

Installation and User Manual for Vice HVQ 515 and 516 Quick-Automatic



Quick-clamping system HVQ 515 and 516 (see Fig. 1):

- | | |
|---------------|---|
| 1. Base plate | 6. Guide rods |
| 2. Face | 7. Head with hole for capstan 28-25mm (1,1"- 0,98") |
| 3. Spindle | 8. Brace |
| 4. Nut | 9. Retaining ring |
| 5. Housing | |

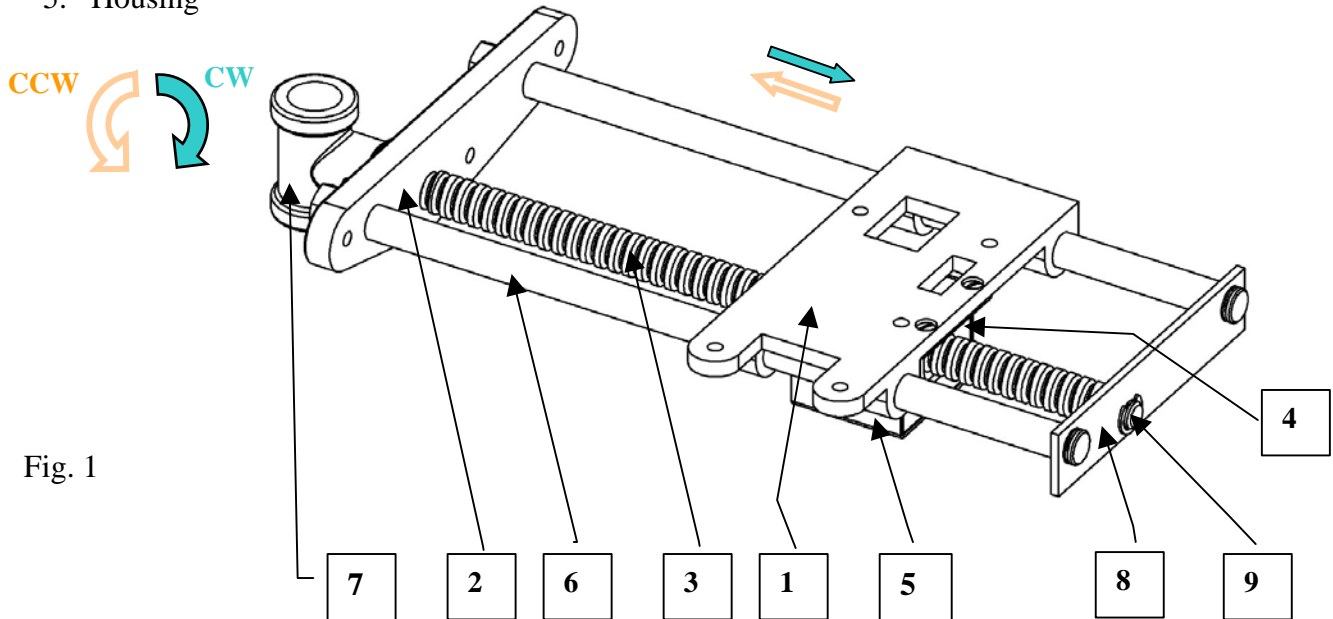


Fig. 1



1. Foreword:

Read carefully all instructions of this User Manual, especially sections concerning work safety. These sections are marked by a warning triangle.



2. Important notice !!

- fast feed allows free motion of the screw, which can lead to pressing of fingers between the jaws!
Be CAREFUL especially during installation
- prior to use, the vice with quick-clamping system YORK-Quick must be fixed to a workbench to enable the **gravitational component** to function
- the head (7) has an opening for the capstan $\text{Ø}25\text{-}28\text{mm}$ (1"-5/8")
- to ensure safe fixing of the vice, the minimum workbench thickness is **30mm** (5/4")
- after unpacking, the vice must be cleaned of all preservative grease and rust on the guide rods
- prior to installation, the HVQ vice must be dismantled into two parts by removing the retaining ring (9) and brace (8) and subsequent turning the spindle clockwise (CW) until the entire base plate (1) slides off the guide rods (6)
- assembly is done by reverse procedure and turning the spindle counter clockwise (CCW). For centering and inserting the spindle (3) into the nut (4), it is sometimes necessary to use an assistance tool, for example a screwdriver
- vice installation is easier when the workbench is turned upside down
- to ensure correct vice operation it is recommended to lubricate the spindle (3) and guide rods (6) with oil **once a week**

3. Standard Clamping by Turning the Spindle

By turning the spindle (3) clockwise (CW) by 1.5 to 2 revolutions the nut (4) and spindle (3) engage and the screw can be tightened the standard way.

