



Your Guide to the Beer Business

Contents

Introduction	1
Handling Draught Beer	2-3
Maintaining Power Packs	4
Handling CO ₂ Cylinders.	5
Tapping a Barrel	6
The Importance of the “Beer-Ready” Glass	7
Ensure Your Glassware Is Properly Cleaned	8
Handling Glassware After Cleaning	9
Drawing the Perfect Draught Beer	10
Profitability	11
Cleaning the Beer Lines.	12
Draught Troubleshooting	13
Storing Packaged Beer	14
Serving Packaged Beer	15
Glassware Sells Beer	16
The Beertender Guide Checklist.	Inside Back Cover



YOUR GUIDE TO HANDLING & SERVING BEER

The Anheuser-Busch Beertender Guide is a practical reminder of the basic steps you, the retailer, should take when handling beer. This will ensure the freshest, best-tasting beer reaches the most important person in the beer business, your customer.

That's why Anheuser-Busch makes such an effort to brew consistently fresh, great-tasting beer. For more than 150 years, Anheuser-Busch has been known for its tradition of uncompromising quality. We brew our beers with the finest ingredients available, using the highest-quality brewing methods in the industry.

Our success—and yours—depends on how the beer is handled at every step of distribution, from the brew kettle to the bar table. After all, a satisfied customer is a repeat customer.

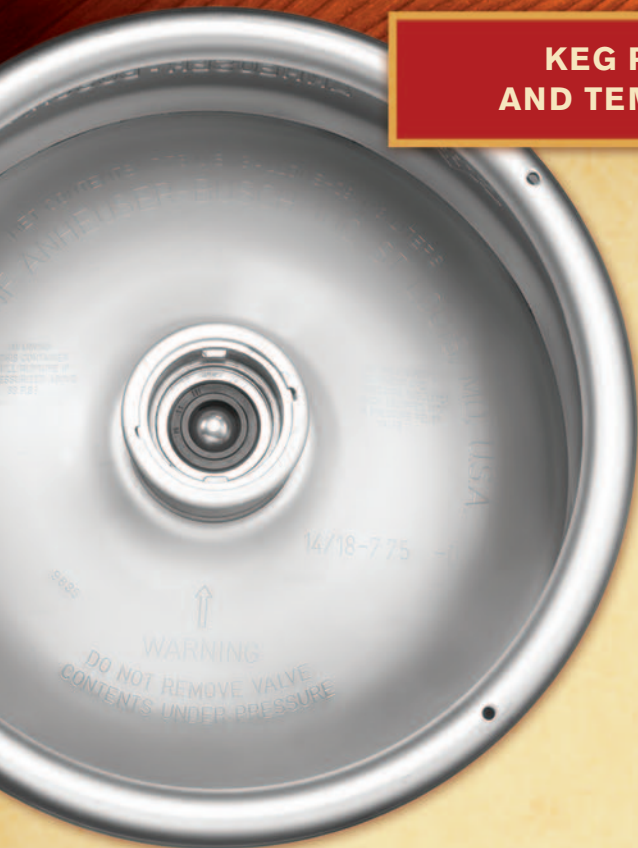
Thank you for serving Anheuser-Busch beers.

*Customer satisfaction is your
key to repeat business.*



Handling Draught Beer

KEG ROTATION AND TEMPERATURE



Rotate Your Stock—Always Sell the Oldest Kegs First

- Do not stock new deliveries on top of or in front of barrels already in the cooler.

Draught Beer Should Be Kept Cold at All Times

- The ideal temperature range for draught coolers is 36° to 38° F.
- If draught storage is too cold (below 36° F), beer will pour slowly with very little foam and have less flavor, aroma, and profits.
- If stored over 42° F, draught beer will draw wild or foamy, sacrificing the taste of the beer and profitability.

