DRAFT SYSTEM MAINTENANCE AND TROUBLESHOOTING WITH DRAFTNAUTS LLC

DRAFTNAUTS LLC - ITHACA, NEW YORK

Like all great business plans, Corey Brown and Bill Jablonski drank a few pints and discovered there was a need for quality draft system design and installation. The year 2013 was a lifetime ago in this industry, and our prediction has been accurate.

We are fortunate to have met many great people in the beer world. Quality beer is a requirement. Quality presentation is a requirement. Profit margins are squeezed. Let's do it right.





CONSIDER HIRING AN EXPERT.

IF YOU DON'T KNOW, BE HONEST AND DECIDE IF YOU HAVE THE EXPERIENCE AND KNOWLEDGE TO TROUBLESHOOT YOUR DRAFT SYSTEM PROBLEM. YOU PROBABLY DON'T GROW YOUR HOPS OR BARLEY. AND YOU DON'T WELD YOUR KETTLES. YOU DIDN'T DESIGN AND INSTALL YOUR FIRE SPRINKLER SYSTEM. AND SO ON.

BUYING AN EXPERIENCED AND REPUTABLE INSTALLER IS ANOTHER EXPENSE AND USUALLY WORTH EVERY PENNY. IN THE LEAST, THE PROPOSAL WILL GIVE YOU AN IDEA OF WHAT YOU ARE GETTING YOURSELF INTO. IF YOU ARE PLANNING A DRAFT SYSTEM INSTALL, YOU HAVE LIKELY NEVER PRICED OUT AN INSTALLATION OR THOUGHT ALL THAT MUCH ABOUT THE DESIGN, HARDWARE AND LABOR CONSIDERATIONS. GET A PARTNER. SAYS THE SELLER OF DRAFT BEER SYSTEMS.

WITH TIME AND EXPERIENCE YOU WILL OWN YOUR SYSTEM.

CONFUSED BEER DRINKER WITH A NECKBEARD. STOCK PHOTO.



THE PERFECT POUR

- Wasting beer is expensive.
- The math is real. A 15.5g keg has 1,984 ounces. A \$6 pint (16 ounces) is \$0.375 per ounce. A 15.5g keg contains a potential \$744 in revenue if every ounce is sold.
- A 10% hold back in retained foam is \$75. Per keg. Day in, day out. All year. 10% is not ambitious. That is perfect pint with a one finger foam collar and little to no drip.
- How many kegs turn over per year?



PIAGET BEER GAUGE



THREE LEGS OF A BALANCED DRAFT SYSTEM



KEG→TUBING→ SHANK→ FAUCET INTO GLASS

- Keep it cold along the entire route.
- All of the beer is in one big contraption. Think of the faucet as an extension of the keg. The beer does not know or care where it is within the system and physics will dictate how the beer reacts at all points along the route.

MAINTENANCE

- Zen? Do you have the right key? Is the battery dead? Is the gas tank empty
- Start with the obvious and move down the list. Temperature first. Pressue Resistance third. Remember, more than one thing may need to be correct



BRIGHT TANKS VS. KEGS

Service from bright tanks never works out so well. Bright tanks look great, and that's it. If your brewery can't use kegs you are at a disadvantage. Troubleshooting a system with bright tanks is difficult and correcting the problem is sometimes not possible.

Bright tanks are not kegs. It is challenging to achieve a balanced design because of the inconsistencies. Maintaining stable temperature (38F/ 3.3C) in a bright can be hard. Maintaining vols is another problem.

Plan to have trunk lines all over your brewery floor or hanging from the ceiling. Each one has variable resistance.

A bright tank draft system compromises all three legs of the draft system. - temperature, pressure and resistance.

Off site accounts will consider D Sanke kegs. Plastic kegs are a nightmare. Stay away.

Bright tanks are not kegs. Kegs are proven and reliable. Lease them. Buy them. Share them. Be creative.

