Cabinet Buyer’s Guide

WHAT YOU NEED TO KNOW BEFORE YOU BUY KITCHEN CABINETS
Homeowners often find the experience of renovating a kitchen frustrating and confusing. Remodeling is a major investment and decisions should be well-informed. Yet, information available online and in retail centers is often contradictory, filled with industry jargon, and hyped with fluff about special features.

This guide will help you evaluate cabinetry, typically the most expensive part of a kitchen remodel. In clear and simple language and diagrams, it describes different cabinet manufacturing methods and the impact of each on the function and durability of your kitchen.

**WHAT YOU NEED TO KNOW ABOUT QUALITY CABINETRY**

*Click on a page number to view details about that cabinet construction feature.*

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CONSTRUCTION MATERIALS

Cabinet boxes are typically built of plywood or particleboard. The strongest cabinets have full plywood sides and backs. They handle the weight of heavy countertops, stay square during installation, and resist damage from occasional moisture.

Particleboard (see various names below) is a less expensive alternative. It is vulnerable to damage from moisture or crushing and vulnerable to difficult-to-repair blow-outs at screws and joints.

All-plywood construction (APC)

Plywood has more holding power with screws, fasteners and glue than particleboard does. Plywood is made with layers of wood running both lengthwise and crosswise in a way that makes plywood stronger. It has a much higher tolerance for moisture than particleboard does, and this is a key feature to consider for areas with sinks, faucets and running water. Plywood is also much more resilient to damage such as blow-outs, dings and dents.

Particleboard

There are many names for particleboard; medium-density fiberboard (MDF), engineered wood, hardboard, substrate and furniture board are just a few. Particleboard is made by pressing wood particles together with glue and high temperature. Particleboard doesn’t typically expand and contract as the climate becomes warmer or colder. On the downside, the particles pressed together are heavier and don’t have the same per-square-foot strength of plywood. Plus particleboard is more susceptible to damage caused by moisture or by being crushed.
I-BEAM BASE CABINET CONSTRUCTION

I-beams secured into the upper sides of base cabinets provide long-term strength and keep cabinets square during shipping and installation. (Wall cabinets, enclosed on top and bottom, do not need that support.)

Less expensive alternatives to integrated I-beam construction include triangular corner gussets and braces. Since gussets and braces are stapled to the cabinet sides, they add no strength to the cabinet.

I-Beams

I-beams are 1/2-inch stretchers used in base cabinet construction. I-beams are locked and secured in a dado joint, nails and glue that capture all four sides of the cabinet. Because the I-beams meet all four sides of the cabinet box, the box is stronger and stays square, and that makes installation of the cabinet and countertop easier.

Corner gussets or braces

Corner gussets and braces are usually made from plastic, but sometimes from wood or metal. Gussets are usually stapled to each corner to keep the cabinet square during shipping but sometimes glue, screws or nails are used. Integrated larger gussets can be more effective because they support larger sections of the cabinet sides.
CABINET BACK PANELS

Cabinet back construction affects strength and ease of installation. The strongest cabinet construction uses a heavy (3/8-inch or more), full-plywood, full-back panel. Less expensive methods use thin panels, metal hang rails and brackets, rails, and picture-frame construction.

A solid-plywood, full-back panel allows the cabinet to be directly attached to the studs of the wall at any point on the cabinet back. If installation requires the cabinet be cut around ductwork, plumbing or electrical conduit, the modification will be simpler on the full-plywood back.

Solid, full-height plywood

The strongest cabinet construction secures a solid, full-height plywood back panel to the cabinet with a rabbet joint (notched edge), hot glue and nails. The full back simplifies installation. Since the strength of the plywood extends from top to bottom and side to side, there is no need for hanging rails. If a cut needs to be made to accommodate wiring or plumbing, the back generally will retain its integrity without additional reinforcement.

