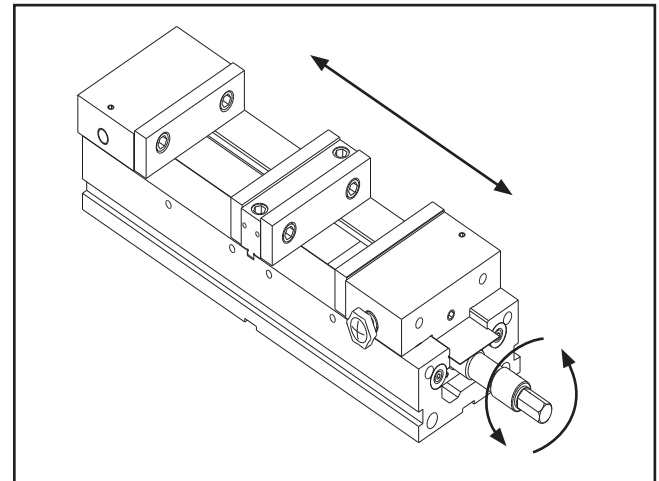


Figure 3. Opening jaws.

To close vise:

1. Rotate handle clockwise to bring vise jaws back toward center. Fore-side jaws will move first, stopping after lightly clamping fore-side workpiece. Step-Side jaws will then begin to close.
2. Once both sides contact their workpieces, apply final tightening pressure. Force will automatically be evenly distributed to both sides (see **Figure 4**).

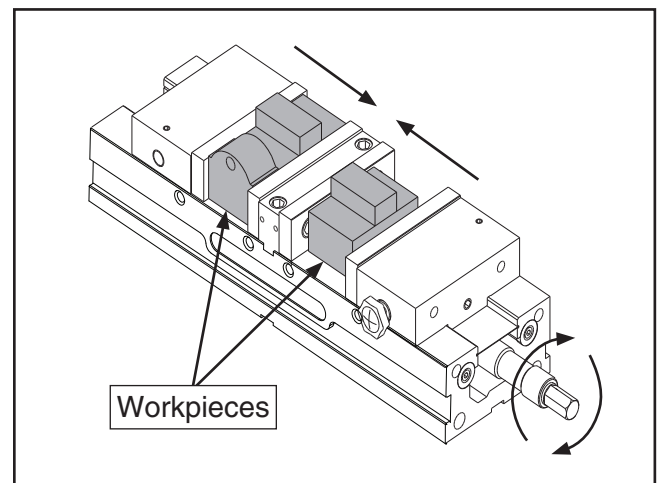


Figure 4. Tightening workpieces.

3. Once work has been completed, rotate handle counterclockwise to open jaws. As when previously opening jaws, step-side opens slightly first before fore-side opens.

Note: Step-side jaws will always open slightly before fore-side jaws. Step-side jaws will always open between ⅝"–⅜".



Removing Fixed Jaw & Securing Step-Side

By reconfiguring the jaws and jaw plates, this vise can be adapted to handle almost any type of workpiece. The fixed center jaw can be removed and the step-side made stationary to clamp larger workpieces.

Tools Needed	Qty
Hex Wrench 8mm (T10065)	1
Hex Wrench $\frac{3}{8}$ " (T10066)	1

To remove fixed jaw and secure step-side:

1. Remove (2) cap screws attached to top of fixed jaw and remove jaw (see **Figure 5**).

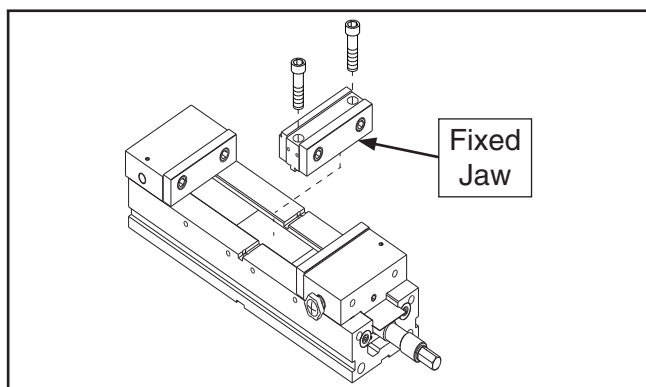


Figure 5. Removing center jaw.

