

Installing a Cast-Iron Vise

It's hard to imagine working in a shop that lacks a good bench-mounted vise. After all, woodworkers come from the factory with just two hands, and we need both of them to use most tools. So it usually takes some help to keep a workpiece fixed firmly in place.

The cast-iron style of vise has long been a staple in woodworkers' shops, and for good reason. A cast-iron vise that's well maintained can last several generations, and a workpiece locked in its grip won't easily budge.

A cast-iron vise has another plus: It generally installs without much fuss. But

that doesn't mean the procedure is fool-proof. To minimize the fussiness factor, there are a few worthwhile points to keep in mind—including a little preinstallation planning.

Where to put it

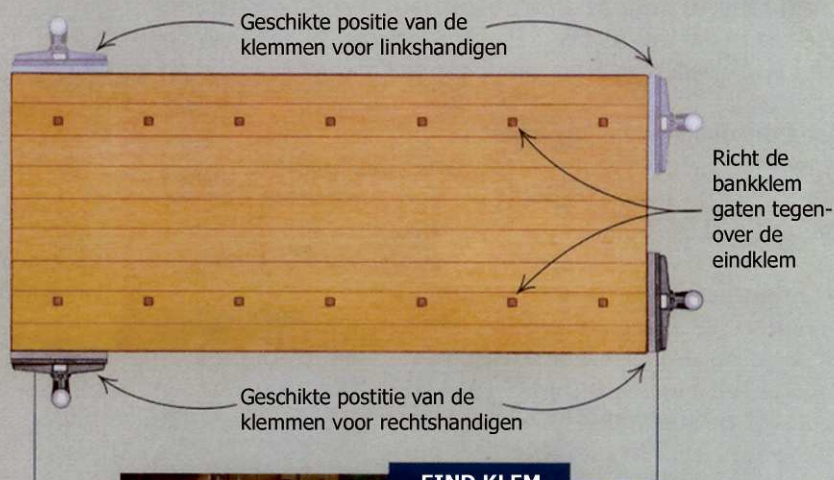
At first glance, a workbench seems to offer a number of places to locate a vise. But a few spots can be eliminated quickly. Any vise centered on the front, back or end of a bench is sure to be in your way, so the vise almost always ends up installed near a corner to make it as unobtrusive as possible. Your options narrow even further when

you consider the bench location, its design and you—or more specifically, your handedness.

Bench location and design—When a bench is positioned well away from the walls, allowing all-around access, the vise can be installed adjacent to any of the corners. But if the bench butts against a wall, both corners of that side of the bench are eliminated as options. If the bench has to go in a corner, the options become fewer. So it's best not to finalize the vise location until you've considered where the bench is going to go.

Stel de beste locatie vast

Voor het plaatsen van een werkbankklem, bedenk wat de beste plek voor u is. Rechtshandigen preferen de klem voor aan de linkerkant en de eindklem aan de rechterkant. Linkshandigen preferen het net andersom.



EIND KLEM

Een eindklem gebruikt met een bankklem zorgt ervoor dat hout snel geklemt kan worden en is handig voor het schaven en zagen van lange stukken hout.



KLEM VOOR

Wanneer je een klem monteert, biedt een klem voor de meeste mogelijkheden. Hout dat horizontaal geklemt wordt is ideaal om te schaven. Klem het verticaal en het hout kan uitstekend gebruikt worden voor zagen en schaven.



There's more to it than sinking a few lag screws

BY TOM BEGNAL

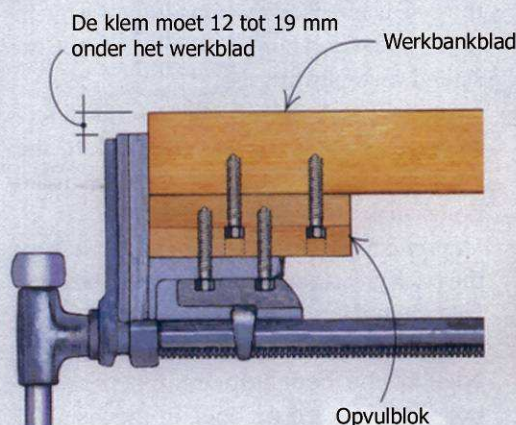
Most cast-iron vises have a metal dog built into the front jaw. When the vise dog is used with a benchdog, the vise offers additional clamping advantages. Keep in mind, though, that the holes for the benchdog must be in line with the vise dog. So before you settle on a vise location, make sure the benchdog you use can be placed into all of the holes without interfering with the vise, the bench legs or anything else under the top.

