

# DRY HOPPING

**ESTIMATED TIME:  
1 MINUTE**

**THIS STEP IS OPTIONAL.  
CERTAIN BEERS WILL COME  
WITH A DRY HOP SACHET.  
YOU WILL NEED:**

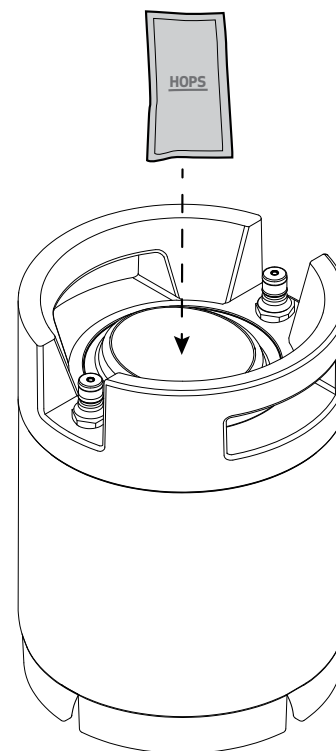
- Your keg of fermenting beer
- Dry Hop Sachet

# 12

If your PicoPak contains a Dry Hop Sachet packet (packaged inside same box with the Yeast Packet) there is an extra step in order to dry hop your beer to add maximum flavor and aroma. Store the Dry Hop Sachet packet in your refrigerator while your beer ferments for 3 days.

# 13

After 3 days of fermenting, remove the Metal Keg Lid or the Black Keg Seal from the Brewing Keg. Remove the Dry Hop Sachet from your refrigerator and open the clear vacuum-sealed bag, do NOT open the paper sachet bags. Pour all of the paper Dry Hop Sachet bags into the Brewing Keg with your fermenting beer. The paper sachets are designed to work inside your Brewing Keg and minimize clogging during the racking process.



# 14

Replace and clamp the Metal Keg Lid or Black Keg Seal on to the Brewing Keg and confirm it is seated correctly on Brewing Keg.

Allow your beer to continue to ferment with the Dry Hops for a minimum of 4 more days, longer if fermentation is not yet complete.

**PROCEED TO NEXT SECTION:  
RACK & CARBONATE YOUR BEER**

UNBOXING

SETUP

FIRST  
RINSE

LET'S  
BREW

AFTER  
BREWING

FERMENT  
YOUR BEER

DRY  
HOPPING

RACK &  
CARBONATE

SERVING

USAGE &  
CARE

GLOSSARY

# RACK & CARBONATE YOUR BEER

**ESTIMATED TIME:  
15 MINUTES**

## **YOU WILL NEED:**

- Your keg of completed fermented beer at room temperature or chilled
  - 1.5 cups of 3% Hydrogen Peroxide (or other food grade sanitizer) and 1.5 cups of clean water
  - Large Bowl
  - Waste container
  - Serving Keg
  - Racking Tube
  - Keg Wand
  - Dispensing Bung Plug
  - For Forced Carbonation:
    - Carbonation adapter
    - CO<sub>2</sub> Regulator and Cartridge
- OR
- For Keg Conditioning:
    - Carbonation Sugar Packet

# 1

Remove the white plastic shipping plug from the center of the Serving Keg Bung Hole.

Sanitize the Serving Keg by pouring 1.5 cups of clean tap water and 1.5 cups of 3% hydrogen peroxide. Close the serving keg with the shipping plug. Shake the keg and let it sit for 10 minutes, dump the keg into a large bowl and set aside, then rinse the keg thoroughly with clean water.

**Note:** Star San (available in home brewing stores) is an effective alternative to hydrogen peroxide.

# 2

Attach a Keg Wand to the Racking Tube. Soak the Racking Tube and Keg Wand for 5 minutes in the large bowl of hydrogen peroxide you set aside earlier. Rinse the Racking Tube and attached Keg Wand with clean water.