4. Fast Feed to Required Distance

By turning the spindle (3) counter clockwise (CCW) by 1.5 to 2 revolutions the nut (4) and spindle (3) disengage. Then the spindle can be moved axially (direction of axis) to the required distance. After subsequently turning the spindle (3) clockwise (CW) by 1.5 to 2 revolutions the nut (4) and spindle (3) engage and further turning tightens the screw the standard way.

5. General Instructions

The wood vice is mounted to the underside of a workbench flush with the outside edge. The exact position is selected depending on the design of the workbench and HVQ vice size. We recommend positioning the HVQ vice in one of the workbench's corners, while taking into account the free movement of guide rods (6) and brace (8) especially in the vice's end positions. The most common HV vice installation is illustrated in Fig. 2a, 2b, 2c.

Installation on workbench with additional rear jaw - Fig. 2a

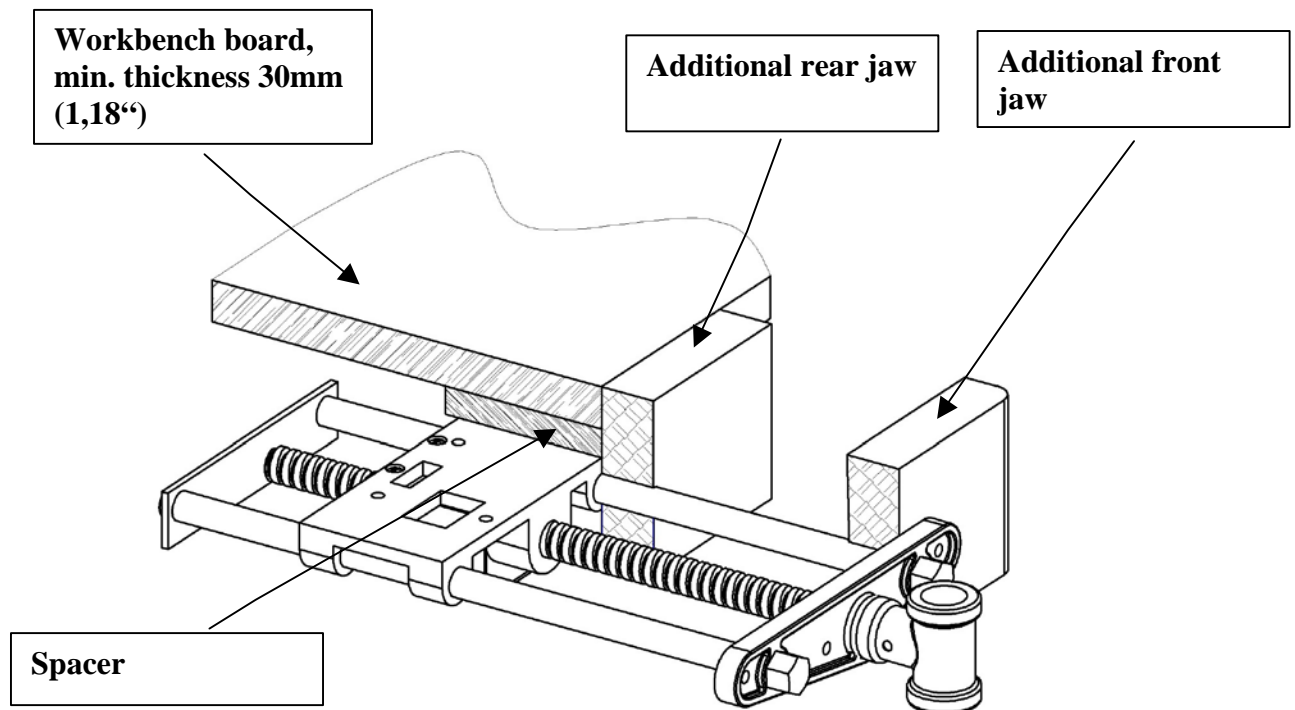


Fig. 2a

Installation on workbench with collar – additional rear jaw not necessary - Fig. 2b