Front or end vise?—A vise can be mounted to the front or end of a bench. Because each location has its advantages, many

PLAATSEN VAN DE KLEM



Bereken de dikte van het opvulblok. Plaats de werkbankklem onderste boven op het werkblad en meet het verschil plus 12 tot 19 mm voor de gewenste dikte van het opvulblok.



Plaats het opvulblok, dan de klem, met behulp van houtdraadbouten. Door de houtdraadbouten geheel weg te werken haal je het meeste uit je werkbankklem.

MAKEN VAN EEN HULPSTUK



Een lang hulpstuk. Een inkeping in hulpstuk valt gelijk met de werkbankklem. Door het hulpstuk dezelfde lengte te geven als de werkbank is het mogelijk lange lengtes te klemmen.



Metten, merken en frezen van een inkeping. Bij veel werkbankklemmen valt de achterkant van de klem niet gelijk met de werkbank. Meet het diepste punt van de klem om zeker te zijn dat de inkeping diep genoeg is. Haal eerst met een boor het meeste hout weg en gebruik vervolgens een frees om de rest weg te halen.

benches include both front and end vises. If a bench is limited to having just one vise, it's best to install it as a front vise, because most of us naturally gravitate toward the front of the bench.

Think right or left—More than anything else, your handedness determines the best vise location. Right-handers usually like a front vise on the left of the bench. That way, when crosscutting a board with a handsaw, the cutoff end can be held by the left hand.

When the front vise is installed on the left, you'll want the end vise added to the right, near the front corner. Reverse the locations if you're a lefty.

How to mount it

There are several ways to install a cast-iron vise; your best option depends on the

benchtop's design. The procedure outlined here covers the most common installation, one where the back jaw of the vise simply butts against the edge of a top that's about 1½ in. thick.

Cast-iron vises, especially large ones, are heavy and awkward to hold. So try to work with the benchtop turned upside down, as shown here. If flipping the top isn't an option, you can make the vise easier to handle by removing the front jaw along with the screw and guide bars.

Include a filler block—Ideally, when the vise is installed, the top edge of the jaws should be ½ in. to ¾ in. below the top of the bench. The extra space allows room for the wood face, added later, to cover the top of the jaw.

Also, on some vises, the dog extends almost ½ in. above the jaws, even when the dog is fully lowered. Unless the jaws are well below the benchtop, the dog will always stick above the work surface.

To get that extra space, you're likely to need a wood filler block between the underside of the benchtop and the mounting bracket portion of the vise. The block

should be wide and long enough to cover the bracket and thick enough to produce the intended spacing.

Install the filler block and vise—Before securing the block to the underside of the top, drill and counterbore it for four lag screws. Position the block on the benchtop and drill the pilot holes. Add glue, then slip the lag screws into the holes and thread them home.

Now position the vise on the block, with the back jaw firmly against the edge of the bench. Then drill the pilot holes and add the lag screws. If you've been working with the benchtop upside down, now's the time to flip it right-side up.

Make the faces—A workpiece secured in the vise is less likely to dent if the cast-iron jaws have wood faces. The faces can be installed several ways.

A quick method is simply to screw a rectangular piece of hardwood stock to the jaws of the vise. Most jaws have predrilled holes, making the job an easy one.

I prefer to mortise the back face to accept the back jaw. Also, I like to extend the back face the full length of the bench. Effectively then, the back face becomes part of the edge of the benchtop. So when a long board is clamped on edge in the vise, the



Plaats het hulpstuk tegen de werkbank. Om het gat te vullen, tussen de achterkant van de klem en het hulpstuk, vult u deze met een aantal stukken epoxy. Nadat de klem met vet is ingesmeerd plaatst u het hulpstuk en schroeft u deze vast.