Note: If you are Keg Conditioning (naturally carbonating) your beer (see steps 14-16), open up the Carbonation Sugar Packet now and pour the entire contents of packet into the sanitized and dry Serving Keg.

**PROCEED TO NEXT SECTION:  
RACK THE BEER**

# RACK & CARBONATE YOUR BEER

## STEP 1: RACK THE BEER

UNBOXING

SETUP

FIRST  
RINSE

LET'S  
BREW

AFTER  
BREWING

FERMENT  
YOUR BEER

DRY  
HOPPING

**RACK &  
CARBONATE**

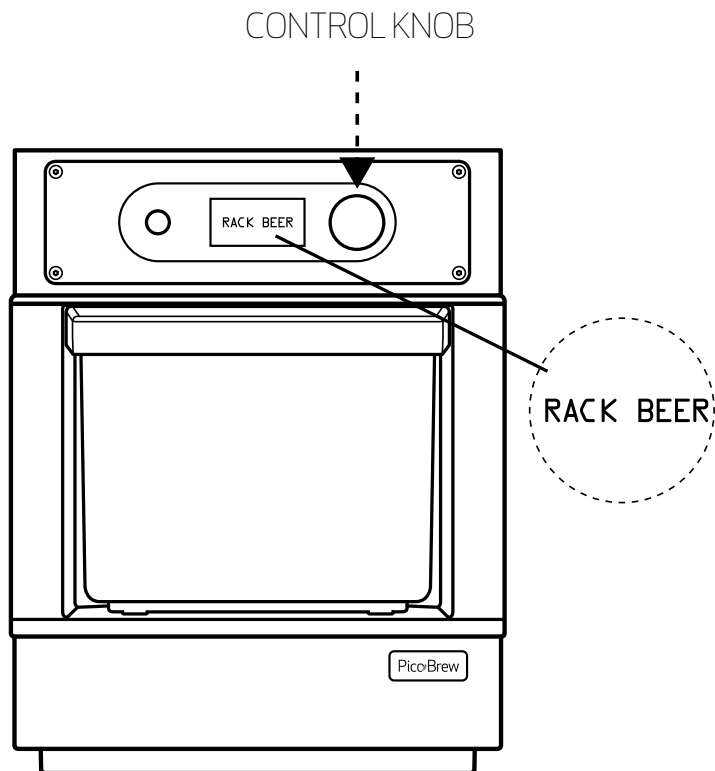
SERVING

USAGE &  
CARE

GLOSSARY

**3** From the Pico main menu select **Utilities** then select **Rack Beer** on the Pico display. This will provide step-by-step instructions on screen.

Press the Control Knob between each step.

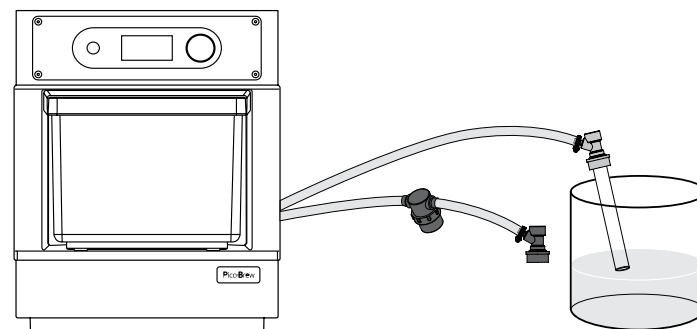


**4** Connect sanitized Keg Wand to the **GRAY** Ball Lock Connector.

Direct the **GRAY** Keg Wand to a waste container. Press the Control Knob to clear the drain hose.

When liquid stops flowing into the waste container press the Control Knob to stop the pump, this should take no more than 1 minute.

