Growlers, Crowlers®: What you need to know about draught beer to go

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The Original

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Growler Types

Glass:

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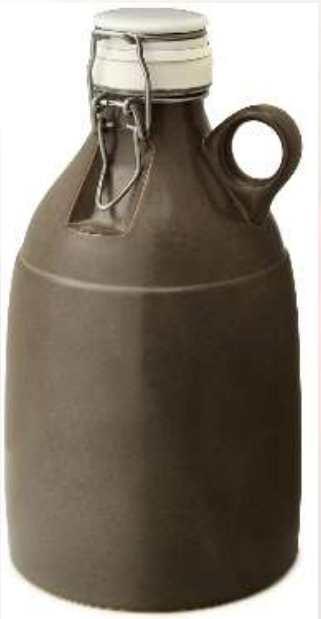
Growler Types

Ceramic:



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Growler Types

Plastic:

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Growler Types

Stainless Steel:

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The Crowler®

- Single-use container
- Seamed at the point of dispense
- Crowler® is trademarked by the Ball Corporation
- Introduced In 2013 through joint venture between Oskar Blues Brewery and the Ball Corporation
- Trademark is licensed to Crowler Nation, an offshoot of Oskar Blues/Canarchy

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Currently

The single use containers has never made more sense

The shortage of cans has made it very difficult to get into the single use business

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Container Types

- The original 32-ounce Crowler®
  - 300 ends*
- Crowler A® 25.4-ounce
  - 300 ends*

*300 ends ≈ 3.00 inches diameter

Note: ends (lids) are typically ordered separately

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Container Options

- 12 oz, 16 oz, 16.9 oz, 19.2 oz also available
  - 202 ends*

*202 ends ≈ 2 3/8 inches diameter

Note: Seam rollers are specific to ends being used

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Growlers

Pros

- Convenient
- Come in different sizes
- No special equipment needed
- Containers widely available

Cons

- Vulnerable to UV exposure
- Carbonation loss
- Oxygen pickup
- Shelf life
- Questionable closure
- Re-use sanitation questions
- Breakage

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Crowlers®

Pros

- Convenient
- Robust seal
- Opaque – UV protection
- Easy to cap on foam
- No re-use, so no cleaning
- Recyclable

Cons

- Shelf life
- Specialized seamer required
- Containers can be hard to acquire
- Labeling/ recycling questions

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Cleanliness of Containers

Standard sanitary practices apply

- Store container and caps/ends in clean, dry area
  - Crowlers® inverted or covered
  - Growlers kept in covered area
  - Ends stored stacked and covered
  - Lids kept covered
  - Rinse container with cool water before filling
- Wear nitrile gloves when filling/seaming

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Rinsing

Water is blocked by the growler neck

This one made with a ¼” coupler and 5” nipple

- Rinsing helps to clean and cool container.
- An extension to a standard rinser helps to get the water past the “bottle neck”
- A cold plate coil can be used to cool the rinse water even more.

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Purging

<u>Same principles apply as with can or bottle filling</u>

- Evacuate Oxygen
- Lower DO/TPO

Purging

Is it effective?

- Preliminary evidence from three minor sensory studies from breweries
- Indication of benefits of CO2 purge
  - Purged showed better results in sensory than no purge
  - Lower DO/TPO with 5 second purge than none
  - TPO still higher than expected from professional packaging line
- Better sensory results than growler after 3 days

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Purging

Recommendations

- Purge for 5 seconds
  - Not longer than 10 seconds due to safety concerns
- Purge from the bottom with tube or long directional nozzle

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Purging

All devices need to have self shut off. CO_2 monitors are suggested

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purging

All CO_2 should be directed to the bottom of the container

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Filling

Filling properly is very important :

- Straight faucet fill is the most disruptive
- Bottom fill with a faucet-fitted tube is better
- A counter-pressure filling machine is the most ideal

Note: Faucet-fitted tubes and other filling equipment must be sanitized, rinsed and dried after each use

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Tube Filling

- ½” OD Vinyl tubing fits snuggly in standard faucets.
- Angles cut on the ends make insertion easier
  - Also lessens the chance of plugging the tube with the bottom of container

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Counter Pressure Filler

Adapters can be made to fit various sized containers to counterpressure fillers

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Safety

Filled growlers can shatter or explode

- Dependent on temperature, fill volume and carbonation level

2.7 Vols/Vol, 5% ABV, at a 95% fill			
	Temperature	PSIG	BARG
Refrigerated	38	13.1	0.90
Cool	50	20.3	1.40
Room Temp	68	32.4	2.23
Hot Day	100	57.5	3.96
Car	120	74.2	5.12

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Safety

- Only use growler containers specifically designed for packaged carbonated beer and
- Ask the container supplier to verify container pressure ratings

Many containers currently in use are not designed for carbonated beverages.

