Shopping for Kitchen Cabinets

by Rick Fournier

For beauty and performance that last, you have to look beneath the surface at materials and joinery

People shopping for kitchen cabinets are usually looking for something better than what they already have. Unfortunately, their wants often exceed their budget. And it only gets worse when they enter a showroom like mine, where they can see five or six full-size displays incorporating most of the styles and accessories available. I handle several different cabinet brands; within each one there are several levels of quality and price. The first thing I try to do is narrow the choices and match the customer's budget to a cabinet that will also fit their needs.

Good, Better, Best

The best tool I have for this is a drawing that shows a typical L-shaped kitchen floor plan and perspective (see "Matching Cabinets to the Budget"). The accompanying chart compares oak raised-panel cabinets for all of the manufacturers I carry, and shows separate costs for the cabinets, the accessories, and the moldings. This system works for people who have no idea what a kitchen costs, as well as for those who come in with a general plan and rough dimensions.

In either case, I can count the number of cabinets (tall cabinets count as two pieces because of their size) and apply the per-unit cost at each level of quality. It gives customers a good idea of the total cost (within 10%) and helps to shape their expectations. Once customers see which grade of cabinet they can afford, they can better focus on door styles and accessories.

The cost chart also provides a timetable for order and delivery. There's no way I can satisfy people who need their cabinets in two weeks. Depending on the cabinet, production time is three to eight weeks, plus a week for delivery.

Box Construction

The quality and price of a cabinet depends on the materials and methods used to put it together. Cabinet boxes come in two designs — framed and frameless (Figure 1). Framed cabinets have a wood facing surrounding the door and drawer openings, and inset, full overlay, or partial overlay doors that let the frame show through, giving them a traditional look. Frameless cabinets (sometimes called Euro cabinets) have no facings and always use full overlay doors and drawers. Frameless cabinets often have laminate door and drawer fronts, which add to their flush, streamlined appearance. But most manufacturers have started to offer wood door and drawer fronts on a frameless cabinet. This leaves a small strip of the cabinet box exposed, which is usually faced with vinyl that matches the cabinet interior (wood-grained or white). Higher-grade cabinets use solid wood banding or wood veneer.

Figure 1. ***In a framed cabinet box*** *(left), the door and drawer openings are bordered with matching wood. A frameless box (right) is almost completely hidden by the door and drawer fronts.*

Plywood vs. MDF. One of the factors that determines cabinet quality and price is the material used to build the box. Cabinet boxes are sometimes made of cabinet-grade plywood (which has a wood veneer), but usually they are constructed of 1/2-inch-thick particleboard with sides and edges veneered in vinyl. The quality of the particleboard varies from one manufacturer to another, with better-quality cabinet lines using MDF (medium density fibercore).

It's difficult to determine the difference visually — a low-grade product can look as good as a high-grade product, but the cost can vary greatly. Plywood resists moisture well, and it's easier to patch a scratch in a wood veneer than in a vinyl veneer. Plywood is also stronger than MDF, which in turn is more durable than low-grade particleboard.

It's not necessary, however, to pay a premium for plywood to get a good cabinet. Cabinets take the most abuse during shipping and installation. Once they're in place, the 36- or 38-pound density MDF used for most cabinets is strong enough. (Some manufacturers, like Millbrook, use even more dense, 42- to 48-pound MDF.) MDF is also more stable than plywood. While it's true that scratches that penetrate through to the MDF base material are harder to repair, the 4-mil vinyl veneer resists scratches well. (This is less true of lower grade cabinets that use 2-mil vinyl.) And the veneer is smoother on MDF than on plywood.

When I'm trying to cut costs to fit a budget, I recommend MDF cabinets, except in a couple of problem areas. To reduce the chances of moisture damage, I go with plywood cabinets for the sink base and both sides of the dishwasher. If scratches are a concern, I order plywood for the finished end panels.

Other considerations. Some high-end custom lines put a solid top on their base cabinets. Even though this gives you more places to fasten the countertop, to me it's not a necessary part of the construction. Most companies use corner blocks, which together with hanging rails, are strong enough to keep the cabinet square.

Curved cabinets are common on frameless cabinets with laminate fronts (Figure 2), although you can get certain radiuses done in wood. To keep the cost down, I try to work with standard sizes on curved units before requesting a quote on a special cabinet.