2. Open vise until outer edge of step-side is flush with matching edge of vise body.
3. Attach step-side lock plate to step-side and vise body using (6) $\frac{3}{8}$ "-16 x $1\frac{1}{2}$ " cap screws that came with vise (see **Figure 6**).

Note: Model T10066 uses $\frac{1}{2}$ "-13 x $1\frac{3}{4}$ " cap screws.

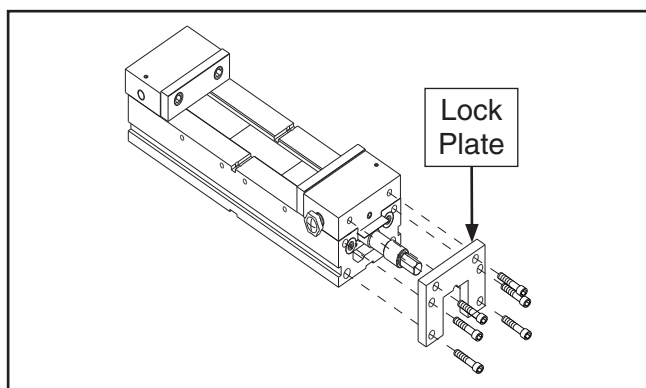


Figure 6. Attaching step-side lock plate.

Replacing Vise Jaws

The fore and step-side jaws can also be removed along with the center, and replaced with machinable soft jaws. Soft jaws offer the precision of hardened parallel blocks, and can be easily machined back to perfection after frequent use.

In addition to the soft jaws offered by Grizzly, many vise owners prefer to custom make their own soft jaw sets out of aluminum, customizing grooves and steps (often referred to as "jack blocks") directly onto the soft jaws.

Tools Needed	Qty
Hex Wrench 8mm (T10065)	1
Hex Wrench $\frac{3}{8}$ " (T10066)	1

To replace jaws:

1. Remove locking pin from side of desired jaw and remove set screw used to adjust jaw against leadscrew nut (see **Figure 7**). Lift jaw directly up to remove.

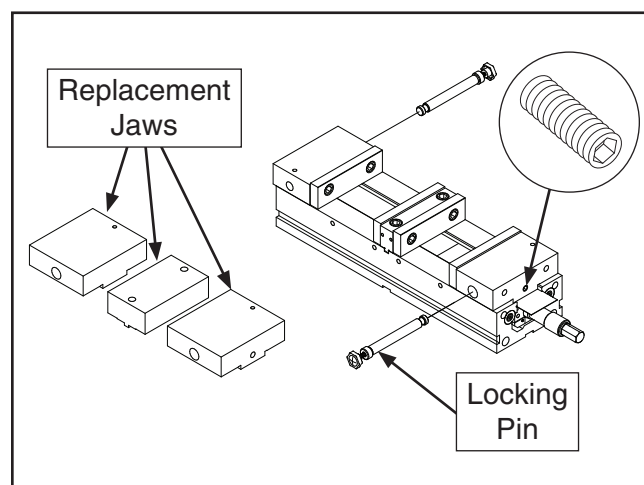


Figure 7. Changing jaws.

2. Set alternate jaw (sold separately) down on leadscrew nut. Thread in adjusting set screw and insert locking pin.
3. Apply directions listed in **Removing Fixed Jaw & Securing Step-Side** section to remove and replace center jaw.



Replacing & Moving Jaw Plates

Jaw plates are also interchangeable and can be used in a variety of ways. Additionally, jaw plates can be bolted onto the opposite ends of the step and fore-side jaws, enhancing the overall clamping range of the vise.

Tools Needed	Qty
Hex Wrench 8mm (T10065)	1
Hex Wrench $\frac{3}{8}$ " (T10066)	1

To change jaw plates:

1. Remove (2) cap screws holding jaw plate to jaw (see **Figure 8**).
2. Replace original jaw plate with alternate plate (sold separately) and tighten into place (see **Figure 8**).

