Undermount Drawer Slides

We test 9 models, and show how to use these invisible slides in all types of cabinetry

Appropriate for fine cabinets. *These invisible slides won't detract from the beauty of inset, dovetailed drawers.*

BY WILLIAM DUCKWORTH

I used to make cabinets for a living and have a vivid memory of one client in particular, an antiques dealer for whom I built a new kitchen. When she pulled out one of the drawers for the first time, she marveled at how smoothly it opened and closed—unlike the drawers in so many of her antiques. I felt a bit guilty for taking the credit; after all, it was the ball-bearing slides on those drawers that made them so easy to operate. That was 20 years ago, and the slides were the side-mount variety typical of the time.

Nowadays, you rarely see side-mounted slides. Most custom cabinetmakers and high-end manufacturers have switched to undermounts for all of their premium-quality kitchen, bath, and bedroom cabinetry, as well as built-ins, entertainment centers, and home-office furniture.

Undermount slides range in design and price from simple and inexpensive (as low as $5.25 a pair) to

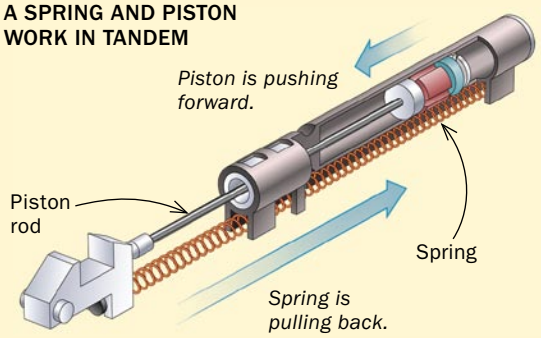
Photos: Charlie Reina; drawings: John Hartmann

The hardware

Wow factor

All of the undermounts we tested are self-closing, with a mechanism that pulls the drawer the last few inches. But six offer a soft-close feature, with tiny oil- or air-filled pistons that slow the drawer to a steady, mesmerizing crawl, no matter how hard it has been pushed. Say goodbye to loud thuds and rattling contents.

A SPRING AND PISTON WORK IN TANDEM



complex and pricey (as high as $47 a pair). While all models make opening and closing drawers easy, only the high-end versions have features worthy of fine furniture and cabinetry. For that reason, I limited the tests for this article to high-performing slides, comparing nine widely available models for price, ease of installation, and in-use features. Then I narrowed the pack to the five standouts shown at right.

I'll also present a series of installation tips for making a typical undermount slide work in almost any cabinet or case you build, with any type of drawer.

The pluses and minuses of undermount slides

One obvious reason for the popularity of undermount slides is that they're hidden from view. This is a bonus for furniture makers, who—let's face it—don't like to admit to using metal in their work. Still, I think the real selling point for undermount slides is the self-close and "soft"-close features that many now offer.

Both features involve mechanisms in the tracks that pull the drawer fully closed once it has been pushed most of the way in. All the slides tested have this

5 SLIDES WE LOVE

All nine undermount slides performed well, but five full-extension slides stood out for ease of installation and overall performance. Below each one is its quick-release clip, which attaches to the drawer box.

SOFT-CLOSE SLIDES

Accuride Eclipse Easy-Close
AUTHOR'S CHOICE BEST OVERALL
www.accuride.com
$47/pair (16-in. model)
Load rating: 100 lb.
Easy to install; quiet; built-in horizontal and vertical adjustment screws

Blum Tandem Blumotion
www.blum.com
$47/pair (15-in. model)
Load rating: 100 lb.
Quietest and smoothest soft-close mechanism; manufacturer offers templates for installation

Hettich Quadro IW Silent System
AUTHOR'S CHOICE BEST VALUE
www.hettichamerica.com
$20/pair (15-in. model)
Load rating: 100 lb.
Very easy to install and adjust height of drawer; front fixing clips are plastic but sturdy

Knape & Vogt In-Line 9400 Series
www.knapeandvogt.com
$39/pair (16-in. model)
Load rating: 75 lb.
Fullest extension of all slides sampled; slide sizes match length of actual drawer box