Other

Metal, rails, hang rails and picture-frame back panels use 1/2-inch or 3/4-inch hangers at the top and bottom of the cabinet and either omit the back panel entirely (so you can see the wall) or incorporate a 1/8-inch to 1/4-inch particleboard panel that is the height of the cabinet. If a rail needs to be cut to accommodate wiring or plumbing, additional reinforcement will be necessary.
CABINET INTERIOR

Kitchen cabinet interior and shelf surfaces should be non-porous, wipe-clean, and tough enough to last the life of the cabinets without staining, bubbling or showing wear. Except for glass-front cabinets, where the interior is matched to the exterior for style, a light-colored interior is preferred, as it makes it easier to see the contents of the cabinet.

Interior surface materials include melamine, a smooth, tough polymer laminated to plywood or particleboard, and wood veneers.

Melamine

Melamine is durable, fire resistant, impervious to water, stain resistant, and can be safely cleaned with strong household solutions. As a shelf or cabinet lining, it wipes clean easily. In addition to cabinetry, melamine is used in whiteboards, floor tiles, countertops and dishware, such as plates, bowls and mugs. When used as an interior cabinet lining, it is typically finished in a light maple color, providing a bright, neutral appearance and helping illuminate the cabinet interior.

Stained wood veneer

Wood is naturally porous and rough, and the finish will be subject to wear. A stained wood veneer interior or shelf surface will absorb moisture and stains and trap soil in the grain of the wood. The finish will not tolerate strong cleaning solutions. Wood veneer will become damaged by residual moisture from dishwashers, excessive humidity, greasy cooking fumes, and dirt and food particles that collect in the porous surface of the wood. When glass fronts reveal the cabinet interior, wood veneer may be stained to match the cabinet exterior.
**DRAWER BOX**

Solid hardwood drawer boxes with dovetail joints and heavy plywood bottoms set the standard for quality in American cabinetry because of their long-lasting strength and durability and the beauty of the dovetail joint. Other drawer boxes may be constructed of particleboard, plastic, metal or plywood sides. In less expensive boxes, sides meet at butt or rabbet (notched) joints and are secured with staples.

Drawer-box material and joint construction is an important consideration, since the joints and drawer bottoms are among the first things to fall apart in low-end kitchen cabinetry.

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**Hardwood dovetail drawer box**

A high-quality hardwood drawer box will have sides of 5/8-inch or thicker solid maple or birch. The sides, milled to include interlocking teeth, meet at dovetail joints, where the strength of the joint comes from the wood itself. A strong plywood drawer bottom, fully captured on four sides in dado (grooved) joints, is glued and nailed in place.

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**Other materials and constructions**

A wide range of materials and construction methods are used for cabinet drawers. Particleboard, plywood, metal and plastic are common materials. Construction methods vary greatly. Lesser quality drawer boxes use butt or rabbet (notched) joints secured with staples to hold the drawer box sides together and may have particleboard drawer bottoms.
DRAWRER GLIDES

High-quality drawer glides (also referred to as slides) are undermount steel with ball-bearing actions, provide 100 percent access to the interior of the drawer, maximize storage space, and close softly. Lesser quality glides include those that only allow partial access, side-mount glides that narrow the drawer box and reduce storage space, and glides with parts made of nylon, plastic or wood.

Quality of drawer glides is an important cabinet feature, since they must provide many years of hard use.

Undermount, steel, soft-close glides

Undermount, steel, soft-close drawer glides (also known as slides) should extend to provide full access to the entire drawer. Ball bearings and steel guides provide smooth operation and long wear. Mounted beneath the drawer box, the glides should be rated to support a heavy load, at least 70 pounds. Adjustable glides with a soft-close (anti-slam) dampening system will be almost silent when opening and closing the drawer.