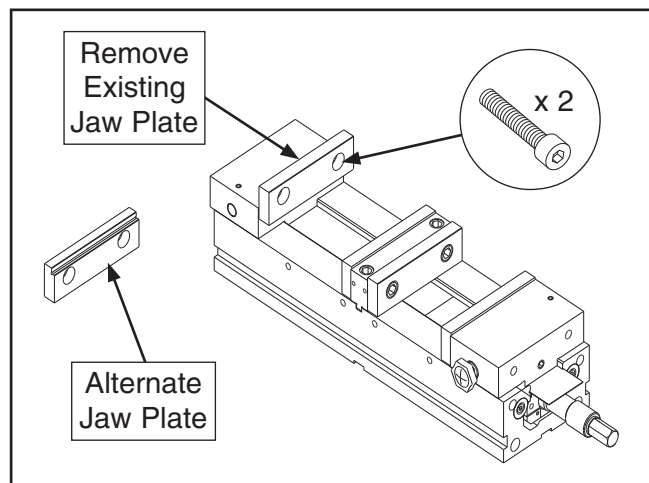


Figure 8. Removing and replacing jaw plates.

Note: Jaw plates can also be attached to opposite ends of jaws. This allows for wider clamping area when working with extra-long narrow workpieces (see **Common Clamping Arrangements** on **Page 5**).

Accessories

SB1284—4" Step Jaw for T10065

SB1286—6" Step Jaw for T10066

These step jaws hold flat stock and are direct jaw plate replacements for your milling vise. They are precision-ground and flame-hardened for added accuracy and durability. Sold in pairs.



Figure 9. 4" and 6" step jaws for milling vises.

SB1287—4" V Jaw for T10065

SB1289—6" V Jaw for T10066

These jaws feature horizontal and vertical V-grooves to secure round stock parallel or perpendicular to vise during operation. They are precision-ground and flame-hardened for added accuracy and durability.



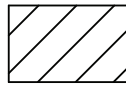
Figure 10. 4" and 6" V jaws for milling vises.



Common Clamping Arrangements



= Jaw Plate



= Workpiece

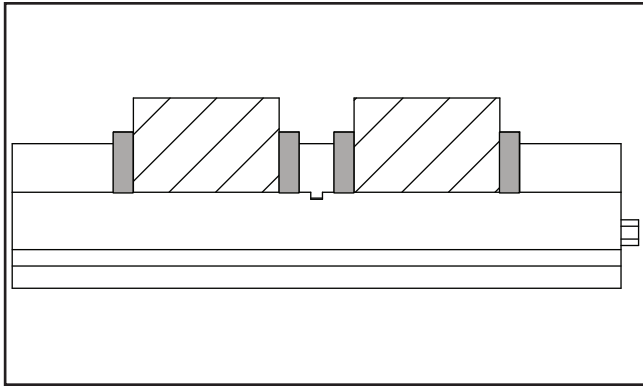


Figure 11. Clamping two identical-sized workpieces at once.

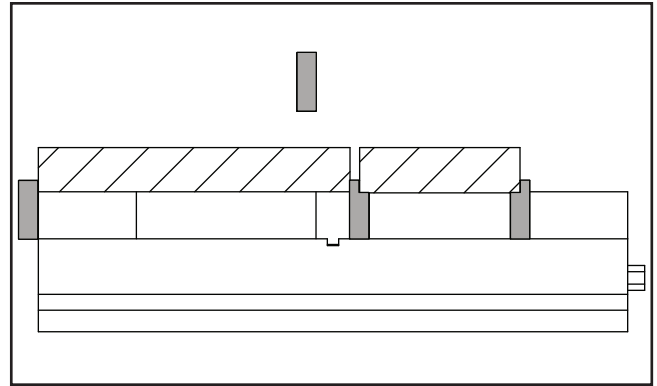


Figure 14. Clamping thin workpieces of different sizes with ridged jaw plates (sold separately).

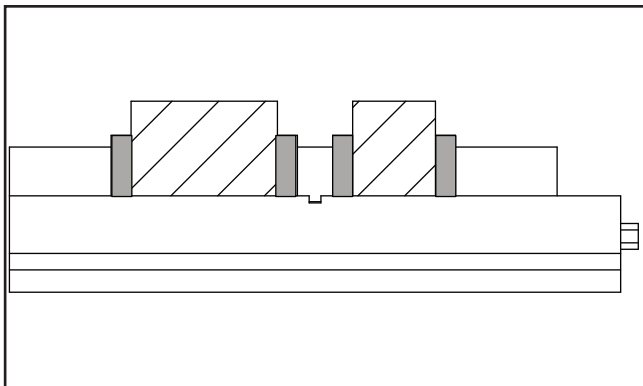


Figure 12. Clamping two different-sized workpieces at once.