SELF-CLOSE SLIDE

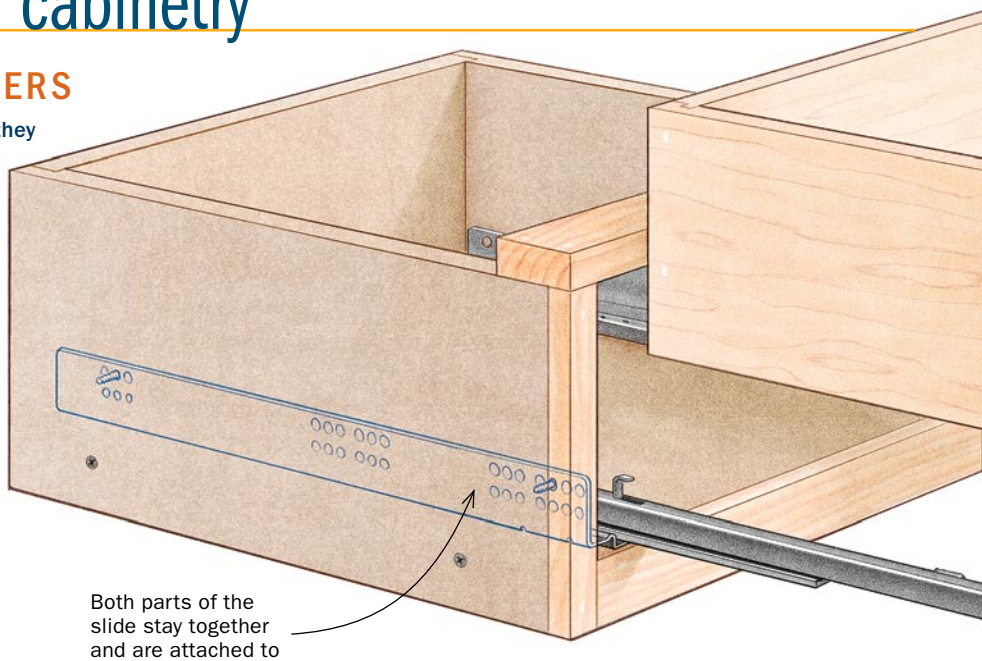
Accuride Eclipse Self-Close
www.accuride.com
$35/pair (16-in. model)
Load rating: 100 lb.
Easiest installation of self-close slides; somewhat noisy

Four other models were tested: the Grass Metro-Elite ($34/pair for 15½ in.); Hafele No. 423.57.641 ($38/pair for 16 in.); Hafele No. 421.14.940 ($9 pair for 16 in.); and Mepla Alfit Dynamic NT Series ($26/pair for 15 in.).

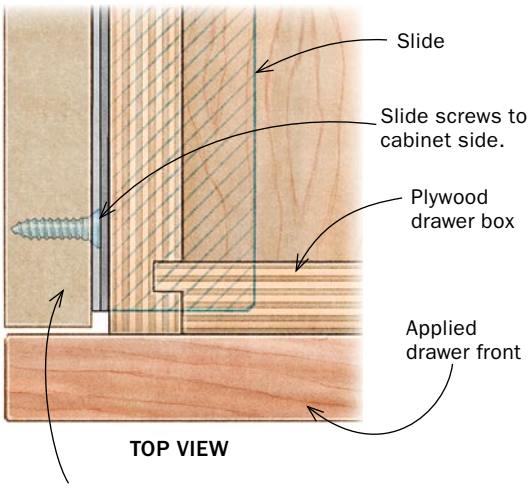
Designed for production cabinetry

APPLIED-FRONT OVERLAY DRAWERS

Undermount slides are designed for kitchen cabinets, so they are simple to install on overlay drawers with false drawer fronts, in both frameless and face-frame carcases.