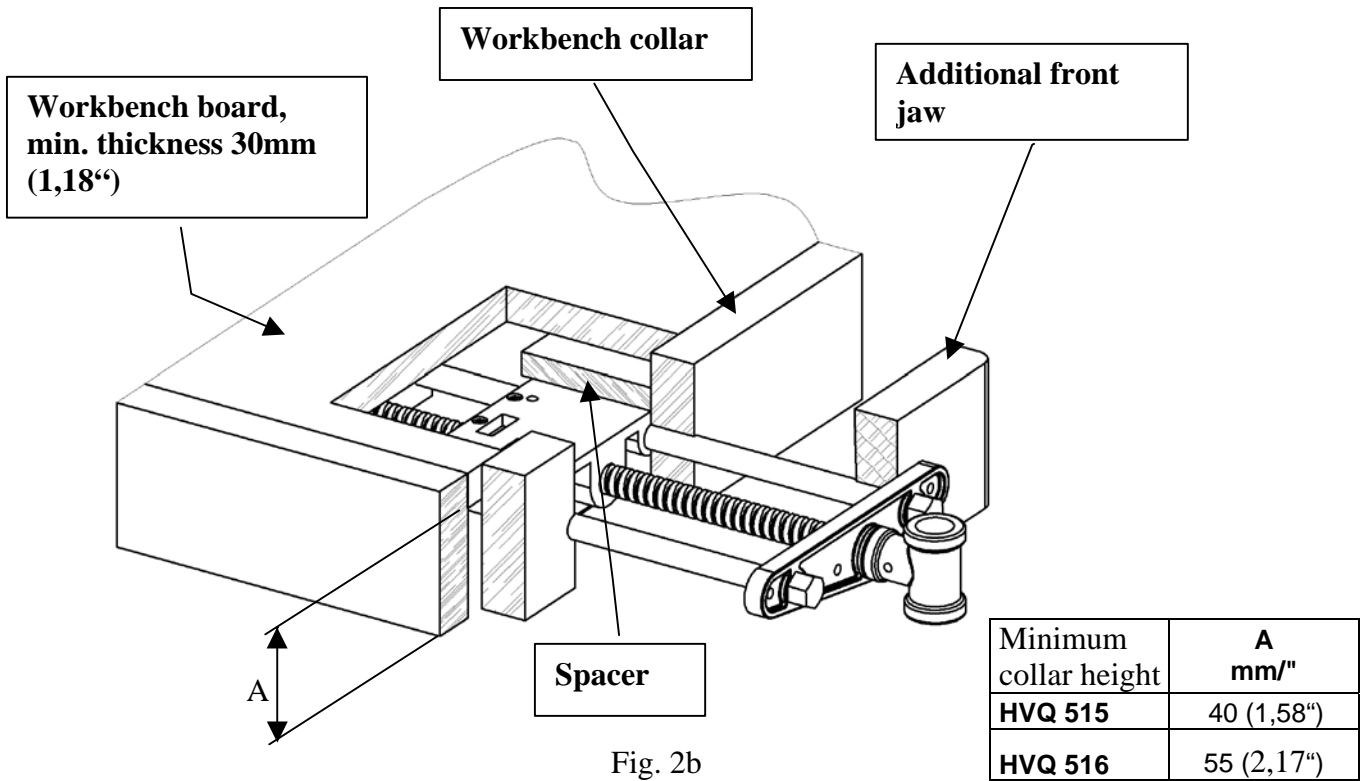


Fig. 2b

Installation on workbench without additional rear jaw and collar – this configuration is neither usual nor recommended - Fig. 2c