DRAFT DISPENSE PROBLEMS ARE TEMPERATURE PROBLEMS

- 38 Fahrenheit / 3.3 Celsius. From keg to glass. Measure liquid temp in the cooler, not air temp.
- Temperature maintenance probably accounts for 90% of draft dispense problems. Although every beer has its best drinking temperature, this is not practical with a commercial draft system. All kegs are in one walk in or under bar cooler, and all draft lines live with the same conditions.
- Nobody every returned a beer because it was too cold. As far as we know.
- Pouring warm beer results in dumped foam and is wasteful. Keep it cold and fresh. Draft beer is likely your primary revenue. Make it count.
- Getting beer from the keg to the glass at the same temperature throughout is the primary challenge of a draft system. Glycol or air, your system must have 100% cold contact at every point.
- When it doubt, turn it down to 37F. 36F even. (2.8 to 2.2 Celsius)
- Wait a day for changes to take effect.



PRESSURE.

 Carbon dioxide (or blend gas) will determine the correct pressure. When the stable temperature you already determined is not the problem, get the applied pressure correct. Or – fix both.

Know your vols and use the vols chart. Be consistent. Check vols with a hacked pressure check coupler. Like this!





COUPLER PRESSURE GAUGE

- 1/4" threaded fittings to hose barb (5/8" or 3/8")
- Beer nut and tail piece (5/8" or 3/8")
- Beer nut cap. On liquid out.
- Washers.
- Check with temperature against vols chart.





NOT AVAILABLE IN STORE HOMEBREV/ED MINE

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Use a pressure coupler and know what's in your lieg.

Checking the pressure in the kee can help to determine if you need to adjust your applied pressure correct your packaging procedure, or look elsewhere. Having a coupler with a pressure gauge is handy when visiting accounts.

Every other bartender wants to mess with the regulator because the regulator is the only thing they can mess with. Lay down the law and put a stop to the insanity.

ect again and correct it needed.

es from the spear at the bettom of the leg; ocking ong, dropping the keg creates a very short-term stem is closed until a fauce lis or eled.

• Design resistance is built in. Hopefully, the draft system was built right, because it is not easy to reinstall choker or heaven forbid, the trunk line. Resistance determines the rate of flow only. If you have foam in the glass, it is usually because the temperature or pressure is not balanced. If you routinely need flow control faucets, or want to install flow controls to fix foam, the two other legs of the system are probably not balanced. So, fix that first.

System resistance determines velocity. That is to say the speed of the beer hitting the glass. Some finesse is needed at the faucet. Train your staff to pour a proper pint, into a clean glass, at the correct angle, with the proper amount of foam. This is easy profit. Hold the glass close and there will be relatively little foam. Let the last few ounces fall into a glass of beer and generate some nice foam collar. Voila.

THREE LEGS, ONLY THREE LEGS. AND THERE AIN'T NO MORE

- TEMPERATURE
- PRESSURE
- RESISTANCE
- QUESTIONS AND ANSWERS.



CLEANING A DRAFT SYSTEM

- BEER IS FOOD, CLEANING YOUR DRAFT SYSTEM IS NOT OPTIONAL.
- THE DRAFT SYSTEM IS SIMILAR, BUT NOT THE SAME AS A BREWERY; SOME SPECIAL CONSIDERATIONS ARE REQUIRED.
- USE 100% STAINLESS STEEL, FDA AND NSF 51 MATERIAL EVERYWHERE.
- STATIC CLEANING AND PUMP CLEANING. SET A SCHEDULE AND BEVIGILANT.
- EITHER AFTER A SET PERIOD (ONCE A MONTH*) OR A SET VOLUME (EVERY KEG).

*The Brewers Association recommends cleaning every 2 weeks. This may or may not be needed, depending on the state of the system. A vigorous cleaning every 4 weeks is adequate, but don't go more than 4 weeks.

https://www.brewersassociation.org/association-news/importance-draught-beer-line-cleaning/



SANKE CLEANING CAN STATIC CLEANING

• A Sanke can is cheap, easy and efficient. Fill it with a BLC, purge the lines, let it sit. Drink a beer. Purge again. Flush with many, many gallons of cold water. Check the pH. Remove faucets and detail if needed. Inspect couplers and detail if needed.