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Safety

<u>For counter-pressure filling</u>

- Know the pressure rating of the system
- Ensure system shielding

Safety

Do not overfill a growler

- Always leave 5% headspace or fill to the manufacturers recommended fill line if one is shown.

2.7 Vols/Vol, 5% ABV			
	Temperature	PSIG at 95%	PSIG at 99%
Refrigerated	38	13.0	13.0
Cool	50	20.3	20.4
Room Temp	68	32.4	33.2
Hot Day	100	57.5	60
Car	120	74.2	78.4

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Safety

- Fill heights can be deceptively low
- Fill heights will vary by container

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Safety

<u>Imperfections in glass can cause weakness in glass</u>

- Visually inspect every growler before filling.
- Do not fill glass or ceramic growlers with:
  - Cracks or chips
  - Engravings
  - Pitted or unsmooth glass surfaces as found in older growlers

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System Maintenance

Having a clean draught system is imperative,

Following guidelines from the Draught Beer Quality Manual:

- Clean every two weeks
  - Caustic chemical solution at 80-110F
    - 2% solution, 3% for old or problem lines
  - Recirculate 15 minutes with an electric cleaning pump
- Disassemble and clean faucet at every cleaning
- Scrub Coupler at every cleaning
- Quarterly acid line cleaner – descaling
- Semi-Annual
  - Disassemble and detail FOBs
  - Disassemble and detail couplers