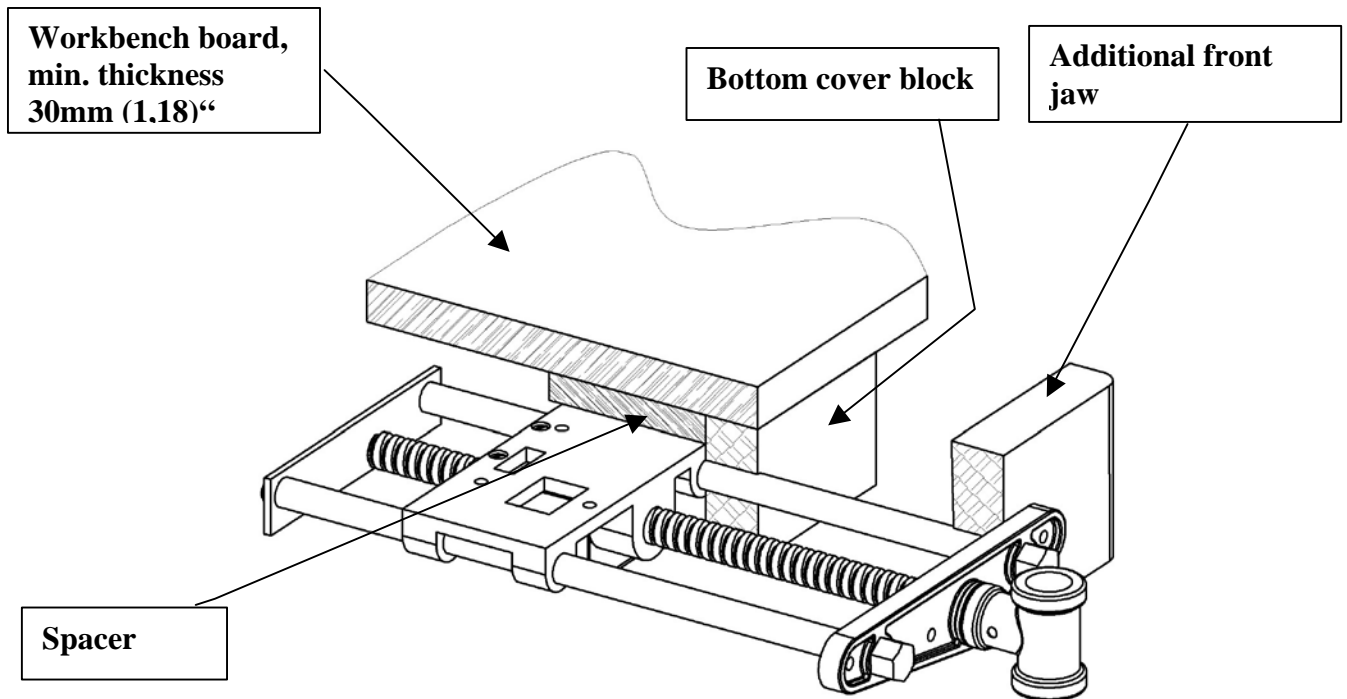


Fig.2c

6. Dimensions and drilling of additional jaws

- The vice jaw and spacer should be made of fine-grained hard wood like beech, maple or birch.



- To ensure correct jaw operation we recommend bevelling the front jaw to 2° after drilling with the rear jaw or bench collar.



It is important to note that vice HVQ516 is not axially symmetrical. This must be taken into account when measuring and making openings “ $\varnothing J$ ” and “ $\varnothing K$ ” at distances “ O_1 ”, “ O_2 ”, “ G ”, “ H ”, “ I ” see **Tab. 1**. Now measure out the openings for the spindle (3) and guide rods (6) onto the front and rear additional jaw, and bench collar, if applicable. To make work easier it is possible to drill the front and rear jaws together by clamping them using a C-shaped brace or clamp – see Fig. 3.