Keep Your Cooler Cold and Clean

- Check cooler temperatures daily by placing accurate thermometers in glasses of water that are chilled overnight.
- Use clear, plastic airflow curtains to help keep cold air inside the cooler.
- Place kegs in cooler immediately after delivery.
- Remind employees and delivery reps to keep the cooler door closed to minimize temperature loss.
- Avoid stacking warm goods near cold kegs.
- Never stack anything on top of full kegs.
- Avoid storing kegs against the wall of the cooler which can reduce air circulation around the barrels.
- Ideally, coolers should be used only for draught beer, not for food or other goods.



PRESSURE REQUIREMENTS



Before using any compressed gas cylinder, you should read and familiarize yourself with all safety precautions to avoid serious injury or death.

Maintain the Natural Pressure

Draught beer is naturally pressurized by carbon dioxide (CO₂), a by-product of the fermentation process, which gives beer its pleasant effervescence. Constant and uniform pressure is needed while the beer is on tap to maintain this natural carbonation.

- At 38° F, the internal pressure of a keg is 12 to 14 pounds per square inch (psi).
- An ideal flow rate is about 2 ounces per second.

GAS BLEND CHART

- 80 CO₂ / 20 N₂ for pressures from 16–19 psi
- 60 CO₂ / 40 N₂ for pressures from 20–29 psi
- 50 CO₂ / 50 N₂ for pressures from 30–39 psi
- 30 CO₂ / 70 N₂ for pressures from 40–55 psi
- 25 CO₂ / 75 N₂ used for nitrogenated beers

NOTE: While a gas filter is not required, installing a filter, where legal, is an excellent precaution to assure the gas is purified for dispensing.

High-pressure gas systems today are generally balanced to push beers with a blend of 60% CO₂ / 40% N₂.

If filling a cylinder with blended gas, it is recommended that gas cylinders only be filled with 30% CO₂ / 70% N₂ (for 40–55 psi) or 25% CO₂ / 75% N₂ (for nitrogenated beers). Other blends should be mixed with a blending box. Pre-mixed gas blends with higher concentrations of CO₂ can cause the mixture to destabilize in the cylinder.

Types of Pressure Systems

Depending on the pressure required in a draught system, either straight CO₂ or a blend of CO₂ and nitrogen (N₂) is required to maintain the natural carbonation and protect beer quality. Beverage grade gas, as defined by the International Society of Beverage Technologists (ISBT), must be used for beer dispense. A gas filter may be used where beverage grade CO₂ isn't available.

- **LOW-PRESSURE** draught systems are typically short-draw or under-the-bar refrigerated units using air or forced air to chill the lines.
 - When the applied pressure is less than or equal to 15 psi, straight CO₂ should be used. Blended gas is not recommended.
 - If less than 12 psi is applied, the beer will pour slowly and look flat over time.
 - If more than 15 psi is applied, the beer will ultimately pour fast and foamy.
- **HIGH-PRESSURE** draught systems are generally long-draw systems requiring 15+ psi. The pressure needed is higher than the natural carbonation level in the beer because of the longer beer lines.
 - When applied pressure is greater than 15 psi, a blend of CO₂ / N₂ should be used to prevent over-carbonation.
 - Blended gases are best produced with a blending box because the blender combines the gases at fixed proportions.