The least expensive way to finish the back side of a peninsula or island cabinet is with a flush veneered panel, which all manufacturers supply. A step up is wainscotting, which is basically a series of cabinet doors glued together without the frame. Wainscotting requires more labor to install than a plain panel, especially if you have to miter the corners or if the cabinets are set at an odd angle to each other.

Figure 2. *Curved fronts* *are more widely available with laminate doors and drawers, but a limited number of radiused wood fronts are available. Stock sizes are much cheaper than custom curves.*

Figure 3. *With inset doors,* *a gap is visible between the doors and drawers and the cabinet frame. Expansion and contraction may cause the fronts to rub against the frame.*

Doors

Appearance is a priority for most people, so the door style is what they look at first. Wood doors are always more expensive than laminate doors, but most people have a definite preference for one or the other, so price is not necessarily the determining factor. What the average customer doesn't know is that even though a cabinet door appears to be solid wood, many are actually less expensive particleboard with a wood veneer. It's difficult to tell the difference with a flat panel door, but the milling of raised panel doors differs depending on whether it's solid wood or veneer. If the panel has a flat slant toward the frame, it's probably solid wood; if it's a raised cove, it's probably veneer. Particleboard is more stable than solid wood, but it's harder to mask scratches in the veneer.

With laminate doors the main differences in quality are in the finish surface and the edge treatment. High-pressure decorative laminate (HPDL) is much more durable than melamine (see "Cabinet Finishes: A Glossary," page 27). The thinner melamine, however, is adequate for the back side of a door, and is widely used for cabinet boxes. For edge banding, HPDL leaves a black line at the seam, so most doors have PVC or wood edge banding, or plastic T-molding. Impregnated paper is only used on low-end cabinets.

Inset doors. Builders who have no experience with inset doors may get callbacks from fussy customers. Unlike an overlay door, which covers the cabinet frame, an inset door is mounted flush with the frame, so the gap between the door and the frame is exposed (Figure 3). It looks great when the cabinets are new, but even a slight misalignment — from expansion and contraction or a slipping hinge — can cause the edges to rub or make the door look tilted. The best cabinet lines bevel the edge of the doors and drawers so they will shut without rubbing even if they've moved a little. To avoid callbacks, I explain all of this to customers and I tell them that I will make one adjustment after installation. After that if it moves, it moves.

White painted wood. Another popular style that may cause complaints is white painted wood — usually a birch or maple framed cabinet finished with some type of catalyzed enamel paint. There are two problems with this type of finish. First, despite the paint's durability, scratches and nicks are harder to touch up than stain or even regular paint. It's like a chip in the paint on your car. Do you sand the whole panel or just the spot? The other problem is that when the wood expands and contracts, even a slight separation at the joints is very visible (Figure 4). Sometimes the floating center panel also shows a line of natural wood color where the panel has moved away from the white frame.

One solution is to use an MDF door with a foil wrap. The finish is harder than paint so it's less likely to

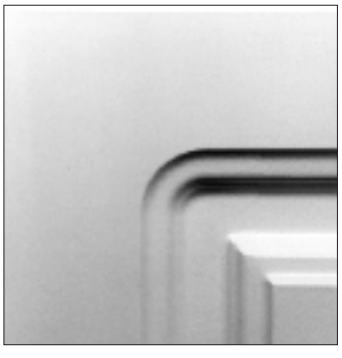
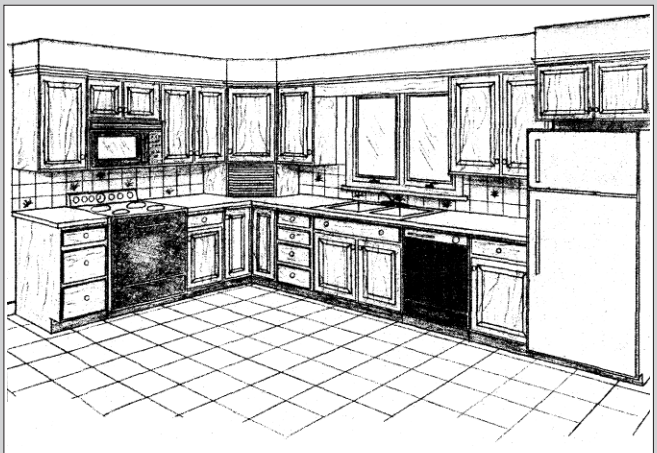