The fixing depth B is selected by the user. This is the distance from the top edge of the bench or rear jaw to the guide rods, which should be in the range stated in **Tab.1**

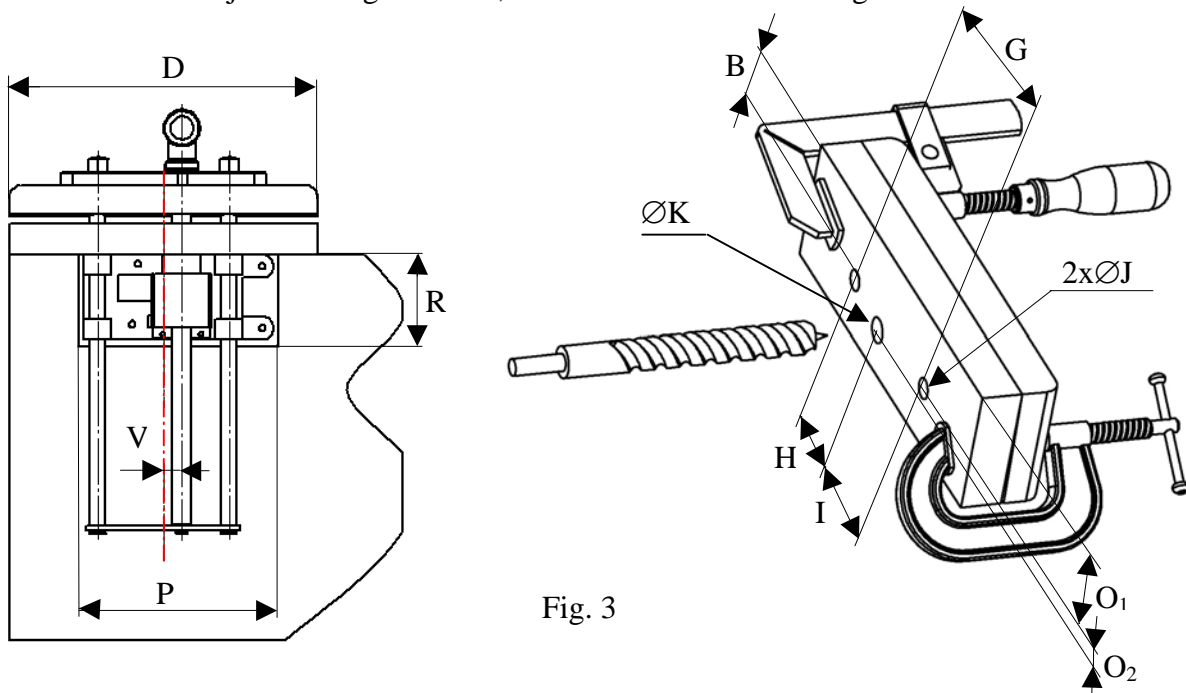


Fig. 3

	B		O ₁ mm/"	O ₂ mm/"	G mm/"	H mm/"	I mm/"	ØJ mm/"	ØK mm/"	V mm/"
	Minimum	Optimum								
HVQ 515	42 (1,65")	50 (1,97")	B+7 (B+0,28")	5 (0,20")	150 (5,91")	75 (2,95")	75 (2,95")	18 (0,71")	30 (1,18")	-
HVQ 516	52 (2,05")	65 (2,56")	B+10 (B+0,39")	12 (0,47")	170 (6,69")	61 (2,40")	109 (4,29")	20 (0,79")	30 (1,18")	24 (0,95")

Tab.1

7. Preparation of the spacer

Preparation of spacer according to dimensions **E**, **P** and **R** – see Fig. 3 and Tab. 2