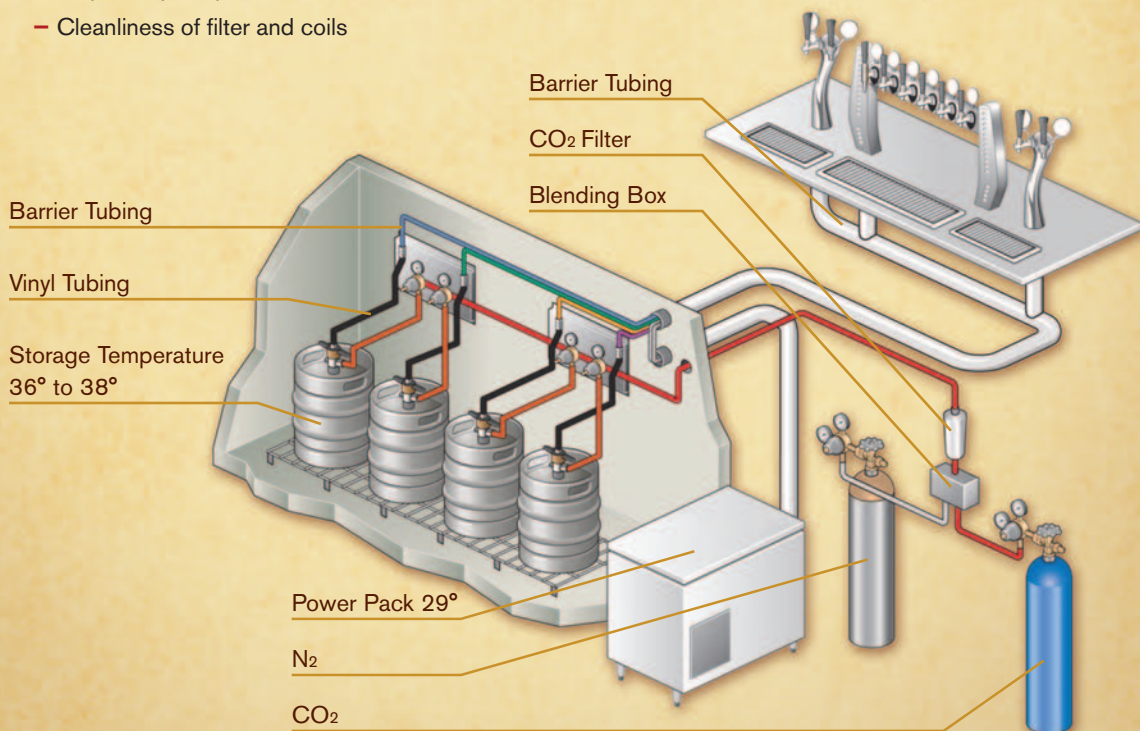
Maintaining Power Packs

A Power Pack ensures the beer is kept cold from cooler to faucet. It is filled with a mixture of food-grade glycol and water.

Tips on Maintaining Power Packs:

- Glycol should be changed annually and maintain a 29° temperature for best beer serving temperature
- Follow a maintenance schedule, which requires a service call every six months by a refrigeration expert that includes:
 - Temperature verification
 - Quality/amount of liquid
 - Ensure proper ventilation and airflow for power pack performance
 - Cleanliness of filter and coils

GLYCOL SHOULD BE CHANGED ANNUALLY AND MAINTAIN A 29° TEMPERATURE FOR BEST BEER SERVING.



Handling CO₂ Cylinders



Changing the Cylinder

1. Close cylinder by turning knob **(A)** clockwise.
2. Remove regulator from empty cylinder by turning nut **(B)** counter-clockwise.
3. Examine inside of regulator nut **(B)** to ensure an o-ring or plastic fiber washer is in place (prevents gas leakage).
4. Attach regulator to new full cylinder by tightening nut **(B)** clockwise.
5. Fully open knob **(A)** counter-clockwise.

Adjusting Pressure on CO₂ Regulator

- **To Increase Pressure:** Turn regulator key **(C)** clockwise until pressure gauge **(D)** shows desired dispensing pressure (psi).
- **To Decrease Pressure:** Fully turn regulator key **(C)** counter-clockwise. Pour beer from faucet to draw pressure out of system. Return to CO₂ cylinder and turn regulator key **(C)** clockwise until pressure gauge **(D)** shows desired dispensing pressure (psi).

NOTE: Pressure in the dispensing system should not exceed 60 psi. Two pressure-relief devices are necessary in every system, preferably built into the equipment: one at the regulator, one at the tap.