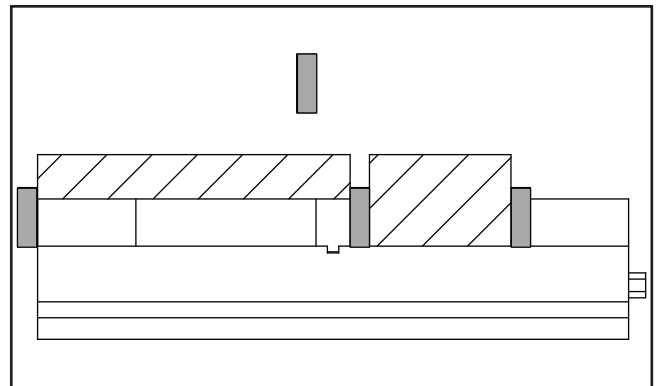


Figure 15. Clamping multiple sizes and shapes by repositioning jaw plates.

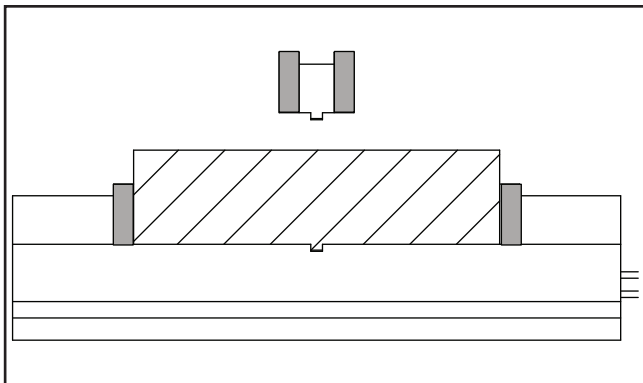


Figure 13. Clamping single large workpiece by removing center jaw.

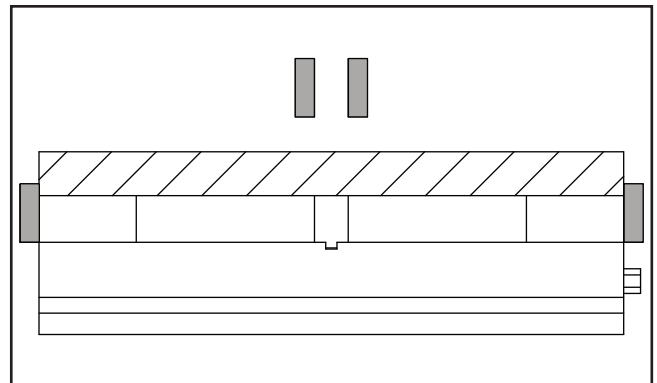
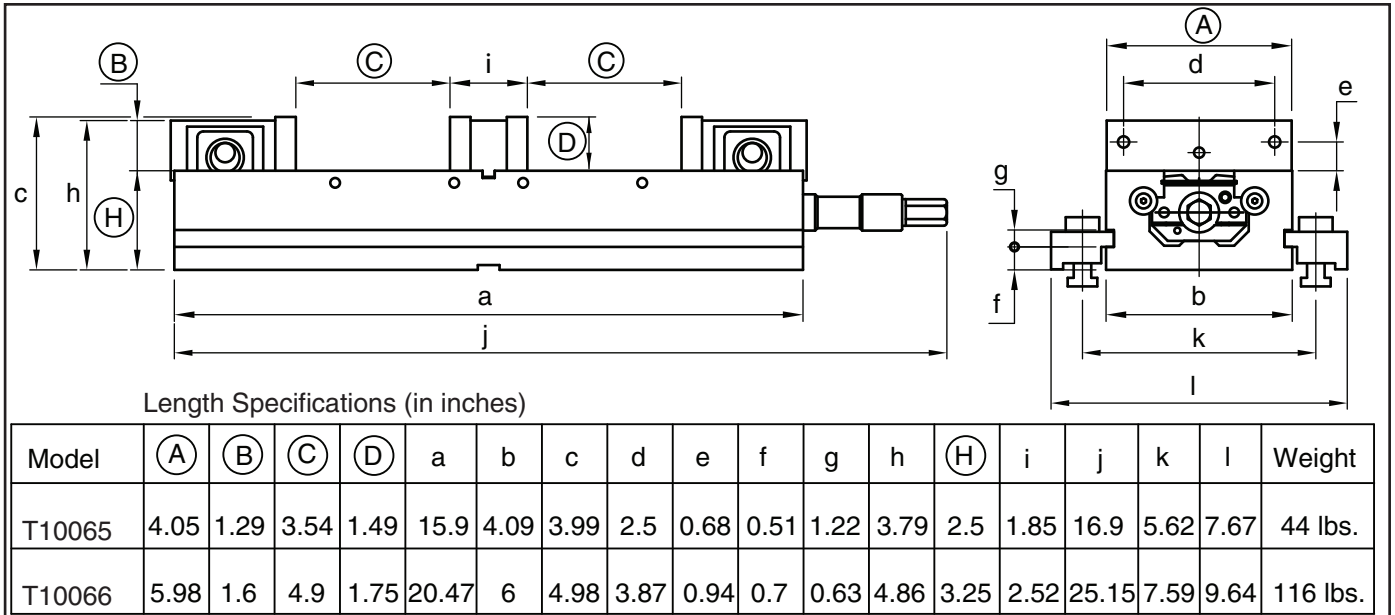