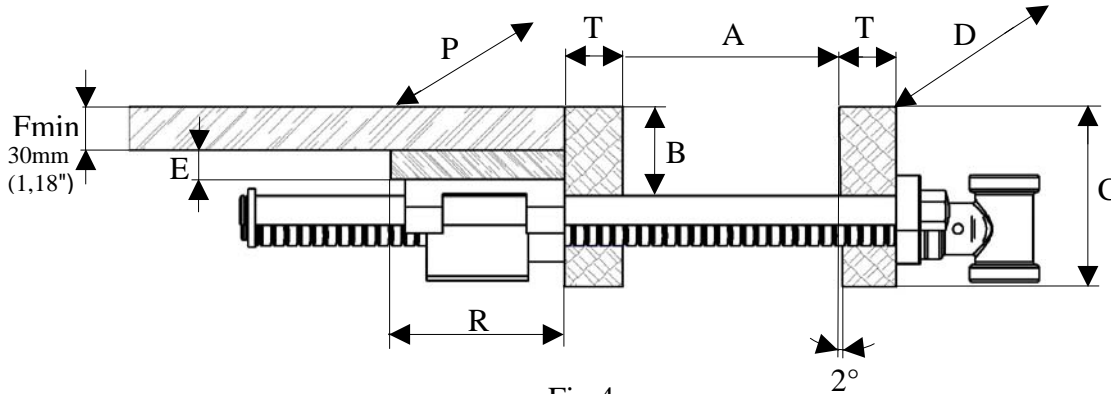


Fig.4

	Total length	A+2T opening	Spacer		Jaw				
			E mm/"	PxR mm/"	C mm/"	D		T	
						Minimum	Optimum	Minimum	Optimum
HVQ 515	390 (15,35")	205 (8,07")	E=B-F-13 (E=B-F-0,52")	200x100 (8"x4")	C=B+50 (C=B+2")	200 (8")	350 (14")	30 (1,18")	50 (2")
HVQ 516	550 (21,65")	335 (13,19")	E=B-F-11,5 (E=B-F-0,45")	260x130 (10,24"x5,12")	C=B+80 (C=B+3,15")	300 (12")	500 (20")	30 (1,18")	50 (2")

Tab.2

8. Vice installation on a workbench including additional jaws

Required tools:

- handheld drill / bench top upright drill
- wood drill bit \varnothing : 3, 4, 5, 6, 18, 20, 30 mm (0,12", 0,16", 0,2", 0,24", 0,71", 0,79", 1,18")
- manual / electrical screwdriver – depending on type and size of used screws
- wood saw
- screw vice / C-shaped clamp – 2 pcs
- hammer / mallet

a) If the workbench has no collar and we use an additional rear jaw by fixing it to the relevant position on the front edge of the workbench. The number and size of screws must be adequate to the additional rear jaw size. The presumed number of wood screws is 5-7, \varnothing **6–8mm (0,24"–0,32")**. Fix the rear jaw so that the top edge is flush with the top of the workbench board. If the workbench has a collar, drill holes for the spindle (3) and guide rods (6) directly into the collar. See Fig. 5.