Schaaf de bovenkant. Met een scherpe schaaf zorgt u ervoor dat het oppervlak goed vlak wordt.

board remains in contact with the back face the full length of the bench. That makes it easier to clamp the end of the board to the benchtop.

To create the mortise, first mark its length, width and depth on the back of the back face. When measuring the depth, keep in mind that most jaws taper in thickness, meaning the back jaw usually isn't square to the benchtop. So to make sure the jaw can fit fully into the mortise, measure the depth dimension at the bottom of the jaw at its thickest point.

Once the mortise has been marked, use a drill press and a Forstner bit to remove most of the waste. Clean up the rest with a router.

Mount the faces—At this point, there's just one more detail to attend to before the back face can be attached. Because the back jaw is tapered, it doesn't fit fully against the mortise. As a result, there's a gap that widens as it nears the top of the jaw. Thus, the jaw loses some support provided by the back face.

To fill in the gap, use a bit of epoxy in putty form. You can find this stuff at most hardware or home-improvement stores. To prevent the epoxy from sticking to the jaw, add a heavy coat of paste wax to the area of the jaw that meets the epoxy.

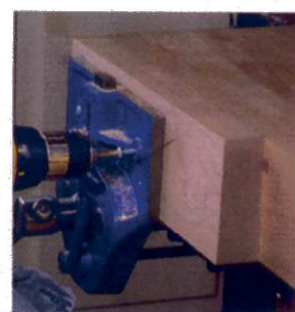
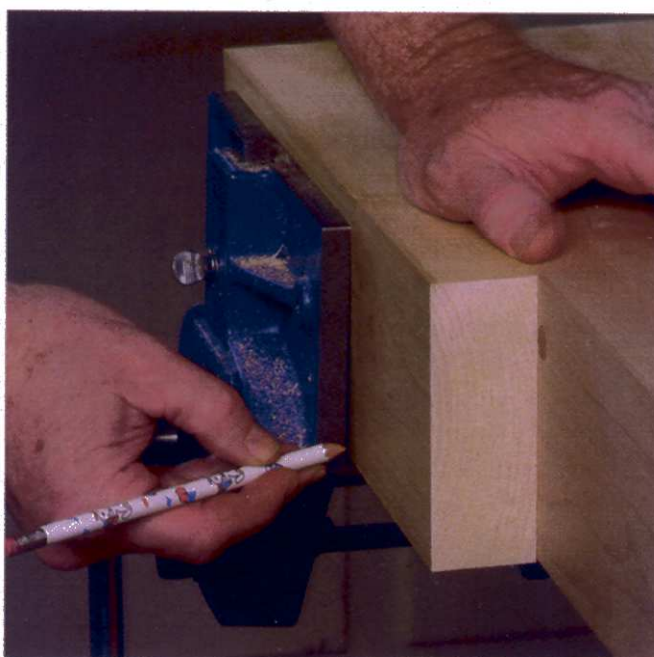
Next, attach the back face, using the vise to clamp one end. The top edge of the face should stand proud of the benchtop by $\frac{1}{8}$ in. Now add a bar clamp to the other end of the face. Secure the face with screws driven into counterbored holes, and add wood plugs to the holes.

The front face is just rectangular stock that's attached by driving screws through holes in the front jaw. Because the front jaw has a taper, like the back jaw, the

front face cants toward the back face. That's actually a plus because it helps the vise grip more tightly along the full width of the jaws. But if there's too much cant, it can be reduced quickly by handplaning a bevel on the entire inside surface of the front face.

For the final step, add a finish to the two faces, preferably one that matches the finish on the original benchtop. □

Tom Begnal is an associate editor.



Plaatsen van de voorkant van de klem. Net als de achterkant van de klem heeft voorkant schroefdraad. Draai deze rustig vast en draai dan twee schroeven vast in voorgeboorde gaten.