Figure 4. *Over time, white painted hardwood cabinets* *tend to show small cracks at the joints (top). An alternative is to use a foil-wrapped MDF front (above).*

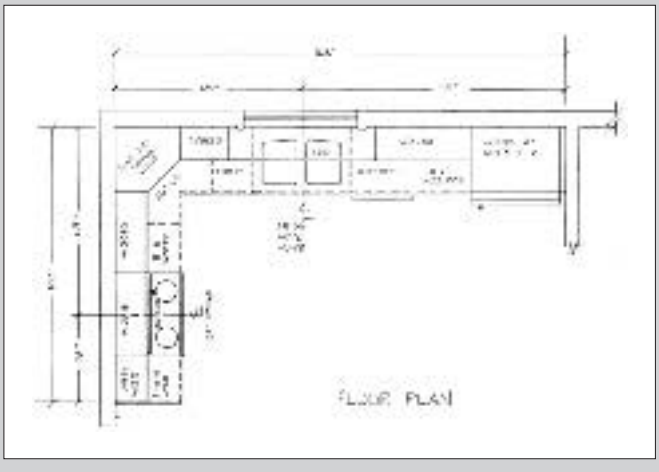
Matching Cabinets To the Budget

Using this perspective drawing and floor plan for a standard L-shaped kitchen helps clients compare costs among various brands and models of cabinets. The chart gives prices for the kitchen shown both with and without accessories.



Molding:
V60 – Valance 60" Straight
3 Crown Molding
2 Matching Toe Kick
1 Touch-Up Kit
27 Pieces of Hardware

Accessories:
1 Spice Rack
2 Wall Lazy Susans
1 Appliance Garage
1 Cutlery Divider
2 Tray Dividers
1 Tilt Down
1 Towel Bar
2 Roll Outs



Cabinet Price Comparison

	Cabinets Only		Cabinets with Accessories		
Manufacturer	Total	Unit Cost	Accessories/ Moldings	Total	Unit Cost
Jim Bishop II	$2785	$199	$450/190	$3425	$245
Jim Bishop	3115	223	455/210	3780	270
Imperial	3570	255	605/275	4450	318
Plato	5015	358	945/205	6165	440
Millbrook	3195	228	750/530	4475	320
Millbrook 500	3705	265	800/565	5070	362
Millbrook 1000	4640	331	900/565	6105	436
Millbrook 2000	6015	430	955/660	7630	545

Note: *Most manufacturers require three to eight weeks to produce cabinets, plus one week for delivery.*

scratch and chip. Because it's a one-piece door, it's also more durable and stable, and it usually costs 20% to 40% less than real wood.

Drawers

Drawer glides have improved a lot in the last ten years. Every manufacturer I know of uses glides rated for at least 75 pounds that wrap around the bottom edge of the drawer. This simplifies drawer construction because the glides support and strengthen the drawer.

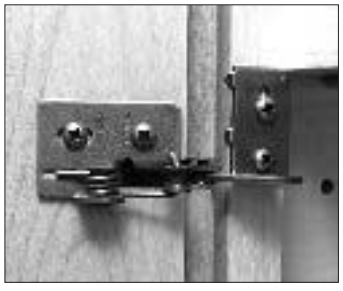


Figure 5. ***Knife hinges*** *are partially concealed and are adjustable in two dimensions.*

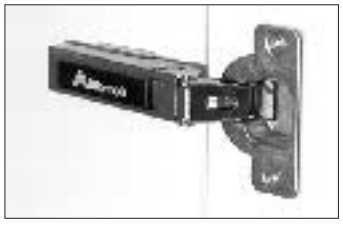


Figure 6. ***Fully concealed cup hinges*** *are adjustable in three dimensions, making it easier to keep full overlay doors aligned. Many cup hinges allow you to remove the door by unclipping the hinge body from the base plate (above).*

Some high-end cabinets still build drawers with dovetailed corners, but it's really not necessary for strength. Most drawers are solid wood, stapled and glued together, with a separate drawer front attached to the box with screws from the back. To reduce cost, some drawer boxes use softer poplar instead of maple or birch, and some have an integral drawer front, which is a less durable construction. Lower-grade cabinets use MDF or particleboard wrapped with wood-grained vinyl, but it's not something you'd notice unless you're told or take the drawer out and look at the back edges.