Other drawer glide systems

There are hundreds of drawer-glide systems and mechanisms used by cabinet manufacturers. A common construction uses epoxy-coated metal with nylon rollers, materials subject to wear. Center-mount and side-mount glides rarely provide full access; instead, about 25 percent of the drawer remains inside the cabinet, making it difficult to reach the back of the drawer. Side-mounted glides reduce the width of the drawer, thus reducing storage space. Side-mount glides are never soft close. At the bottom of the quality scale is a single center-mounted wooden or metal glide sliding through a plastic brace on the cabinet.
SHELVES

Common materials for cabinet shelves are plywood and particleboard. Since cabinet shelves bear weight over long periods of time, strength is a primary consideration. Plywood is stronger and lighter than particleboard, so less likely to bow under the weight of heavy ceramic dishes and metal pots. Particleboard is less expensive, but more likely to sag, may puff and flake when wet, and is susceptible to crush damage.

Base cabinets are built with either full-depth or half-depth shelving. Half-depth shelving, the less expensive option, provides less storage space.

Plywood

Plywood is made with layers of wood running both lengthwise and crosswise. This crossing pattern makes plywood stronger to support the weight of china, dishes and glassware stored on the shelf. Plywood has a much higher tolerance for moisture than particleboard does and is less vulnerable to crush damage.

Particleboard & half-depth shelves

Particleboard is made by pressing wood particles together using glue and high temperatures. It is less expensive than plywood, so employed by manufacturers to cut costs. Heavier than plywood, a particleboard shelf adds weight to the cabinet without adding strength. Over time, particleboard shelves may buckle and bow under their loads. Since particleboard is highly susceptible to moisture, dishwasher drips on glasses, the occasional leaky faucet, or excessive humidity may result in bubbling or deterioration.

Another feature of economy cabinetry is the half-depth base shelf, which uses less material but offers less storage space than the full-depth shelf.
FRAME VS FRAMELESS BOX CONSTRUCTION

A framed cabinet has a solid hardwood frame attached to the front of the cabinet box. Door hinges and drawer glides are attached to the frame. In a frameless cabinet, doors are attached directly to the cabinet box sides.

The two methods of construction are significantly different in appearance and, depending on construction methods, can vary widely in strength and stability. Installation costs are typically higher for frameless cabinets.

Framed cabinets
A framed cabinet has a hardwood frame that attaches to the front of the cabinet box. Cabinet door hinges and drawer glides are secured to the hardwood frame. In addition to providing a solid, hardwood base for hinges and drawer glides, the face frame provides stability, keeping the cabinet box square during shipping and installation. There are three styles of framed cabinetry, referred to by the amount of frame revealed: partial overlay, full overlay and inset.

Frameless (Euro) cabinets
Frameless, also known as European-style, cabinets have no frame on the front of the cabinet box. Frameless cabinets are full overlay, revealing approximately 1/8-inch around drawer fronts and cabinet doors. Side panels are thicker than in a framed cabinet, allowing drawer glides and door hinges to be attached directly to the cabinet side walls. Most frameless cabinets are constructed out of particleboard, a material less strong than plywood; as a result door hinges may come loose over time. Installation of frameless cabinetry must be very precise and the install area must be perfectly level and plumb, therefore some installers will charge more than for installation of framed cabinets.
DOOR STYLES: FULL OVERLAY, INSET, PARTIAL OVERLAY

Mid- and high-end cabinets will have full-overlay or inset doors and drawers. The full-overlay style reveals almost no cabinet frame, while the inset style reveals the entire frame. Either style provides a visually smooth, even surface. Economy-grade cabinets may come in a third style, partial-overlay, which requires less wood for doors and drawer fronts.

Full overlay

Full overlay door styles provide a seamless look by minimizing the gap between the cabinet doors. The doors almost completely cover the face frame, revealing only 1/8 to 1/2-inch of the frame around doors and drawer fronts.

Partial (standard) overlay

Partial-overlay (standard) doors and drawer fronts only partially cover the face frames of the cabinets, exposing one- to two-inch sections of face frame between the doors and drawer fronts. Once very common, this style is now seen primarily in economy construction.

