

## Buyers' Learning Tools



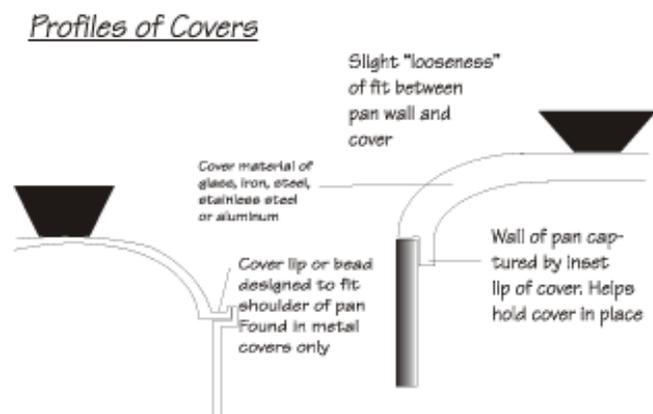
### Unit Six:

## CMA's Buyers Guide to Covers and Lids

Covers and lids are valuable adjuncts to many types of top-of-stove cookware. Covers and lids enable steaming, reduce cooking time, conserve nutrients in food by re-distilling steam to liquids and help control cooking time.

**Materials:** Covers and lids fall into two broad categories: glass and metal. There are certain advantages and disadvantages to each material. Some covers even combine metal, glass and plastic. There are also many different types and kinds of knobs and handles used on covers as well: wood, thermoplastics (high temperature resistant plastics), metal, and even silicone-impregnated metals. Glass covers have the advantage of enabling the user to see the food's cooking process without having to lift the cover from the pan, but are often heavier than an equivalent metal cover. Metal covers are unlikely to break, but they require the user to remove them to check foods progress. Metal covers can be made of aluminum, stainless steel, copper, carbon steel or cast iron—all of the materials that cookware is made from.

**Design aspects:** Covers and lids should fit loosely. Overly tight fitting lids can turn an ordinary cooking pan or pot into an unintentional pressure cooker. When a cover is placed on a pan it should have a certain amount of "play" or looseness that will enable steam or rolling boils to escape the pan. There are specially designed knobs that can be turned to release steam, but covers should still not be too tightly fitted to their corresponding pans. Typically covers are designed with a "boss" or "lip" that is designed to fit loosely into the interior profile of the pan it is to be used or a raised shoulder lip or bead from the pan body itself captures the cover. See the cover profile illustration.



Metal covers and lids should be free of burrs or sharp edges.

Cracking and breaking potential are considerations for glass covers. Ideally glass covers should be made of borosilicate glass, specially formulated to withstand high temperatures and sudden changes in temperatures. The edges of the covers should be thick enough to withstand

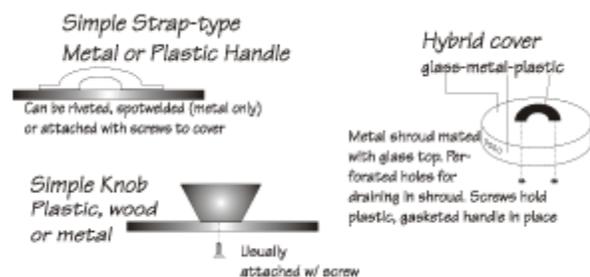
chipping. If the covers are made of thin glass, then many producers wisely include a metal band—called a bezel or shroud—fitted around the perimeter of the cover to guard against edge chipping or cracks. The CMA, in its standards, also recommends that glass covers should comply with ASTM Standard C149 and all existing glass industry standards for thermal shock tests. Additionally, all metal bezels, shrouds or decorative rings should be designed and assembled in such a way that the glass isn't scratched. Direct metal-to-glass contact should be avoided, if possible, by the use of gasket material to protect the glass—particularly where the part is attached under load to the glass (such as a knob).

Most manufacturers design their covers to fit more than one pan. For instance, a 10 inch diameter fry pan may have the same cover as does a 5 quart Dutch oven. While there are universal lids designed to fit a variety of sizes of pans (usually 8 to 12 inches), these simply act as covers and many do not typically mesh the cover with the inside of the pan's sides, so stability of the lid is sacrificed. They are usually made of aluminum or stainless steel.

Look for knobs and handles large enough to be easily handled by a potholder or mitt. There are a number of issues concerning the proper attachment of knobs or handles to covers and lids. These are covered below.

Some producers make covers with deep edges that are perforated to allow for pouring off cooking water from the food inside the pan. These often are made for pans that have a pouring spout or a sidewall relieve area that conducts the water away from the food more easily. See illustration. Often these lids have knobs that are slightly oversized, allowing more clearance between the cover and the top of the lid, enabling the user to more easily hold the cover in place. Some of these covers are made of a mixture of glass and metals. For especially deep pots, such as stock pots, such strainer covers made have detents built into the cover and the pan itself to “lock” the cover in place. This is particularly useful with larger capacity pans. Water itself weighs over two pounds per quart or liter, and larger size pots are usually handled with two hands, not one!

**Knobs and handles for lids and covers:** There are two basic ways that a knob or handle can be attached to a cover or lid (unless of course the handle is molded into the lid; as in some cast iron and glass covers). For metal covers, the knob or handle can be spotwelded into place using high direct current (typically done with what is known as a strap handle, see illustration) or fixed mechanically with a rivet or a screw. For glass covers, the knobs are typically mechanically fixed with a screw or bolt.



If a knob is attached using a screw, the CMA recommends that the screw threads engage the knob a minimum of three full turns. Additionally, the CMA also recommends telling the consumer how to tighten the screw(s) should the knob or handle become loose.

The CMA also recommends particularly that knobs attached to glass covers have gasket material installed between the knob and the surface of the glass to guard against scratching of the glass or placing the glass under undue tension, which might allow sudden shattering of the part.

Knobs designed to release steam should be designed and installed in such a manner that turning the knob "closed" can be accomplished without undue force being used.

Cookware Manufacturers Association