Figure 16. Clamping extra-long, thin workpieces.

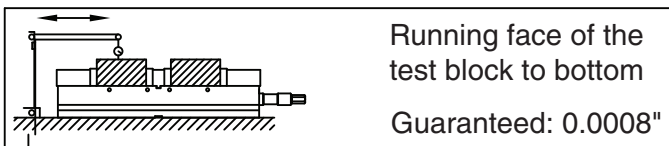
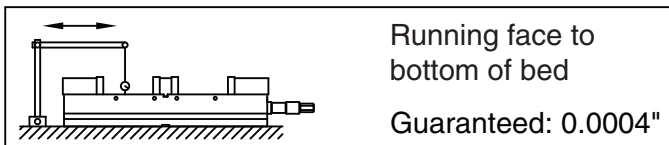


Dimensional Specifications

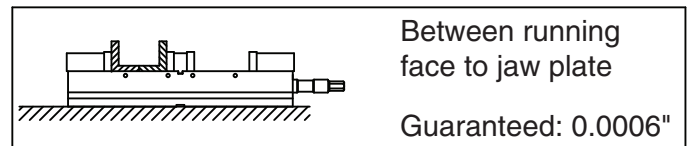
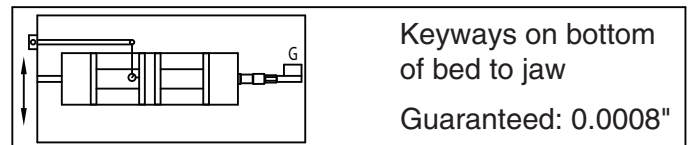