FRAMELESS CABINETS



Frameless installation is the easiest. *With no face frame extending into the cabinet opening, undermount slides are attached directly to the cabinet sides.*

feature. But six have the more impressive soft-close feature (see "Wow factor," p. 69). Another advantage of the new line of undermounts is strength. I filled each drawer with heavy shop tools, and every slide easily carried more weight than its listed load rating.

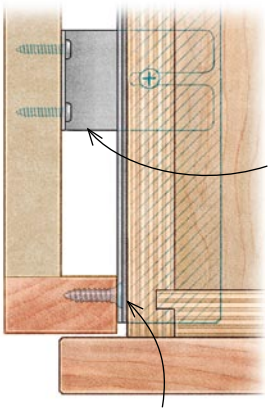
On the downside, undermount slides use more space than side-mounts. Because they're attached beneath the drawer, you typically lose ½ in. or more of vertical storage space per drawer; with most undermounts, you also can lose space at the back of the drawer for the slides' rear-mounting clips. You can reclaim some space, though, by making the drawers about ½ in. wider than you would with side-mount slides.

Designs and sizes vary considerably

Many of the slides share key design features, such as interlocking steel channels that ride on ball bear-

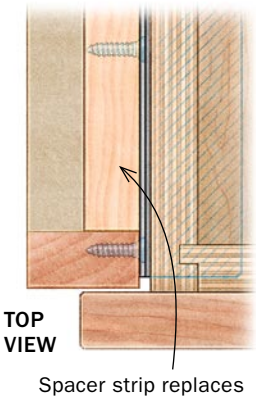
TWO OPTIONS FOR FACE FRAMES

BRACKETS ARE SUPPLIED

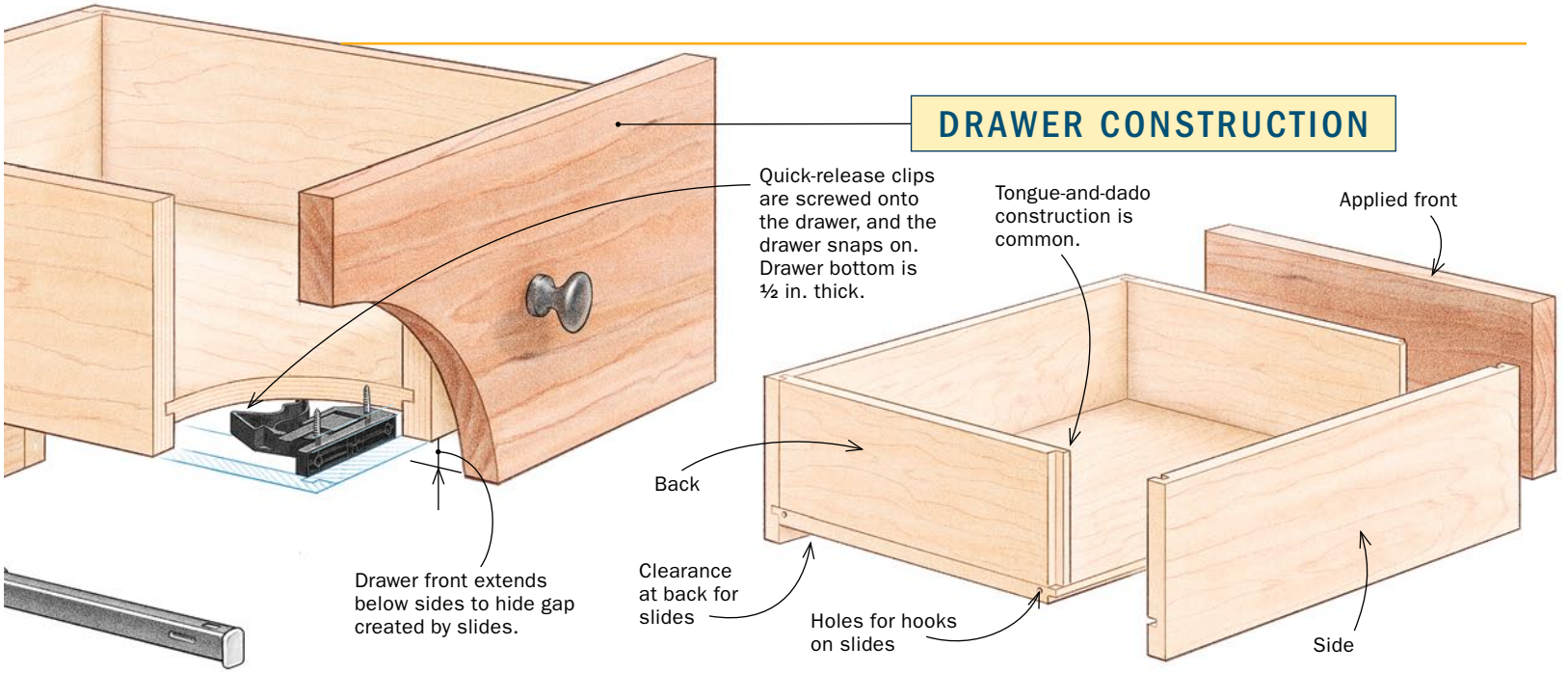


Space to fill. *Face-frame cabinets require extension brackets to bridge the distance between the drawer sides and cabinet sides and/or to attach the slides to the cabinet back.*

SHOPMADE SPACERS



Block out the inside. *Simple strips of wood can be used to bring the cabinet walls in, flush with the inside of the face frame. Then the slides simply screw on, just like a frameless cabinet.*



ings. However, the sizes and shapes of the slides vary widely, as do the mounting clips that fasten them under the drawers.