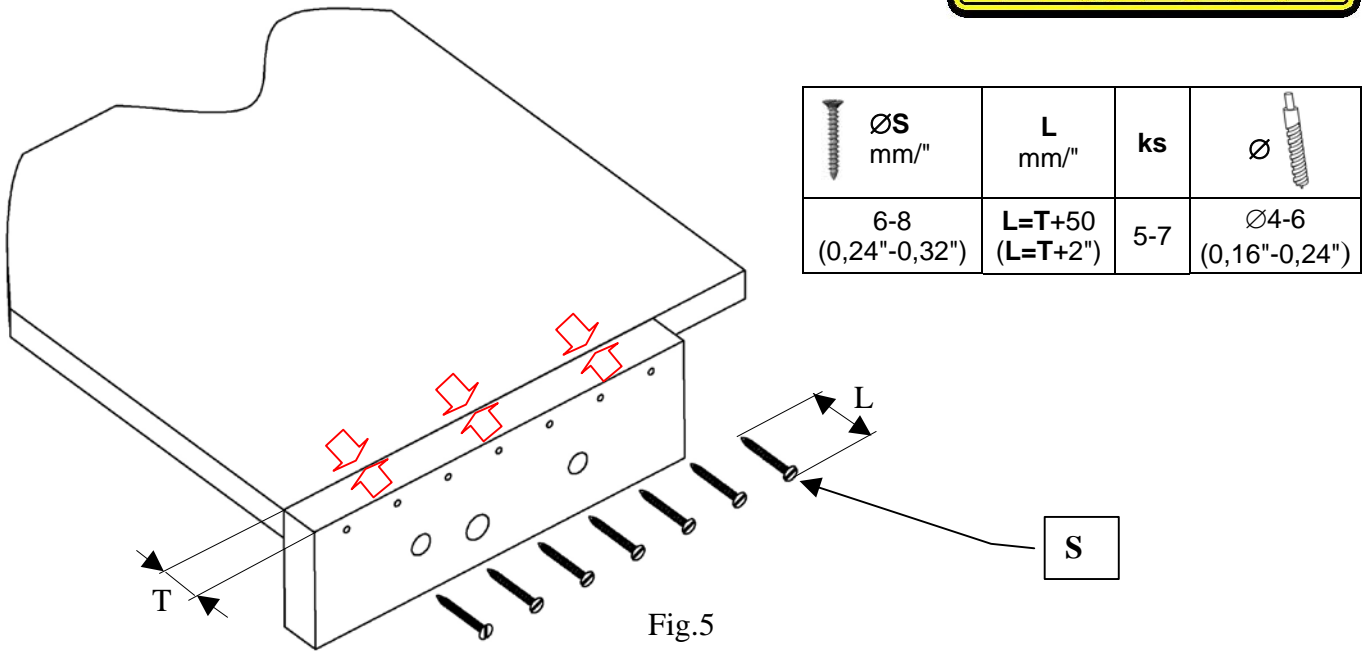


Fig.5

b) Now the vice can be installed on the workbench. First it must be dismantled into 2 parts by removing the retaining ring (9) and brace (8) and turning the spindle clockwise (CCW) until the base plate (1) exits the guide rods (6).

If a spacer is used, it must now be fixed to the bottom side of the workbench and pushed against the additional rear jaw or workbench collar. For easier installation, you can lightly fix it with 2 wood screws S_1 $\varnothing 4-5\text{mm}$ (0,16"-0,2"), length $L_1 = E$ (spacer thickness) + 25mm (1") and then attach to it the base plate (1) of vice HVQ, into pre-drilled openings of the base plate itself. Lightly tighten the screws S_2 to enable the front jaw to fit correctly and the base plate (1) to meet with the rear jaw or workbench collar, Fig. 6

