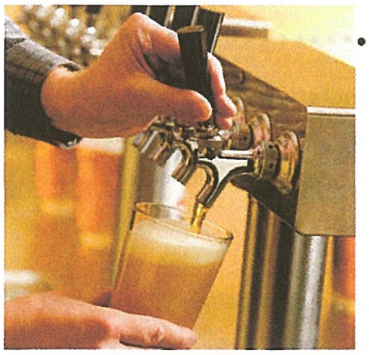

Brewers Association Facts About Growlers

Growler use by consumers and retailers is becoming an increasingly popular way to bring the retail draught beer experience home or to transport rare or small production beers. The important decision to fill and use growlers must be made with an eye towards safety, delivering quality draught beer and compliance with all state and local regulations. The following best practices will help brewers, wholesalers, retailers, and consumers avoid many potential pitfalls and ensure the highest quality growler experience possible.

Growler Containers

Growlers have evolved from simple galvanized pails with lids of yore to today's many container options including glass, stainless steel, ceramic, and a variety of plastics. Dark brown glass or opaque materials such as stainless steel or ceramic will protect beer best from "skunking" caused by light; clear glass will not protect beer from light. No matter what kind of container is used, consumers and filling establishments must be aware that all filled growlers are pressurized containers. The growler container used must be able to withstand the pressures exerted by carbonated beer as well as the growler filling method.

Growler Container Cleanliness

- Retailers are ultimately responsible for ensuring a sanitary "beer clean" container is filled. Consumers also have a responsibility to maintain and care for growlers they own. Growler cleaning concepts mirror those outlined in the glassware cleaning section of the Brewers Association Draught Beer Quality Manual.
- Detergents should not be fat- or oil-based.
- Proper detergent ratios should be used to ensure thorough cleaning as well as to avoid residual chemical aromas.
- The use of a large carboy-type brush can be used to assist in cleaning; however brushes with exposed metal on any brush part should not be used to clean ceramic or glass growlers.

Safety Notes For Retailers & Consumers

Filled growlers can shatter or explode if allowed to warm or freeze, especially if they are overfilled. The internal pressure of a filled growler warmed to room temperature (68F) or in a hot car (90F) may be as high as 2.0 atm (29 psi) or 3.7 atm (52 psig) respectively. (Example assumes a growler filled to 99% of capacity with beer at 38F containing 2.5 volumes CO2, and then sealed). Brewers Association recommends:

- only use growler containers specifically designed for packaged carbonated beer, and ask the container supplier to verify that the pressure rating is equal to or greater than the pressure from carbonation in the beer being filled. Many containers currently in use are not designed for carbonated beverages.
- if filling by counter-pressure, know the pressure rating of the system used and ensure the system includes shielding between the growler being filled and people nearby in case of failure
- do not overfill a growler. Always leave 5% headspace or fill to the manufacturers recommended fill line if one is shown.
- for growlers with threaded screw-on closures, consider using plastic rather than metal closures; plastic closures may vent more readily if over pressurization occurs; if using metal closures you may wish to discuss this issue with your supplier.
- keep filled growlers cold and dark, and never allow a filled growler to warm or to freeze, due to potentially hazardous shattering.
- visually inspect every growler before filling. Do not fill glass or ceramic growlers with cracks or chips, those which have been engraved, or older growlers with pitted or unsmooth glass surfaces, as the pressure strength of these growlers will be significantly reduced.

- Growlers should be allowed to completely air dry and should be stored with the lid unsealed.
- Cleaned growlers should be sanitized. Typical sanitizers include the trichloromelamine, quaternary or iodophor based products used for glassware.
- Pre-rinse empty growlers immediately before filling with cold water; don't fill a frozen growler.

Establishments filling growlers should only fill containers that have been properly cleaned. In some cases retailers require an "exchange program" where a consumer exchanges an empty, approved growler container (to be cleaned by the retailer) for a full growler.

Local and state laws often dictate growler filling and selling practices, up to and including the requirements of pre-filled and/or pre-sealed growlers, labelling and licensing. Retailers must familiarize themselves and comply with all local and state growler filling regulations, which can vary greatly.

Growler Filling

Traditionally, growlers have been filled using an add-on extension tube to emulate the bottom-up filling method of a bottle filler. In most cases these filling tubes are a specific length of flexible draught beer tubing. If a stainless steel growler fill tube is used, care must be taken to avoid damaging the inside of glass or ceramic growlers. Adding a filling tube to a standard draught system may reduce waste and filling time; however this method will increase the oxygen content of the beer, leading to rapid staling.

The use of a counter pressure CO2 filler is another option for filling growers. To reduce the amount of oxygen coming into contact with the beer, counter pressure systems will purge some of the oxygen out of the container with CO2 before filling the container with beer. Counter-pressure systems may further reduce filling waste; however counter-pressure filled growlers will not necessarily have a longer shelf-life.

Growlers should be filled to the manufacturer specified fill level. An overfilled growler can become dangerously over pressurized; whereas an under filled growler is not consumer friendly.

Growler Filling Hygiene

Be prepared for the extra effort required to deliver quality beer free of off flavors in a growler. Basic hygiene begins with draught beer lines cleaned at a minimum of every two-weeks as outlined by the recommendations found in the Brewers Association Draught Beer Quality Manual. Faucets and filling tubes should be rinsed, cleaned, sanitized, and air-dried after each growler fill.

More complex counter-pressure filling systems have a greater need for comprehensive cleaning to avoid off flavors caused by infection. They should be cleaned at least as often as the rest of the draught system unless a more frequent schedule is recommended by the manufacturer. A well-designed and diligently executed maintenance plan will ensure hygienic, trouble-free draught system operation and fresh, flavorful beer.

Consumer Education, Post-Filling Quality

- Draught beer is a lot like bread, best when enjoyed fresh. Growlers should be opened within 24-72 hours of filling, and should be consumed promptly within hours after opening (enjoy responsibly). In cases where growlers have been pre-filled, ensure your growler has been filled that day for optimal freshness. Brewery studies show that beer quality begins to suffer almost immediately after filling. Within 24 hours, carbonation, mouthfeel and the hallmark flavors of your favorite beer brand degrade, and within 72 hours stale flavors become obvious.
- Keep filled growlers cold and dark. Remember: An increase in temperature will increase pressure and could cause a growler to burst; and light can damage beer by skunking.
- Growlers should be thoroughly cleaned, sanitized, rinsed, and allowed to air dry immediately after emptying.
- After cleaning growlers should be stored with the lid unsealed.

Growler Resources including this document, and Brewers Association Growler Neck Tags with concise growler filling and care recommendations are available at:
http://www.draughtquality.org/resources/growler-resources/

For more information on draught beer, visit the Brewers Association's Draught Beer Quality Manual at: **www.draughtquality.org**

Brewers Association
www.BrewersAssociation.org