Inspection Specifications

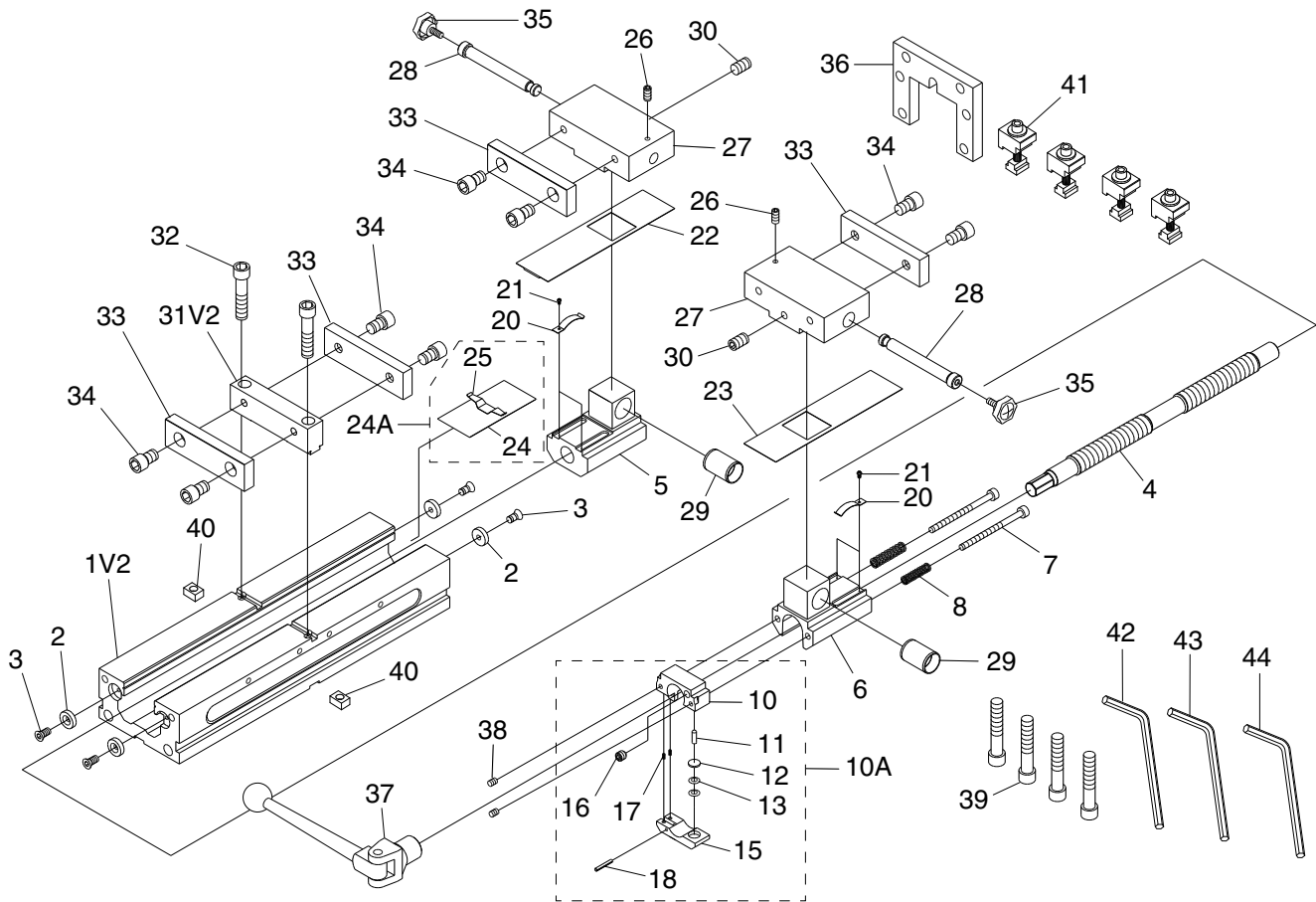
Parallelism:



Squareness:



T10065 Parts Breakdown & List

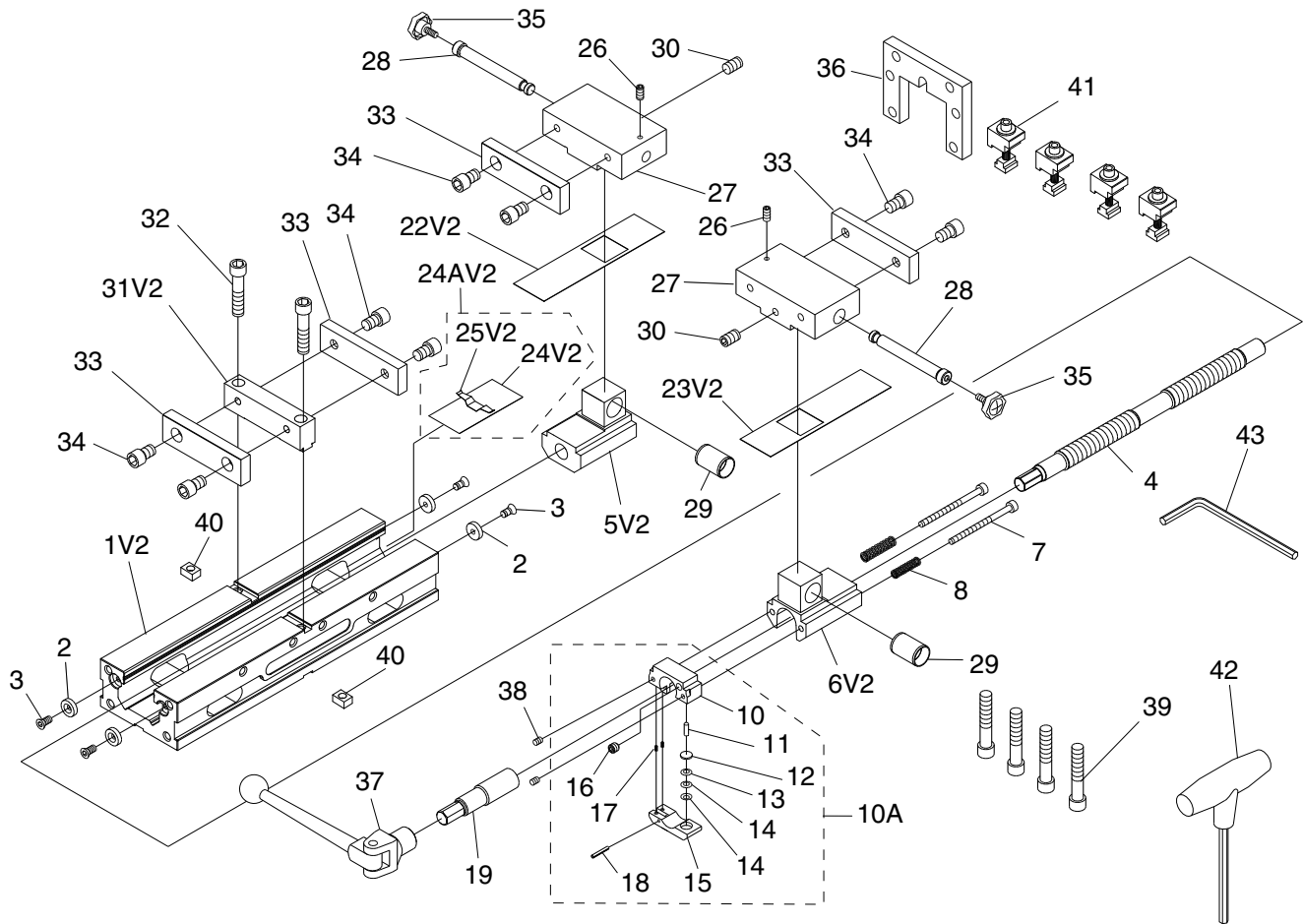


REF PART #	DESCRIPTION
1V2	PT10065001V2 VISE BASE V2.02.21
2	PT10065002 RAIL CAP 4-PC
3	PT10065003 FLAT HD CAP SCR 1/4-20 X 1/2
4	PT10065004 VISE LEADSCREW
5	PT10065005 FORE-SIDE LEADSCREW NUT
6	PT10065006 STEP-SIDE LEADSCREW NUT
7	PT10065007 CAP SCREW 1/4-20 X 3-1/2
8	PT10065008 STEP-SIDE COMPRESSION SPRING 2-PC
10A	PT10065010A ADJUSTING LEADSCREW STOPPER ASSEMBLY
10	PT10065010 ADJUSTING LEADSCREW STOPPER
11	PT10065011 STOPPER ADJUSTMENT PIN
12	PT10065012 COLLAR 11.8MM
13	PT10065013 DISC SPRING 12 X 5.2MM
15	PT10065015 LEADSCREW STOPPER BRAKE
16	PT10065016 SET SCREW M8-1 X 12 CONE PT
17	PT10065017 COMPRESSION SPRING
18	PT10065018 ROLL PIN 4 X 30
20	PT10065020 SEGMENTED COIL SPRING 4-PC
21	PT10065021 PHLP HD SCR M3-.5 X 6
22	PT10065022 FORE-SIDE SLIDING CHIP GUARD
23	PT10065023 STEP-SIDE SLIDING CHIP GUARD
24A	PT10065024A STATIONARY CHIP GUARD W/CLIP