A. Cylinder Valve

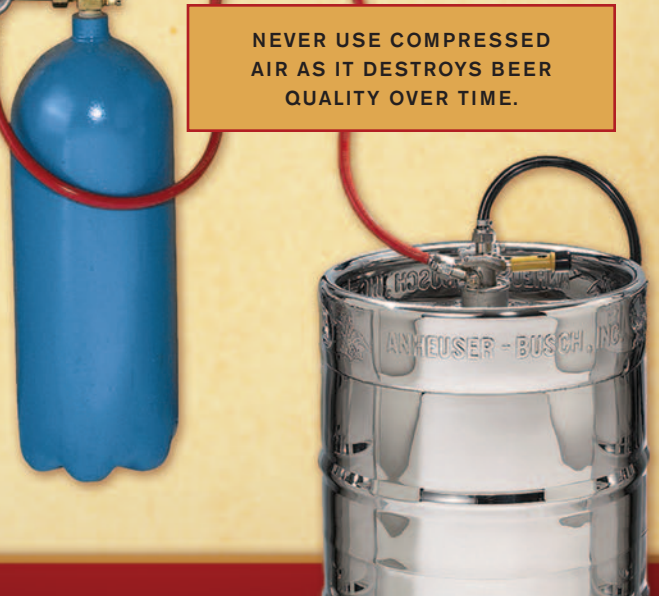
B. Regulator Nut

C. Regulator Key

D. Pressure Gauge



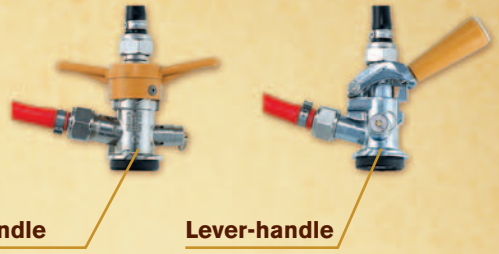
NEVER USE COMPRESSED AIR AS IT DESTROYS BEER QUALITY OVER TIME.



Tapping a Barrel

Anheuser-Busch uses only barrels with a single-valve tapping system which:

- Taps quickly and easily with only one connection.
- Is completely sanitized.
- Has a pressure-release valve for maximum safety.



With a T-handle Tap



1. Place tap body into opening at top of barrel. Turn tap body clockwise until it is firmly in place.



2. Turn handle clockwise until it locks.

YOU ARE NOW READY TO DRAW BEER

With a Lever-handle Tap



1. Place tap body into opening at top of barrel.



2. Turn tap body clockwise until it is firmly in place.



3. Pull handle out and press downward until it locks in place.

YOU ARE NOW READY TO DRAW BEER

The Importance of the "Beer-Ready" Glass



A "beer-ready" glass ensures no invisible film, odor, or bacteria

- **FILM** can be caused by several factors: the wrong sanitizer or lanolin-based soap, grease-based residues (lipstick), food in the wash water, fingerprints, or smoke from cigarettes.
- **ODORS** may be left on glasses when detergents and sanitizers are used improperly, from contact with bar towels, or from stale air in refrigerated areas.
- **BACTERIA** can contaminate your glassware if your sanitizer is measured incorrectly, not changed at recommended intervals, or is incompatible with your detergent.

If any of these conditions exist, the beer you serve can be flat, produce a false head, or have an off taste.

It is critical that draught beer is served in a "beer-ready" glass

- Use "beer-ready" glasses for beer only.
 - It is important to have "beer-ready" glasses that are free from any residue that will affect the beer's flavor or appearance.
- Properly chill glasses to 20° F.
 - Freezing glassware is not recommended.
 - Frost on glasses may contain sanitizer that can affect taste.
 - The temperature difference between glass and beer may cause a bad pour.
 - The frozen glass may cause the beer to freeze and separate.



Flat Beer

Film or grease residues actually attack the head, which rapidly disappears, causing the beer to look and taste flat, requiring bartenders to then fill the glass again.



False Head

A film or soap on the glass produces a head formed from overly large bubbles that quickly disappear.



Off Taste

Because of the close relationship between taste and smell, a glass with a residual odor can actually give the beer an off taste.

Ensure Your Glassware Is Properly Cleaned



To ensure glasses are “beer-ready,” use a three-sink system for washing, rinsing, and sanitizing.