Like side-mounts, undermount slides come in a range of lengths, typically in 2-in. increments, from 12 in. to 30 in. Some also come in odd-numbered lengths, such as the 9-in., 15-in., and 21-in. slides offered by Blum. Several of the manufacturers represented here are European. Typically, the length of their slides is listed in both millimeters and inches.

The best of the best

Of the six soft-close slides I tested, four stood out: the Accuride Eclipse Easy-Close, the Blum Tandem Blumotion, the Hettich Quadro IW Silent System, and the Knape & Vogt In-Line 9400 Series. All of them are sturdy, well-made, easy to install, and quiet in use.

If price were no object, I'd go with the Accuride Eclipse, because it was the easiest to install and came with excellent instructions. Still, when I had to choose the slides for a new bedroom cabinet, I got the Hettich Quadros because they offer virtually all the benefits of the Accurides at a much lower price.

Of the three models without the soft-close feature, I'd go with the Accuride Eclipse Self-Close. Though somewhat noisy by comparison, it is by far the easiest to install.

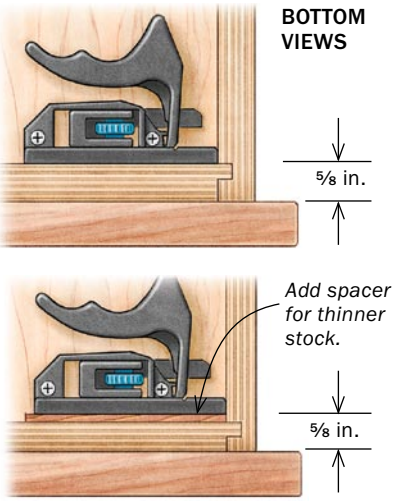
Buy the slides, then make the cabinet

Virtually all of the better undermount slides work with any style of cabinet, framed or frameless. Most are made to be secured to the sides of a frameless cabinet carcase with flat-head screws through predrilled holes in the hardware. For use with face-framed cabinets, in which there's extra space between the drawers and cabinet sides, most of these slides also come with

Metal tabs grab the back. *Build the drawer as shown so the back doesn't extend below the drawer bottom. This allows the drawer box to sit on the slides, and the metal hooks to engage small holes drilled in the back (right).*

MOUNTING CLIPS ARE SIZED FOR ⅝-IN. MATERIAL

But spacers are supplied for ½-in.-thick drawer boxes.