Inset

In an inset style, doors and drawer fronts sit inside the face frame of the cabinet, on the same plane, with minimal gaps—roughly 1/8 inch. The effect is smooth, crisp and clean. Hinges are partially or completely exposed.
ASSEMBLED

Fully assembled cabinets are completely built at the factory, boxed, and shipped ready to install. Ready-to-assemble (RTA) cabinets are designed to be assembled by a homeowner or contractor. The differences to the consumer include price, convenience, and construction strength.

RTA cabinets are generally less expensive, but, each box, drawer, pull-out tray and insert has to be assembled. Assembly time is significant. Because of the limitations of home assembly methods, RTA cabinets generally are not as strong or durable as those assembled in a factory.

<table>
<thead>
<tr>
<th>Is RTA worth your time?</th>
<th>CliqStudios</th>
<th>Ready-to-Assemble</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of packages/cartons</td>
<td>1 - fully assembled and ready to install</td>
<td>Multiple parts, packages, or cartons</td>
</tr>
<tr>
<td>Estimated assembly time</td>
<td>0 minutes</td>
<td>20 - 30 minutes per cabinet</td>
</tr>
</tbody>
</table>

Fully assembled

Cabinets designed to be fully assembled in the factory are stronger and more durable. Factory construction methods join wood parts using dovetail joints, hot glue, power fasteners and other industrial techniques. In this wood-to-wood construction, the pieces bond on a microscopic level that increases cabinet strength. A cabinet is built, packed and shipped as a unit, doors and drawers intact, ready to be installed.

RTA

RTA cabinets ship in parts, such as the cabinet, face frame, drawers, drawer glides, inserts, doors and hardware, and are designed to be assembled at the construction site. Whether assembly and installation are handled by the DIY homeowner, or by a hired contractor, some skill is required to ensure safe, functional cabinets.
TOEKICK AREA

Toekick area refers to space beneath the cabinet, including the inset area at the front. Cabinets constructed with full-plywood sides and back panels reaching the floor provide the strongest support for heavy countertops and enclose the space beneath the cabinet. After installation, a finished toekick panel is applied for a neat, trim look.

Cabinets with an open front and ready-to-assemble (RTA) cabinets supported by plastic legs are not as strong or stable as full-box cabinets. Since the front of the toekick area is open, a toekick panel is necessary to prevent dirt and small articles from being trapped under the cabinet.

Integrated plywood toekick

The full-box cabinet with a solid, full-length plywood back panel and plywood cabinet sides forms a natural toekick panel. If the cabinet is constructed with fully captured dado joints, hot glue and other top construction methods, this is the strongest base for heavy countertops and ease of installation. A decorative panel applied post-construction provides a finished look.

Plastic legs with open toekick

Many RTA cabinets are supported by four plastic adjustable feet (stainless steel may be available for an upcharge). The open space under the cabinet requires a toekick cover, which snaps on the legs to enclose the area. Plywood or particleboard cabinets supported on two sides with open fronts require a wooden toekick panel be constructed and installed.
CABINET BUYER’S GUIDE

CABINET SELECTION

The selection of styles, finishes, and sizes offered by a cabinet manufacturer affects pricing, design, and style. A fully custom cabinet manufacturer can fulfill any design, but has high production costs that will be passed on to the consumer. A stock manufacturer offering only a few styles and sizes will be able to offer cabinets at lower prices, but will not have sizes needed for most remodels and custom designs.

A middle ground: semi-custom cabinets with modifications

Semi-custom cabinets with modifications provide a wide range of sizes, styles, and specialty cabinets at a reasonable price. The manufacturer builds each kitchen as a custom project, saving on production costs by starting with a basic cabinet line. Modifications allow a high degree of customization, but that cost is restricted to specific cabinet units.