Empty



1. Empty used glasses into an open drain and rinse with water.

Wash



2. In the first sink, wash glasses in warm water with an approved odorless, low-sudsing, non-fat cleaning compound (your wholesaler can recommend an approved cleaning compound). Use a nylon, three-spindled brush so you can clean two glasses at once, thoroughly brushing all surfaces, including the bottom. Make sure your brushes are tall enough to reach the bottom of your tallest glass. Clean brushes with salt or detergents. Use a special brush for pitchers.

Rinse



3. In the second sink, rinse glasses with fresh water. Insert the bottom of the glass in the water first to prevent air pockets. Take the glass out bottom first using the “heel-in, heel-out” method three times to rinse completely.

Sanitize



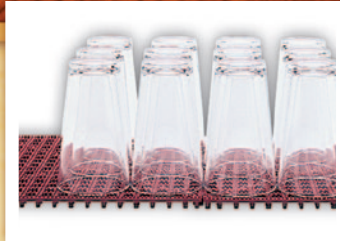
4. In the third sink, rinse glasses in cold water with approved sanitizer, using the “heel-in, heel-out” method three times to rinse completely.

Dry



5. Dry the glasses upside down on a stainless-steel wire rack or a deeply corrugated, free-draining plastic surface for maximum air flow and complete, odor-free drying. If glasses will be chilled, make sure they are completely dry first.

Handling Glassware After Cleaning



After you've cleaned your glasses, it's important to keep them clean and odor free.

- Store glasses in a stainless-steel wire basket to provide maximum circulation. A deeply corrugated surface is also acceptable.
 - Storing glassware on a towel, a rubber drain pad, or any other smooth surface may cause odors to be transmitted to the glass and may slow the drying process.
- Store your glassware in an area free of odors, smoke, grease, or dust.
- Air-dry glassware.
 - Drying glasses with a towel can leave lint and may transmit germs and odors.

- Store glasses in a refrigerator away from food products such as meat, fish, cheese, or onions.
- Store dry beer glasses in a chiller.
 - Never use a freezer. Chill glasses at 20° F.

If you use a mechanical glass washer, be sure to regularly service the machine based on the manufacturer's/installer's guidelines. Do not use dishwashing machines.

Testing your glasses to see if they are “beer-ready”

Glassware is “beer-ready” if it passes the following tests:



Sheeting Test

Dip the glass in water. If the glass is clean, water will shed evenly off the glass when you lift it out of the water. If the glass still has an invisible film, water will break up into droplets on the surface.



Salt Test

Salt sprinkled on the interior of a wet glass will adhere evenly to the clean surface, but will not adhere to parts that still contain a greasy film.



Lacing Test

Fill the glass with beer. If the glass is clean, foam will adhere to the inside of the glass in parallel rings after each sip, forming a lacing pattern. If not properly cleaned, foam will adhere in a random pattern, or may not adhere at all.

Drawing the Perfect Draught Beer

A properly poured draught beer has a 1" head of foam to release the natural carbonation, which allows the aromas to escape, resulting in a more flavorful, smooth-tasting, and less-filling beer.

1.



Hold the glass under the faucet at a 45° angle. *Do not let the glass touch the faucet.*

2.



Grab the handle at the base. Open the faucet fully with a quick, smooth motion. *Do not let the faucet touch the beer.*

3.



Straighten the glass gradually as you pour, letting the beer agitate in the center of the glass.

4.



Top off your pour with a 1" head of foam.

**DRAUGHT BEER IS BEST SERVED
AT 38° TO 40° F.**

Profitability



A properly poured draught beer has a 1" head of foam to release the natural carbonation, which allows the aromas to escape, resulting in a more flavorful, smooth-tasting, and less-filling beer... and increases profit.

16-OZ PINT	0" FOAM	1" FOAM
Servings / ½ bbl	124	161
Ozs / serving	16	12.25
Cost / ½ bbl*	\$78.00	\$78.00
Cost / oz	\$0.03	\$0.03
Price / serving	\$3.50	\$3.50
Kegs sold / year	100	100
Profit / keg	\$356.00	\$485.50
Profit / year	\$35,600.00	\$48,882.50
% margin	82.0%	86.2%

*Average Bud Light Cost / ½ bbl

No Head of Foam

Beer looks flat, unappetizing, and may taste gassy. Fewer servings per keg mean less profit.