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Seamer

- Semi- automatic
- Can is spun mechanically
- Seaming is done manually

Note: This style can be made to seam a variety of heights of the same ends

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Seamer

The original All American

- Seaming is done automatically

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Seamer

Production

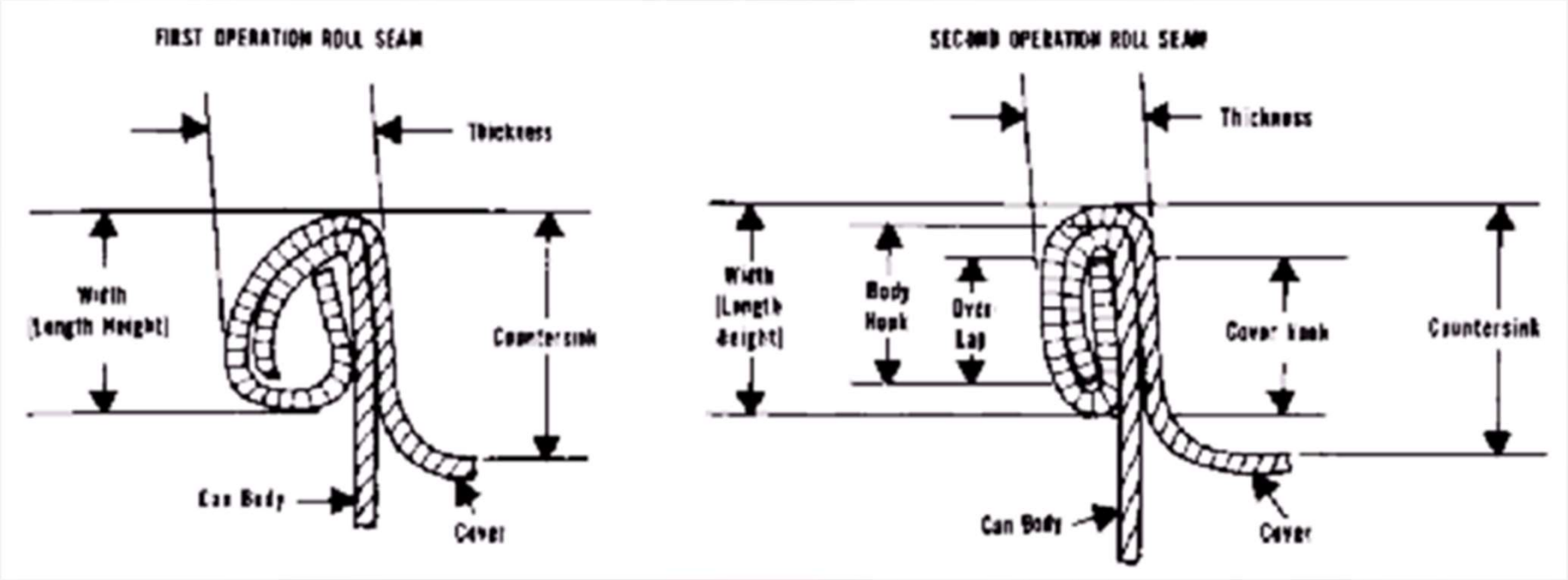
- Designed to run continuously

Seamer

<u>All seaming machines need to be maintained</u>

- Daily lubrication
- Seam checks

Seams



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Seam Checks

- Check first and second seams on a regular schedule.
- Easily done following seamers manufacturers instruction.
- Each container's manufacturers has its own specific tolerances.

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Shelf Life

Recommendations for minimizing TPO

- Purge 5-10 seconds from the bottom
- Fill from the bottom until foam crowns the top Crowler
- Cap on foam, then seam
- No delay between steps

Bottom Line

- Not the same as packages filled from a professional packaging line
- Impossible to recreate the same oxygen evacuation
  - Elevated TPO is inevitable
  - Consumer education is critical
- Date coding on the label is recommended

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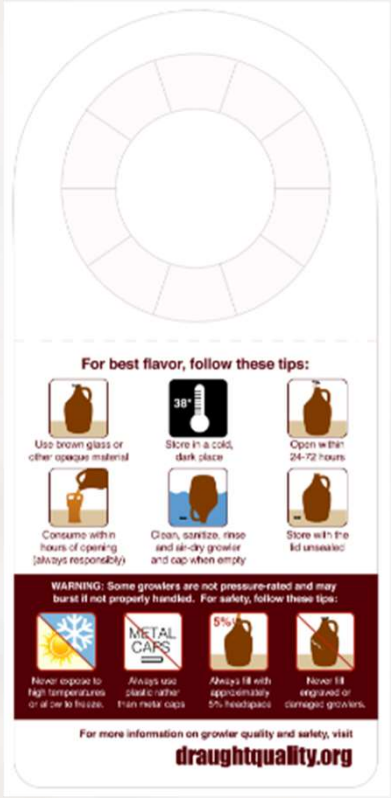
Consumer Education

<u>The average customer doesn't understand shelf life like a brewer does:</u>

Educate the end user. Verbiage is available from BA

<u>Remind customers:</u>

- It's not a commercially filled can/bottle
- Store cold
- Consume growlers within 72 hrs
- Consume Crowlers® in 7 -10 days



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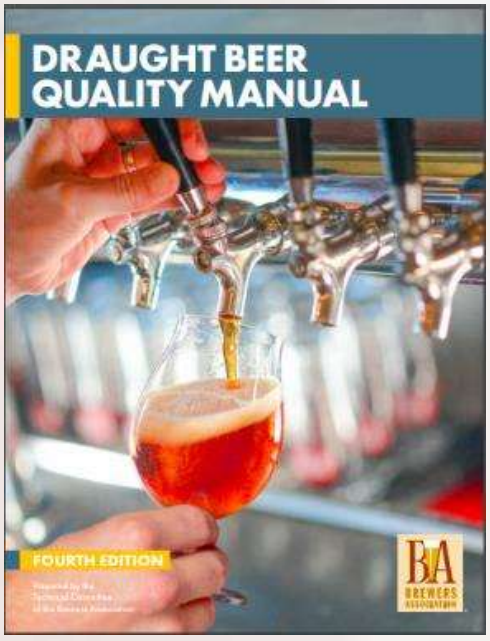
Available Publications

https://www.brewersassociation.org/educational-publications/facts-about-draught-beer-to-go-cans/

https://www.brewersassociation.org/educational-publications/draught-beer-quality-manual/

https://www.brewersassociation.org/educational-publications/draught-beer-quality-for-retailers/

https://brewersassoc.s3.us-west-2.amazonaws.com/wp-content/uploads/2019/01/Draught-Beer-Quality-Growler-Tags.pdf



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THANKS!
Questions?