Modifications include one-inch incremental adjustments in cabinet box sizes, finished interiors, beadboard ends or interiors, glass-ready open-front or mullion doors, storage units, angled end cabinets, and non-conventional uses of standard cabinet boxes. With those options, an experienced kitchen designer can provide a high degree of personalization for the homeowner.
WARRANTY

A cabinet manufacturer may offer a lifetime limited warranty, a ten-year warranty, or no warranty at all. By far kitchen cabinets are one of the most expensive items you will ever buy for your home and should serve you for at least 20 years. Poor quality cabinetry may begin to break down after five to ten years. A warranty assures the consumer the manufacturer will stand behind the product, and implies commensurate quality.

Lifetime limited warranty
A lifetime limited warranty is an assurance that the manufacturer will guarantee the operation of cabinetry for as long as the original purchaser owns the product. This warranty is typically limited to repair or replacement and does not include labor for removal or replacement, or damage due to poor treatment, improper installation and exposure to extreme adverse climate conditions.

Short-term or no warranty
A large percentage of manufacturers only offer one-, five-, or ten-year limited warranties, while others offer no warranty at all. Be cautious if considering cabinets with no or very limited warranties. If the cabinets fail, there is no recourse for the consumer.
WHY IT ALL MATTERS: CHECKLIST

You can have quality at a reasonable price. This guide is designed to help you compare quality across manufacturers. That is difficult when each cabinet manufacturer uses different language and promotes unique features. Typically, a cabinet manufacturer starts with a basic model as standard construction, then adds charges for upgrades such as plywood boxes, hardwood drawers with dovetail joints, and soft-close, undermount drawer glides. What you need to determine is, which features define a better cabinet, and which of those are worth the extra cost?

What you need to know

Determine what construction and quality features define a better cabinet for you. Below are the features CliqStudios offers as standard, with no additional charge. If you buy from us, your kitchen will be built to order at our 500,000 square foot plant in central Indiana.

<table>
<thead>
<tr>
<th>Quality Standard</th>
<th>CliqStudios</th>
<th>Comparison Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembled</td>
<td>✓ Yes</td>
<td></td>
</tr>
<tr>
<td>Box type</td>
<td>✓ Framed</td>
<td></td>
</tr>
<tr>
<td>Construction material</td>
<td>✓ 1/2” All Plywood Box</td>
<td></td>
</tr>
<tr>
<td>I-beam construction</td>
<td>✓ I-Beam Construction</td>
<td></td>
</tr>
<tr>
<td>Cabinet back panels</td>
<td>✓ Solid, Full-Height 3/8” Plywood Panel</td>
<td></td>
</tr>
<tr>
<td>Toekick area</td>
<td>✓ Fully Enclosed, 1/2” Plywood</td>
<td></td>
</tr>
<tr>
<td>Cabinet interior</td>
<td>✓ 30-Gram Melamine</td>
<td></td>
</tr>
<tr>
<td>Drawer box</td>
<td>✓ 5/8” Hardwood With Dovetail Joints &amp; 1/4” Plywood Bottom</td>
<td></td>
</tr>
<tr>
<td>Drawer glides</td>
<td>✓ Full Extension, Steel, Ball Bearing, Undermount, Soft Close</td>
<td></td>
</tr>
<tr>
<td>Shelves</td>
<td>✓ Full-Depth 3/4” Plywood</td>
<td></td>
</tr>
<tr>
<td>Cabinet selection</td>
<td>✓ Complete</td>
<td></td>
</tr>
<tr>
<td>Modifications</td>
<td>✓ Yes</td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>✓ Lifetime Limited Warranty</td>
<td></td>
</tr>
</tbody>
</table>

Upgrades and up-charges

Many manufacturers offer a base model at an attractive price. As the customer adds upgrades such as plywood boxes, hardwood drawers, and soft-close drawer glides, the price escalates, taking the product into a different category altogether.