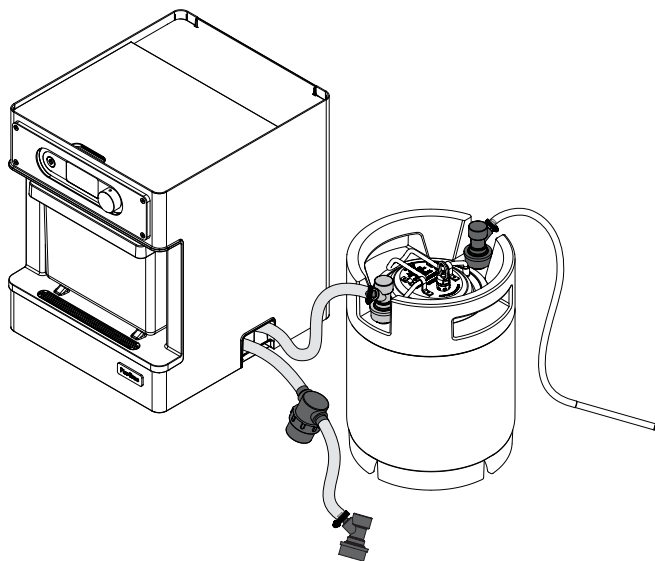
Remove the Keg Wand from the Ball Lock Connector.



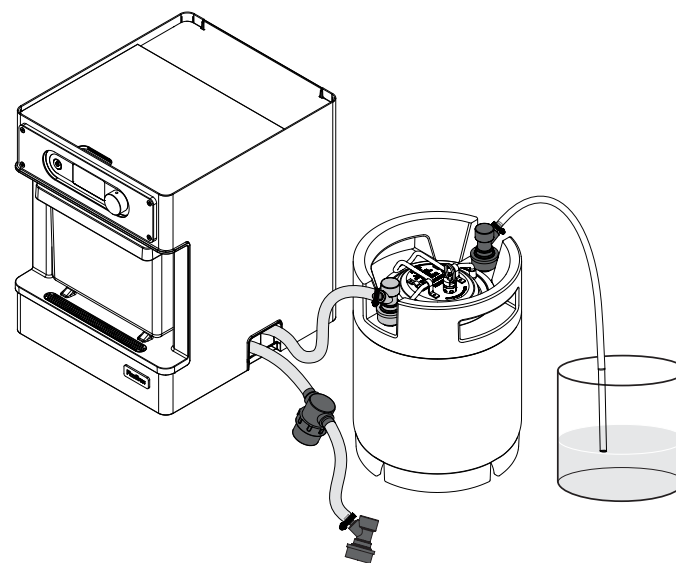
**5** Pull up on Fast Fermentation Adapter to confirm valve is not under pressure.

Connect the GRAY Ball Lock Connector to the Brewing Keg IN post, this will allow the Pico to pressurize the Brewing Keg with air.

Connect the Racking Tube's Ball Lock Connector to the Brewing Keg OUT post.



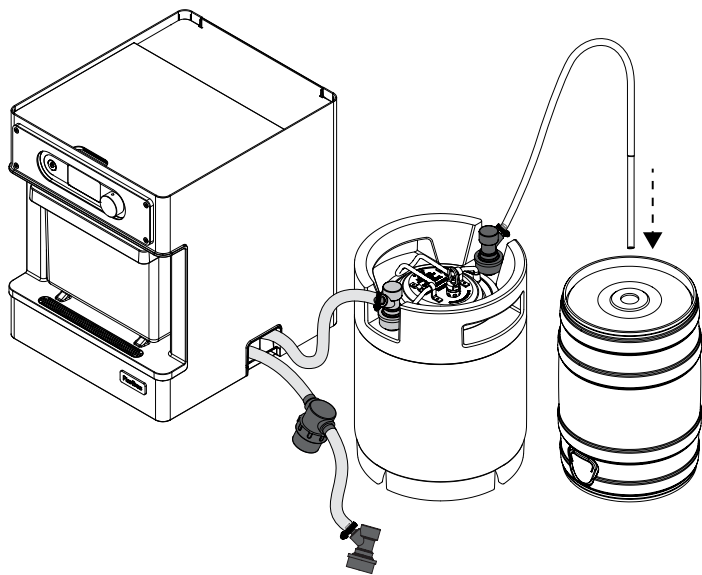
**6** Direct the Racking Tube to the waste container and press the Control Knob. The initial wort coming from the Racking Tube may contain trub (sediment). When no more trub flows into the waste container press the Control Knob to stop the drain, this should take no more than 30 seconds if needed at all, this is only to clear out any trub.