On good-quality cabinets, drawer bottoms are hot-melt-glued into dadoes in the drawer sides. Lower-grade cabinets use particleboard with an impregnated paper print, and on very cheap cabinets, the underside is left unfinished. (Plastic drawers with single center-mounted glides are virtually nonexistent today.) Higher-grade cabinet drawers use melamine or plywood, which wears much better. You can upgrade cabinet drawers at a cost of $10 to $20 per drawer.

A lot of people don't realize that you can also special-order upgraded drawer glides. For example, if you want full extension glides for a heavy-duty pots-and-pans drawer, you can change the cabinet spec for that one drawer. It's an inexpensive way to improve a cabinet without busting the budget.

Hardware

Most customers don't notice cabinet hinges, but for the installer, hinge quality and adjustability is an important consideration.

Barrel and knife hinges. Most lower-grade cabinets use a barrel hinge or knife hinge in one or two finishes (Figure 5). These hinges are adjustable in two directions (up and down, and in and out), and are self-closing, eliminating the need for magnetic or mechanical catches.

Cup hinges. Fully concealed hinges, or cup hinges, give you more control because they're adjustable in three directions, making them ideal for frameless cabinets, where alignment of full overlay doors is critical. Also, with some cup hinges you can unclip the hinge body from the base plate to remove the doors (Figure 6). This makes the cabinets lighter during installation and keeps the doors out of the way when plumbers and electricians are working inside the cabinet.

Most cup hinges allow the door to swing open 95 or 105 degrees. If your customer prefers doors that open more than this, you can either move to a higher-grade cabinet or upgrade the hinges (hinge swing angles vary between 95 and 175 degrees). For one cabinet, swapping hinges will cost about $25. But for a whole kitchen, it could cost as much as $600, which is probably as expensive as stepping up to the next higher cabinet grade.

Pulls. Cabinet knobs and pulls are always shipped loose and have to be installed on site. With most lower-grade cabinets you have to order and pay for the hardware separately, and your choices are limited to about ten styles, often fewer. Many low-end cabinets are not predrilled for pulls, and those that are don't give you a choice of location.

Higher-grade cabinets give you 20 to 25 different hardware styles to choose from, most of which are included in the price of the cabinet. The cabinets are always predrilled, and you can specify the location (if you don't, you get the standard location). Some of the hardware is solid brass, and if your customers choose that particular style, they're getting a good deal. However, if there's absolutely nothing they like from the manufacturer's selection, you cannot get a credit for omitting the hardware. Buying hardware separately could cost $300 to $500.

Figure 7. ***Many corner cabinets*** *now contain a Super Susan, which rides on ball bearings on the cabinet bottom or on an intermediate shelf, eliminating the need for a center post.*

Figure 8. ***Another option for corner cabinet storage*** *combines roll-out trays with pie-cut shelves on the door.*

Accessories

At all levels of quality, a standard base cabinet is equipped with a drawer and one or two adjustable shelves. But every manufacturer also offers accessories that make the storage space easier to use. The cost varies quite a bit from brand to brand, but on average you can easily add $200 to $500 per kitchen in accessories.

Corners. Higher-grade cabinets offer a *Super Susan* for both diagonal and pie-cut corners (Figure 7). The door opens separately from the lazy susan (pie-cut corners have a bifold door), which rolls on the floor of the cabinet or on a fixed shelf, eliminating the need for a center post. This allows the trays to ride on ball bearings, so they will hold more weight and take more abuse. And a Super Susan is bigger than an ordinary lazy susan — 32 inches in diameter instead of 28 inches.

There are lots of other options for corners, too, like swing-out half-moon shelves, trays that slide out of the corner, and racks for the door (Figure 8). Fixed wraparound shelving is a recent — and inexpensive — improvement on the old blind corner. The L-shaped adjustable shelves let you pack a lot of stuff in the corner, but make it easy to get to it.

Fancy Fasteners

Most contractors still hang cabinets with drywall screws because it's convenient — there's always a handful of drywall screws lying around the site. But when I open the door on a white or wood-grained cabinet interior, the last thing I want to see is the black head of a drywall screw. With a little foresight, you can order special fasteners that do a much cleaner job of fastening cabinets to the wall and to each other.

One type isn't really a fastener at all, just a white plastic collar that you drive a screw through, and a removable cap that snaps over the collar (see photo). The collar helps prevent over-driving the screw, and the cap provides a finished appearance that blends well with both white and wood-grained veneers.