Head of Foam too Large

Visually unappealing. Customers perceive they are getting less beer for their money.



Cleaning the Beer Lines

Cleaning and rinsing beer lines regularly is essential to serving a consistently great-tasting draught beer



Materials needed for cleaning draught lines include:

- Fresh water, buckets, towels
- Brewery-recommended line cleaner (ask wholesaler)
- Faucet cleaning attachment, twin male coupler
- Tools/wrenches for disassembling tapping equipment and faucets
- Brush, electric pump, cleaning pot or hand pump

Clean your lines at least once every two weeks

Follow local and state guidelines to remove any sediment that can cause an off taste. If your state requires an outside line cleaner, monitor the cleaning methods and chemicals used, making certain that faucets and tapping equipment are taken apart, examined and then cleaned.

- A full 5 gallons of solution should be flushed through, followed by 5 gallons of fresh, cold water to remove the solution.
- Electric pump should be used for all long draws.
- Test beer with a pH tester. The reading should not exceed 5.5.
- Conduct random ATP testing if necessary.



Draught Troubleshooting

90% of all draught problems are temperature related



Wild/Foamy Beer

- Warm draught cooler
- Frozen glasses
- Beer line systems not properly refrigerated or insulated
- Beer drawn improperly
- Tap/faucets broken, leaking, or dirty
- Too much pressure

Flat Beer

- Beer too cold
- Glasses are not "beer-ready"
- Not enough CO₂ pressure on barrel
- Sluggish (broken) pressure regulator
- Air compressor used for pressure
- Pressure required does not correspond to beer temperature

Cloudy Beer

- Beer over-chilled or frozen in dispensing system
- Beer has been frozen in barrel
- Old beer hose in poor condition
- Beer lines not properly cleaned
- Contaminated pressure source



Off-Tasting Beer

- Air compressor used for pressure
- Sanitizer remains on glasses (often when frozen)
- Beer lines not properly cleaned
- Oily air; greasy kitchen air
- Old draught, kegs not rotated
- Glasses not "beer-ready"
- Contaminated pressure source

No Pour

- Keg is not tapped properly
- Keg is empty
- The gas is turned off
- The lines are frozen
- The gas supply is exhausted

**DRAUGHT BEER IS BEST SERVED
AT 38° TO 40° F.**



Storing Packaged Beer

There are five key points to remember when storing cases of packaged beer

1. Keep it Fresh

- Rotate your stock—always sell oldest packages first.
 - Don't stack new deliveries in front of or on top of cases already in your storeroom or cooler. Restock coolers to always sell the older beer first.

2. Keep it Clean

- Keep all storage areas clean and dust free.
 - If a can or bottle looks dirty, the customer may think the beer tastes bad.
 - Cases stored in dirty areas can absorb odors that customers may notice when drinking directly from the package. Cans may be affected more than bottles.
 - Avoid storing food items that emit odors near beer stock.

3. Keep it Dry

- Consider stacking your cases on pallets or racks to protect them from damp floors.
 - Damp storage coolers may cause labels to soften or shred, making bottles look less appetizing.



4. Keep it Cool

- Store packaged beer between 36° to 38° F and consider restocking the bar coolers at day's end to ensure proper chilling of the beer.



- Warm storage should not exceed 70° F. High temperatures can cause the flavor of beer to degrade quickly.
- Avoid cold storage below 28° F.

If bottles or cans should freeze:

- Fix any malfunctioning thermostat or cooler.
- Let the case thaw, but avoid temperatures higher than 70° F.
- Gently turn the cans or bottles over end-to-end to remix the beer.
- Open the package to check for clarity. If flakes are present, do not sell.

Cold... Warm... Cold Again?

Bottles and cans may be refrigerated, allowed to warm, and then be rechilled without sacrificing quality. Just be sure the temperature range isn't extreme—colder than 28° F or warmer than 70° F. Warmer temperatures can accelerate off taste.