**7** Insert the Racking Tube in the Serving Keg Bung Hole and press the Control Knob, this will begin to transfer beer from the Brewing Keg to the Serving Keg.

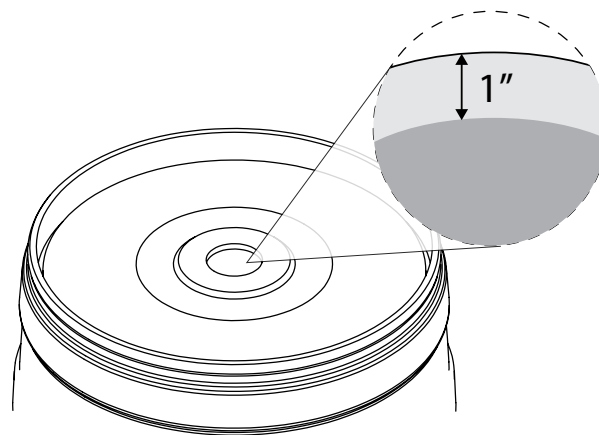
Do not leave this unattended. You will fill to just under 1" from top of Serving Keg.



**8** When air begins to enter the Racking Tube, or if the Serving Keg fills to within 1" of the top,\* then press the Control Knob to turn off the pump and stop the process.

Once racking is complete it is safe to remove Racking Tube from Serving Keg and to disconnect Ball Lock Connectors.