Another type of two-piece fastener consists of a metal or plastic sleeve and bolt. After clamping two cabinet boxes together and predrilling a slightly oversized hole through both sidewalls, the sleeve friction-fits into one side to receive the through-bolt from the other side. This works for framed cabinets, too, but requires longer sleeves and bolts. You can use this through-bolt system to gang base or wall cabinets together before installing them or to pull them snug once they're in place.

Both types of fasteners must be ordered separately. The cost for an average kitchen — about $25 — is easily justified by the improved appearance. But if you'd rather use materials you can get at the local hardware store, try using #6 or #8 Phillips head screws (chrome for white cabinets, brass for wood grain) with matching finish washers. You'll need several different lengths, one to fasten cabinets to each other and one to attach them to the wall. The washers not only give a clean appearance, but also keep you from over-driving the screws.

Better-looking then drywall screws: *Fasten cabinets using a plastic collar and cap (left), a sleeve and through-bolt (center), or a plated screw with finish washer (right).*

— R.F.

Cabinet Finishes: A Glossary

Even though the finish surfaces of factory-built cabinets often look the same, they vary in durability and cost. Here's a brief description of the materials used by most kitchen manufacturers to finish the interiors, exteriors, doors, and drawers of their cabinets.

High-pressure decorative laminate (HPDL) is a multi-layered material familiar to most builders by trade names like Formica, Wilsonart, and Nevamar (it's often called plastic laminate). A single paper sheet printed with a pattern or solid color is sandwiched between a base material composed of several layers of resin-saturated kraft paper, and a top layer of melamine. The entire assembly is squeezed together under high pressure. Kitchen cabinets use .03-inch-thick vertical grade HPDL; the thicker (.05 inch) horizontal grade is used primarily for countertops.

Melamine is a generic name for a clear polymer. Unlike HPDL, melamine is not produced in separate sheets. Instead, manufacturers buy ready-made boards on which melamine has been applied as a wear surface over printed paper glued to particleboard. The paper can be a solid color or a wood-grain print. Melamine boards are used for cabinet box panels, although some low-grade cabinets may also have melamine door and drawer fronts.

Vinyl is a flexible sheet of plastic that, like melamine, is supplied to manufacturers as ready-made boards. Vinyl is thicker and more resilient than melamine, but less wear-resistant. It is used chiefly for cabinet and drawer box panels.

Impregnated-paper is a phenol- or melamine-based overlay. It is used as a veneer on plywood panels (melamine cannot be applied to plywood) for cabinet interiors.

Rigid thermal foil (sometimes called RTF) is a European process that has become popular recently in this country. The process uses heat and pressure to wrap a solid plastic sheet around a medium density fibercore (MDF) door that has been shaped, for example, as a raised panel. Foil has good durability, but the quality of the finish depends on the fabrication process and the quality of the MDF used. Poor quality MDF sometimes allows surface defects to telegraph through. Rigid thermal foil should not be confused with hot-stamped foil, which is not nearly as durable and is used as a finish on low-end furniture.

Polyester paint produces a lustrous, clear or colored finish to cabinet door and drawer fronts. It is a very expensive finish, however, because like lacquer, it requires many coats, and each coat must be wet-sanded by hand. But polyester paint doesn't craze or crack as much as lacquer.

Catalyzed enamel paint is one of a new generation of two-part paints used as a lower-cost substitute for polyester paint. Some manufacturers use vinyl enamel (Plato), while others use lacquer enamel (Millbrook) or some other formula. But in each case, the result is a lacquer-like finish with good resistance to yellowing, chipping, and cracking.

— *R.F.*

Figure 9. ***Adjustable pull-out trays*** *can be mounted on full-extension glides and come in widths up to 36 inches.*

Pull-out tray. Most pull-out trays are adjustable so you can change the height to fit whatever you're storing (Figure 9). They are mounted on full-extension glides and come in widths up to 36 inches. Adding two pull-out trays to a typical 24-inch base cabinet will cost $100 to $150.

Many suppliers will install cabinet accessories at no extra charge, but unless you specifically tell them to do it, they'll ship them loose. It's silly not to take advantage of free mounting, especially since some accessories, like a tilt-down sink front, are tricky to install. A few items, like the inner components of big pantry cabinets, are always shipped loose because of their weight. ■

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