REF PART #	DESCRIPTION
24	PT10065024 STATIONARY CHIP GUARD
25	PT10065025 CHIP GUARD CLIP
26	PT10065026 SET SCREW M8-1.25 X 16 BALL PT
27	PT10065027 MOVABLE JAW 2-PC
28	PT10065028 LOCKING PIN 2-PC
29	PT10065029 LEADSCREW NUT SLEEVE 2-PC
30	PT10065030 SET SCREW 3/8-16 X 5/8
31V2	PT10065031V2 FIXED JAW V2.02.21
32	PT10065032 HEX BOLT 3/8-16 X 1-1/2
33	PT10065033 JAW PLATE 4-PC
34	PT10065034 CAP SCREW 3/8-16 X 1/2
35	PT10065035 KNOB BOLT M8-1.25 X 38
36	PT10065036 STEP-SIDE LOCK PLATE
37	PT10065037 HANDLE ASSEMBLY
38	PT10065038 SET SCREW 1/4-20 X 1/4
39	PT10065039 CAP SCREW 3/8-16 X 1-1/2
40	PT10065040 MILL TABLE GUIDE BLOCK 2-PC
41	PT10065041 MILL TABLE CLAMP KIT 4-PC
42	PT10065042 HEX WRENCH 3/16
43	PT10065043 HEX WRENCH 4MM
44	PT10065044 HEX WRENCH 8MM



T10066 Parts Breakdown & List



REF	PART #	DESCRIPTION
1V2	PT10066001V2	WISE BASE V2.02.21
2	PT10066002	RAIL CAP 4-PC
3	PT10066003	FLAT HD CAP SCR 1/4-20 X 1/2
4	PT10066004	WISE LEADSCREW
5V2	PT10066005V2	FORE-SIDE LEADSCREW NUT V2.02.21
6V2	PT10066006V2	STEP-SIDE LEADSCREW NUT V2.02.21
7	PT10066007	CAP SCREW 5/16-18 X 4-1/2
8	PT10066008	STEP-SIDE COMPRESSION SPRING
10A	PT10066010A	ADJUSTING LEADSCREW STOPPER ASSEMBLY
10	PT10066010	ADJUSTING LEADSCREW STOPPER
11	PT10066011	STOPPER ADJUSTMENT PIN
12	PT10066012	COLLAR 16MM
13	PT10066013	UPPER DISC SPRING 16 X 8.2MM
14	PT10066014	LOWER DISC SPRING 16 X 0.8MM
15	PT10066015	LEADSCREW STOPPER BRAKE
16	PT10066016	SET SCREW M12-1.25 X 20 CONE PT
17	PT10066017	COMPRESSION SPRING
18	PT10066018	ROLL PIN 4 X 30
19	PT10066019	LEADSCREW HANDLE SHROUD
22V2	PT10066022V2	FORE-SIDE SLIDING CHIP GUARD V2.02.21
23V2	PT10066023V2	STEP-SIDE SLIDING CHIP GUARD V2.02.21

REF	PART #	DESCRIPTION
24AV2	PT10066024AV2	STATIONARY CHIP GUARD W/CLIP V2.02.21
24V2	PT10066024V2	STATIONARY CHIP GUARD V2.02.21
25V2	PT10066025V2	CHIP GUARD CLIP V2.02.21
26	PT10066026	SET SCREW M8-1.25 X 16 BALL PT
27	PT10066027	MOVABLE JAW 2-PC
28	PT10066028	LOCKING PIN 2-PC
29	PT10066029	LEADSCREW NUT SLEEVE 2-PC
30	PT10066030	SET SCREW 1/2-13 X 3/4
31V2	PT10066031V2	FIXED JAW V2.02.21
32	PT10066032	CAP SCREW 7/16-14 X 2
33	PT10066033	JAW PLATE 4-PC
34	PT10066034	CAP SCREW 1/2-13 X 3/4
35	PT10066035	KNOB BOLT M8-1.25 X 38
36	PT10066036	STEP-SIDE LOCK PLATE
37	PT10066037	HANDLE ASSEMBLY
38	PT10066038	SET SCREW 5/16-18 X 5/16
39	PT10066039	CAP SCREW 1/2-13 X 1-3/4
40	PT10066040	MILL TABLE GUIDE BLOCK 2-PC
41	PT10066041	MILL TABLE CLAMP KIT 4-PC
42	PT10066042	T-HANDLE HEX WRENCH 6MM
43	PT10066043	HEX WRENCH 3/8