**\*DO NOT OVER FILL**



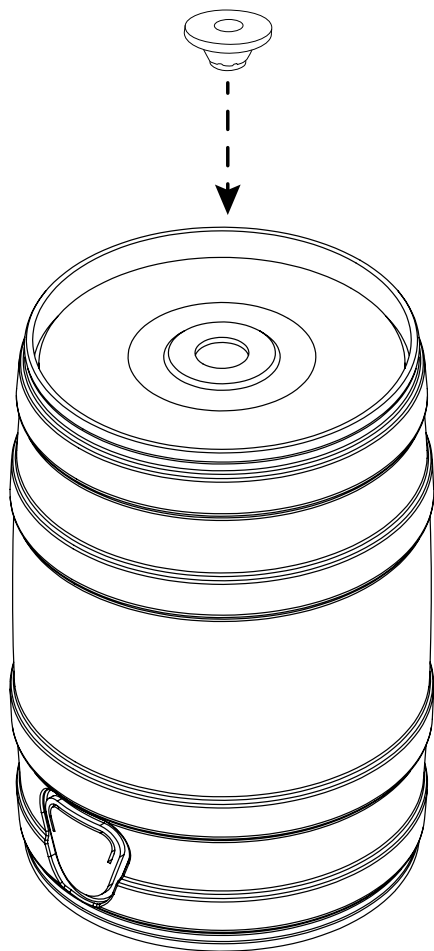
# RACK & CARBONATE YOUR BEER

## STEP 2: FORCE CARBONATE THE BEER

**\*SKIP TO PAGE 101, STEPS 14-16  
IF KEG CONDITIONING.**

9

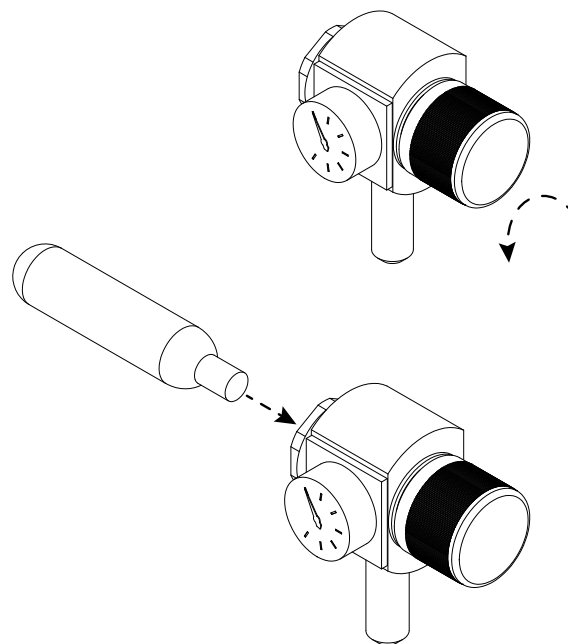
Remove the white plastic shipping plug from the center of the Carbonation Adapter. Wipe down rim of Serving Keg opening, then press the Carbonation Adapter into the Bung Hole of the Serving Keg until it pops into place.



10

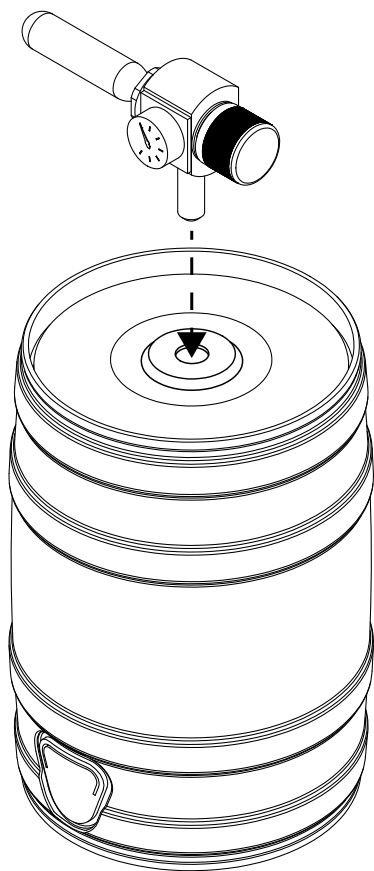
Turn the CO<sub>2</sub> Regulator **counter clockwise** all the way to close the Regulator.

Quickly screw a new CO<sub>2</sub> Cartridge into the Regulator. The Cartridge will pierce through metal and you'll hear a brief air noise, continue to turn Cartridge **clockwise** until you can no longer turn it.



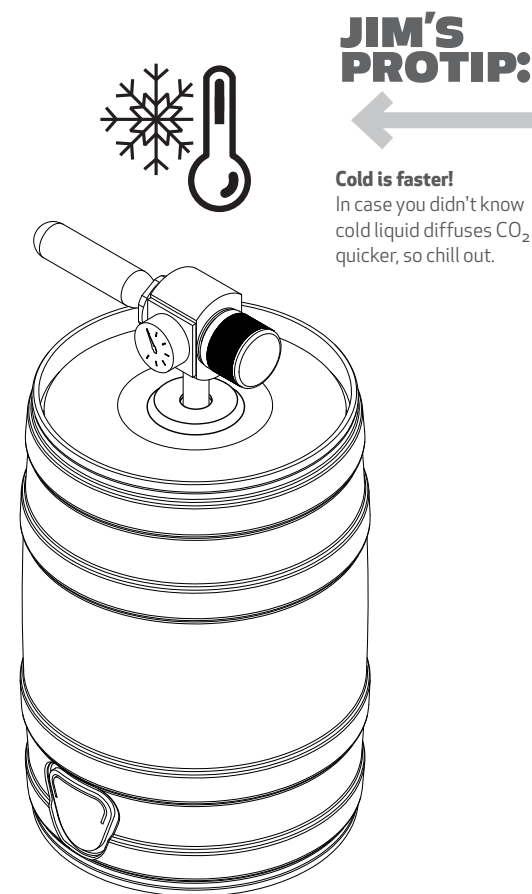
**11** Insert the barbed regulator connector into the Carbonation Adapter, it will be a snug fit.