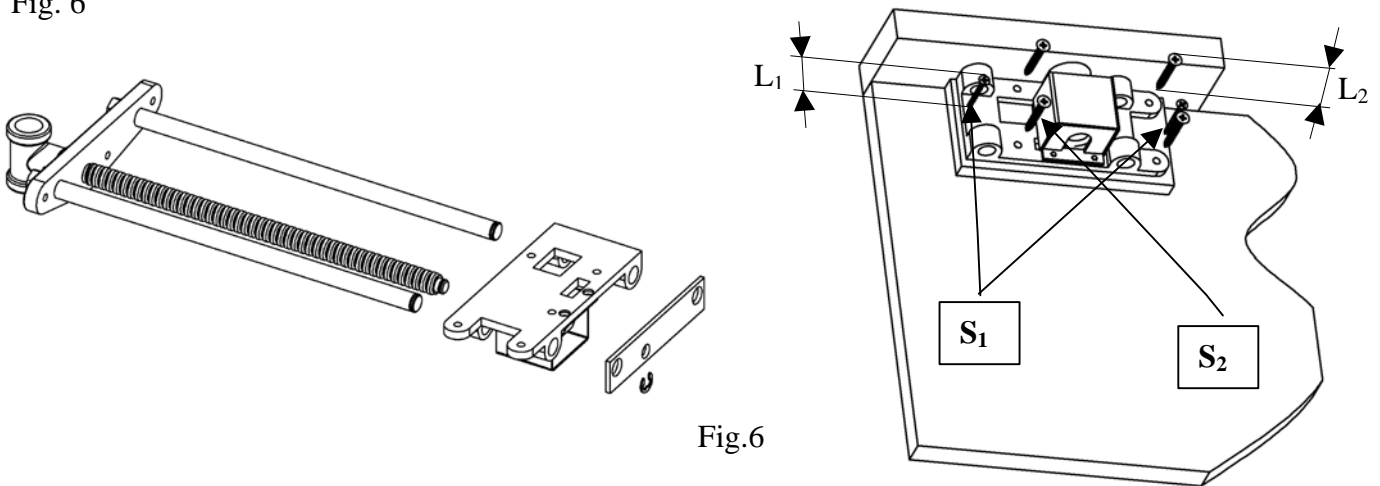




Fig.6

Fixing of base plate and spacer

	$\varnothing S_1$ mm/"	L_1 mm/"	ks	\varnothing	$\varnothing S_2$ mm/"	L_2 mm/"	ks	\varnothing
HVQ 515	4-8 (0,16"-0,32")	$E+25$ ($E+0,98$ ")	2-4	3-6 (0,12"-0,24")	6 (0,24")	$E+35$ ($E+1,38$ ")	4	5 (0,2")
HVQ 516					8 (0,32")			6 (0,24")

c) Now we put the front additional jaw on forehead (2) with guiding rods (6) and everything we insert to base (11) , which is already installed on underneath od working desk . We put the clip (8) and we secure by safety ring (9) and and we fast the jaw of vise on total touch-down . Than we have to seat the top edge of front jaw with top edge of the rear additional jaws or with edge of collar desk . In case , that everything is O.K. , we can fast screws **S₂** on base (1)and we fast the forehead (2) to front additional jaw by screws **S₃** after picture (7) .

Fixing of additional front jaw

	 $\varnothing S_3$ mm/"	L_3 mm/"	ks	 \varnothing
HVQ 515	4-6 (0,16"-0,24")	T	2	3-5 (0,12"-0,2")
HVQ 516	6-8 (0,24"-0,32")	T	3	5-6 (0,2"-0,24")

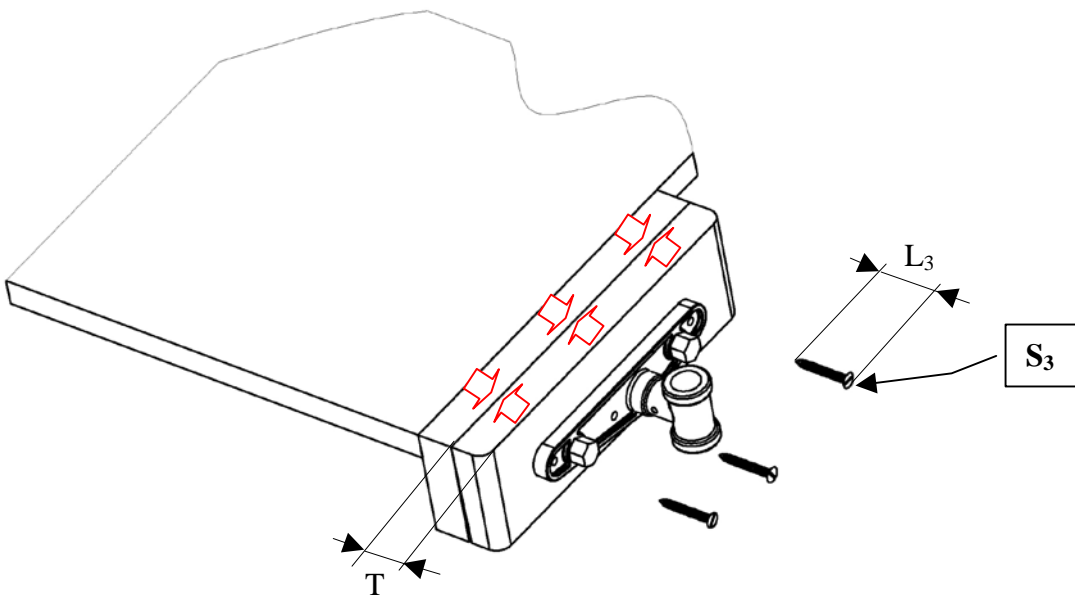


Fig..7

d) Finally, check the operation of the vice's quick-automatic system. By turning the spindle (3) counter clockwise (CCW) by 1.5 to 2 revolutions the nut (4) and spindle (3) disengage. Then the spindle can be moved axially (direction of axis) to the required distance. After subsequently turning the spindle (3) clockwise (CW) by 1.5 to 2 revolutions the nut (4) and spindle (3) engage and further turning tightens the screw the standard way.

- Vice disassembly is done by reversing the steps described in this User Manual.