- Having two cans will speed up the process.
- Simple, cheap, easy.

AT A MINIMUM, YOU SHOULD CLEAN YOUR DRAUGHT LINE EVERY TWO WEEKS WITH AN ALKALINE DETERGENT CLEANER TO REMOVE PROTEIN AND FILMS THAT BUILD UP QUICKLY.

THE CLEANING CHEMICAL SHOULD BE RECIRCULATED THROUGH THE PRODUCT LINE FOR A MINIMUM OF 15 MINUTES AT A VELOCITY UP TO TWO GALLONS/MINUTE. SOAKING PRODUCT LINES IS NOT RECOMMENDED, BUT THE CLEANING SOLUTION SHOULD BE LEFT IN-LINE FOR AT LEAST 20 MINUTES IF RECIRCULATION IS NOT AN OPTION.

ALL FAUCETS SHOULD BE COMPLETELY DISASSEMBLED AND CLEANED EVERY TWO WEEKS. MAKE SURE TO REPLACE ANY DAMAGED SEALS OR GASKETS.

ACID CLEANING SHOULD BE PERFORMED QUARTERLY TO REMOVE INORGANIC COMPOUNDS SUCH AS "BEER STONE," WHICH ARE MINERAL DEPOSITS.

ALL VINYL JUMPERS AND VINYL DIRECT DRAW LINES SHOULD BE REPLACED ANNUALLY.

COUPLERS SHOULD BE REPLACED BASED ON CONDITION. INSPECT THE COUPLER BOTTOM SEAL AND O-RINGS, TO MAKE SURE THEY ARE PROPERLY LUBRICATED WITH A FOOD-GRADE LUBRICANT.

GOOD QUALITY, WELL-MAINTAINED COUPLERS, FAUCETS AND SHANKS CAN LAST A LIFETIME. PARTS THAT ARE 100 PERCENT STAINLESS STEEL ARE THE MOST RELIABLE AND WILL PROVIDE THE BEST QUALITY EXPERIENCE FOR YOUR STAFF AND CUSTOMERS.

ALWAYS MAKE SURE TO RINSE LINES WITH CLEAN WATER AFTER CLEANING!

DRAUGHT LINES MAY NEED TO BE REPLACED AFTER POURING ROOT BEER, FRUIT OR PEPPER-FLAVORED BEERS, SOUR BEERS, MARGARITAS OR CIDERS IN ORDER TO AVOID PERMANENT FLAVOR INFLUENCE.

BREWERS ASSOCIATION GUIDELINES

JULY 1,2016

DANK JUICY

DANK AND JUICY AKA CLOGGED AND CRAPPY.

- The more junk floating in the beer the more junk clogging the system.
- Consider cans.
- Mac Daddy spin down filtration, maybe 200 to 1,000 μ. ???
- Be prepared to flush the system with water, and with the glycol off.
- Give the people what they want.

PUMP CLEANING (DYNAMIC)



- Not as simple as static cleaning but significantly more effective.
- Pulsating flow.
- Required for long draw systems.
- Equipment investment.
- DIY. Keep it below 60 psi.



DUAL FLUSHER AND FAUCET JUMPER

- Connect two couplers together with a ball-lifter.
- Connect two faucets together with a jumper. (Foxx).
- Daisy chain everything and pump cleaning fluid. (MicroMatic).
- Rinse with clear water. Check the pH of the water supply. Check the pH after cleaning.
- Do not use hot water.

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PUMP CLEANING RIG

- \$1,500 to \$2,000
- Maxi-vac or Foxx Equipment
- DIY pumps can not exceed maximum pressure of system tolerance (65 psi or less) and require a throttle.
- Electric and water do not mix.



PUMP CLEANING

- Once per month
- CIP system is possible
- Trained staff.

Q AND A

BEER-THIRTY. NUCLEATION POINTS.





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- Good beer makes good friends. Contact us when you have questions and we will try to provide honest advice.