Clips lock down the front. *The mounting clips are designed to be screwed onto the drawer with no measuring. Then the drawer is installed by pushing it onto the metal tabs at the back and clicking it down onto the slides.*

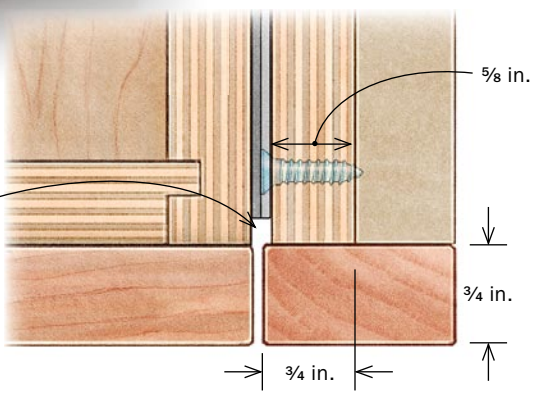
Beyond the basic install: inset drawers

It is easy to adapt undermount slides for use with fine furniture.

APPLIED-FRONT INSET DRAWER

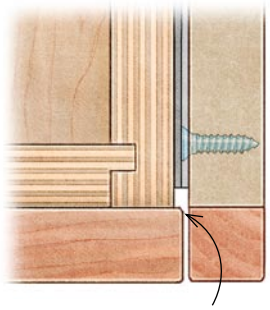
While an applied front thickens the drawer box and isn't appropriate in all situations, it makes it easier to adjust the gap around the drawer. Undermounts work well for this type of drawer, in both face-frame and frameless cabinets.

FOR FACE-FRAME CABINETS



Hide the slide. *Set the blocking in slightly from the inside edge of the face frame. This will create a finer gap around the drawer, hiding the slide bracket.*

FOR FRAMELESS CABINETS



Drawer front is slightly wider than box to cover slide bracket.

Still hidden. *The concept is similar on frameless cabinets, but in this case it is the drawer front that hides the slide bracket and allows a fine gap.*

optional mounting brackets to secure them to the cabinet back. Or you can add filler strips or blocks along the sides, and mount the slides there. In either case, the front of each slide gets fastened with one or two screws into the inside edge of the face frame.

The length of the particular slide you choose, and how it attaches, will affect the depth of both the drawers and the cabinet. And, if you're planning a face-frame cabinet, you'll need a more substantial cabinet back than you would otherwise in order to mount the bracket for the back of the slide. So, if you're planning to use undermount slides, it's best to have the hardware in hand before you build the cabinet.

Making the drawers: notches or no notches?

In order to hide the hardware from view, most of these slides require that the drawer bottom be recessed ½ in. into the bottom of the drawer box. Also, if the drawer back is the same size, top to bottom, as the front and sides, most of the slides require you to notch out that ½-in. bottom lip of the back to accommodate the slide mechanisms, which have barbed hooks that lock the back of the drawer in place.

You can avoid that task if you build your drawer box as I did for the test samples. The bottom fits into ¼-in. grooves in the sides and front of the drawer. But the drawer back is cut short, and the bottom is fastened to the back from below (see p. 71).

Installation: a multitude of choices

As with the cabinets, all the undermount slides I sampled work with any style of drawer—inset, full or half-overlay, with or without an applied front—and with drawer sides either ½ in. or ⅝ in. thick. The particular drawer style you choose will determine how the slides are installed.

Applied fronts on overlay drawers are the standard—Given that most manufactured and custom cabinets use drawers fitted with separate applied fronts, most slide manufacturers provide mounting instructions based on that configuration. So, if you plan to build drawers with integral fronts (to which the drawer sides are attached directly), you'll have to recalculate the location of the slide within the cabinet, or the front-to-back size of the drawer, to make it work. In all cases, take great care to size the drawer properly, left to right, front to back, and top to bottom.

To illustrate the most likely situations for furniture makers, I built five sample cabinets and drawers.