Slowly dial the Regulator **clockwise** to open the Regulator until it reaches 24 PSI. This is the correct setting for most beers.



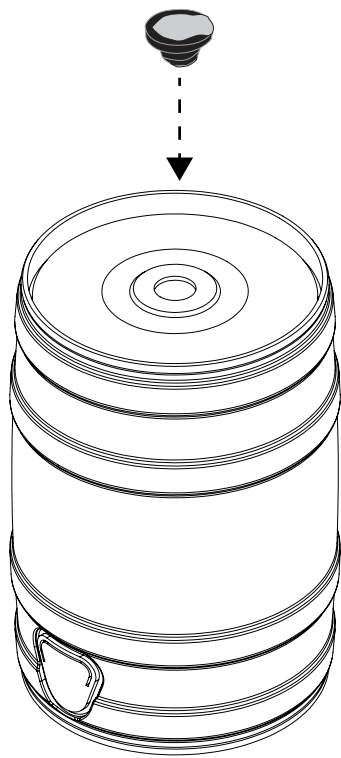
**12** Place the Serving Keg with attached CO<sub>2</sub> Regulator into your refrigerator to chill and carbonate for approximately 36 hours.

Clean the Brewing Keg and Racking Tube, see Usage & Care section.



# 13

After approximately 36 hours, slowly dial the regulator counter-clockwise to close it and release the pressure. Then carefully remove the CO<sub>2</sub> Regulator and Carbonation Adapter from the Serving Keg Bung Hole. Insert the Dispensing Bung Plug into the Serving Keg Bung Hole. Dispose of the used CO<sub>2</sub> cartridge properly. Keep the Carbonation Adapter Bung and Regulator for future brewing sessions.