5. Keep it Dark

- Draw shades in storerooms to prevent sunlight from penetrating bottled beer, which can make beer smell bad or skunky. Most beers are brewed with hops that are sensitive to light. Brown glass helps protect the taste, but too much light can still be harmful.

Serving Packaged Beer

**A 1" head of foam
enhances the flavor
and drinkability**



Serving Temperature

Bottles and cans taste best when served at 38° to 40° F. If the beer is colder than 36° F, the taste declines.

Opening the Bottle or Can

- Hold bottle at the shoulder, not at the bottom when opening, or it may foam over. Rough handling causes beer to foam or gush when opened.
- Check for worn bottle openers to prevent damaging the bottle lip.

Pouring Packaged Beer

A 1" head of foam allows the natural carbonation to escape, enhancing the flavor and drinkability, and keeps the customer from filling up too fast.

To produce a proper head or collar of foam:

- Place the neck of the bottle or lip of the can over the edge of a “beer-ready” glass.
- Quickly raise the bottom of the bottle or can to a high angle, causing the beer to agitate in the glass.
 - Don’t pour the beer by the “down-the-side” method. It minimizes the foam, making the beer look flat and taste gassy.
- Lower the bottom of the bottle or can to reduce the flow until the foam rises to the rim. A 1" head of foam is ideal.
- Open bottles or cans where they are served, whether bar or tableside, to prevent foaming over when walking to the customer.



Glassware Sells Beer

The proper glassware is almost as important as the beer itself.

- Glassware sets the stage: beer style, drinking occasion, and setting.
- It should engage the senses and have great eye appeal.
- Proper glassware should fit in the hand, have correct thickness, and allow the aroma to reach the nose.
- The shape and size of the glass impacts the beer's taste and aroma.
- The glass is the "vessel" that delivers the fresh brew to the drinker; the glass choice is second only to the beer choice.

Elevate the image of Anheuser-Busch draught beers by using special, iconic glassware that heightens the appearance, taste, aroma, and overall drinking experience.

Here are some great examples of signature glassware that are as distinct as the beers they hold.



Flute

Elegant look. Long and narrow design maintains carbonation and showcases sparkle. Moves bouquet upward. Historically served with light lagers.



Tulip

Room to swirl and support large, foamy head. Wider body design showcases fuller body/malt character. Historically served with Belgian ales.



Snifter / Goblet

Opens up maltiness and sweetness of full-bodied beers. Historically served with full-bodied ales and heavier-style lagers.



Mug / Stein

Traditional toasting glass. Historically served with dark lagers, Müncheners, and Märzens.



Pilsner

Shaped to channel hop aroma to the nose. Showcases the color and clarity while capturing head retention. Historically served with Pilsner-style and other lager beers.



Pub

Versatile glass, designed for durability and stacking. Historically served with stouts, porters, and English ales.



Tumbler

Cross between a pint and a Weiss-shaped glass. Historically served with lagers and English pale ales.



Weizenbeer

Large in size, designed to hold volume and fluffy heads. Captures the fruity aromas of wheat beer. Historically served with Hefeweizens and other wheat beers.



Chalice

Narrow lip allows for a tight, pristine head. Stem offers a place for the thumb and forefinger to keep the beer from warming as it's consumed. Perfect for demonstrating the nine-step Belgian pouring ritual.



CHECKLIST

- Do you rotate your beer stock, both packaged and draught, to ensure you always serve the freshest beer?
- Is your beer stock separated from other food products and in an odor-free environment?
- Is your draught beer constantly kept cold, between 36° and 38° F?
- Are you using beverage-grade CO₂ and the proper blend of gas?
- Is your glassware “beer-ready” and stored properly?



*First in,
First out*



- Do you serve beer at 38° to 40° F to ensure the best flavor and aroma?
- Do you pour beer to produce a pleasing 1" head of foam?
- Are your beer lines and faucets cleaned thoroughly at least once every two weeks?
- Is your packaged beer stored in a clean, dry, dark, cool area?
- Do you have sufficient beer inventory?
- Are you the “first customer of the day” to check the draught taste?



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