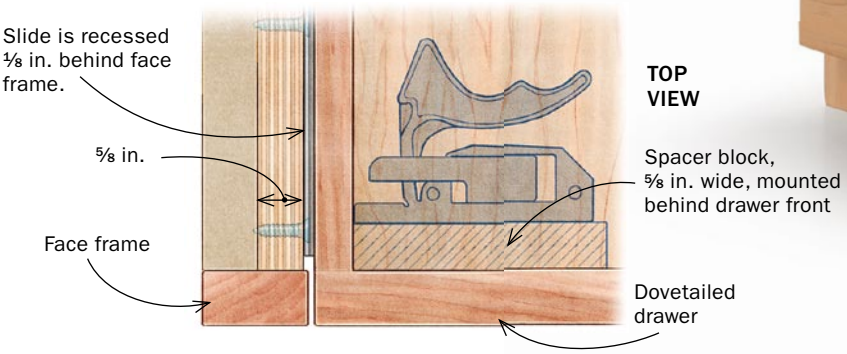
Overlay drawers with applied fronts

In addition to being the industry standard, the overlay drawer with applied front is also the easiest application for undermount slides. In frameless cabinets, the slides are screwed directly to the cabinet, set back as

INTEGRAL-FRONT INSET DRAWER

Integral fronts are a hallmark of fine drawers. But a thinner drawer box puts the slide hardware too close to the outside of the cabinet. The solution on face-frame cabinets is to use spacer blocks to set back the mounting clips far enough to hide the slides behind the face frame.

FOR FACE-FRAME CABINETS



per each brand's recommendations. The mounting clips are designed for ⅝-in.-thick drawer boxes. For ½-in.-thick drawer boxes, most manufacturers provide little plastic spacer blocks.

For overlay drawers in face-frame cabinets, the very front of each slide gets screwed into the edge of the face frame. To keep the slides parallel, you'll have to use the supplied side- or rear-mounting brackets, or add blocking to the sides of the cabinet.

Inset drawers with applied fronts

Inset drawers offer a fine-furniture look, and undermount slides will work great for them, given a couple of extra steps. The challenge is that the slide requires a gap of ⅛ in. or more between the drawer side and the mounting surface in the cabinet, so you'll have to make sure the shiny metal edge of the slide is not visible through the drawer gap.

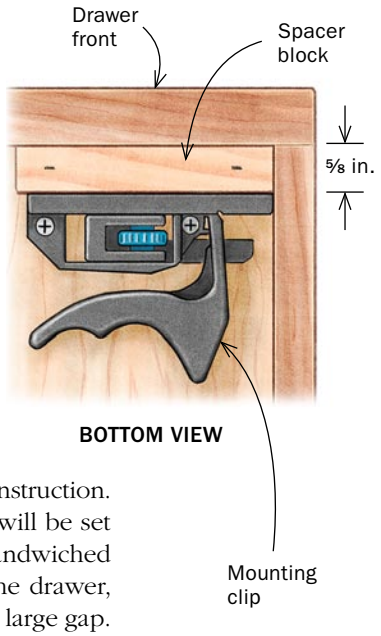
For a typical face-frame cabinet, the best approach is to size the drawer so that the front edge of the hardware is buried behind the face frame. For a frameless cabinet, your best bet is to make the applied front slightly wider than the drawer box. This effectively hides the slide hardware behind the overlap, allowing you to maintain a fine gap around the drawer front.

Inset drawers with integral fronts

For top-quality furniture, in which the drawers have integral fronts and sides flush with the fronts (as in the half-blind-dovetailed sample shown), and with gaps around the drawer fronts that are less than 1/16 in., there's only one good way to install undermount slides. And it only works with face-frame construction. The thinner drawer front means the slides will be set too far forward, so far that they would be sandwiched between the edge of the face frame and the drawer, where they would be very visible sitting in a large gap. So you'll have to set the slides back a bit in order to tuck them behind the face frame. Do this by adding spacer blocks to the underside of the drawer.

The remaining combination, inset drawers with integral fronts in a frameless carcase, is the least palatable option for undermount slides. Perhaps with that in mind, several of the manufacturers recommend against using undermount slides in this application. □

Set them back. *Glue and tack simple spacer blocks to the back of the drawer front, and then attach the mounting clips as usual.*



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