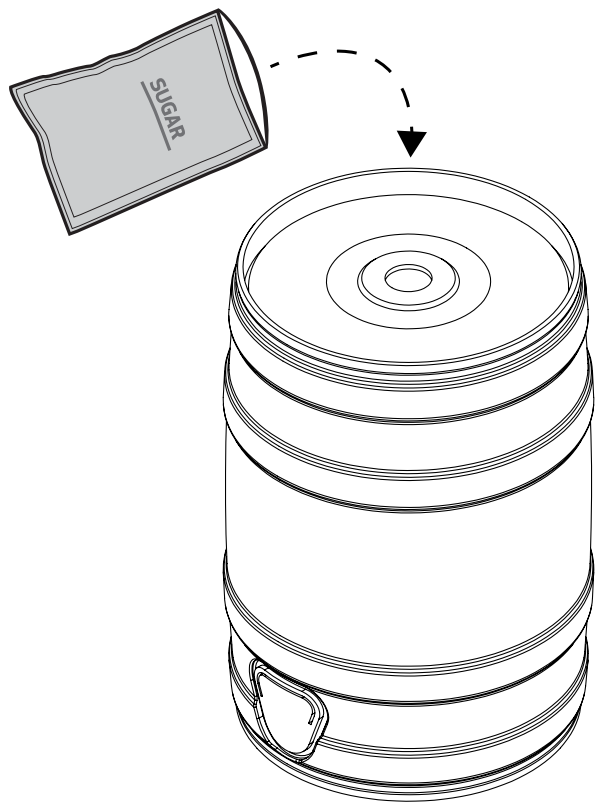
# RACK & CARBONATE YOUR BEER

## STEP 3: KEG CONDITION THE BEER (NATURAL CARBONATION)

**\*SKIP TO PAGE 93, STEPS 9-13  
IF FORCE CARBONATING**

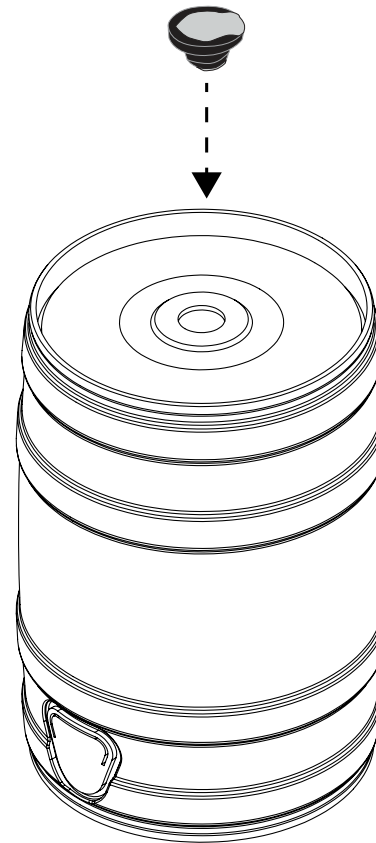
# 14

When the beer is done fermenting, after sterilizing the Serving Keg, open the Carbonation Sugar packet and pour the entire contents into the Serving Keg before racking the beer.



# 15

Now proceed with Racking, see steps 3-8. After racking is complete, press the Dispensing Keg Bung Plug into the Serving Keg Bung Hole.



# 16

Set the Serving Keg aside to carbonate in the same area that you fermented the beer.

**Note:** The amount of time it takes to carbonate should be about twice the amount of time it took for original fermentation. This is based on the carbonation being done at the same temperature as the original fermentation.

Once carbonated, chill for a minimum of 12 hours to allow the carbonation to fully diffuse into the beer.

**PROCEED TO NEXT SECTION:  
SERVE YOUR BEER**



# SERVE YOUR BEER

**ESTIMATED TIME:  
1 MINUTE**

**YOU WILL NEED:**

- Your keg of cold, carbonated, delicious beer
- Keg Label
- Glassware

# 1

Stick your Keg Label on to the Serving Keg. Lift the red tab on the Dispensing Bung and turn it a quarter turn **counter-clockwise** to the "1" position, this will open the vent for serving and release the carbonation pressure inside

Firmly pull the spout of the Serving Keg outward.



# 2

Twist the Serving Keg Spout **counter clockwise** to dispense beer from the keg. Twist Serving Keg Spout **clockwise** to stop dispensing beer.



- 3** When finished serving the beer, close the Dispensing Bung vent by turning it **clockwise** to the “0” position and push the spout back into the keg. Refrigerate the Serving Keg when not serving from it.



# WELCOME TO THE HOMEBREW FAMILY

WE'RE A REALLY  
FUN CROWD.

**LET'S  
STOP  
FOR A  
LITTLE  
REFLECTION.**

**YOUR  
FIRST  
OF  
MANY  
BEERS.**

**THE FLOOD  
GATES ARE NOW  
OPEN FOR MORE  
DELICIOUS  
HOMEBREW  
GOODNESS.**



**CHEERS**

# USAGE & CARE

**ESTIMATED TIME:  
20 MINUTES**

## **RECOMMENDED OCCURRENCE:**

Should be performed after every brewing session, completed fermentation, or when keg is empty.

- Remove Step Filter from Pico. Wipe down any condensation that has formed inside Pico where Step Filter usually sits.
- Wipe down the inside of the Water Reservoir.
- Clean out the Inline Filter.
- Inspect gaskets on Inline Filter, ball locks, Brewing Keg posts.
- Tighten Inline Filter, ball locks, keg posts.

# KEG CLEANING:

**KEGS SHOULD BE CLEANED EVERY TIME THEY ARE DONE BEING USED, AFTER FERMENTING OR WHEN KEG IS EMPTIED.**

## **YOU WILL NEED:**

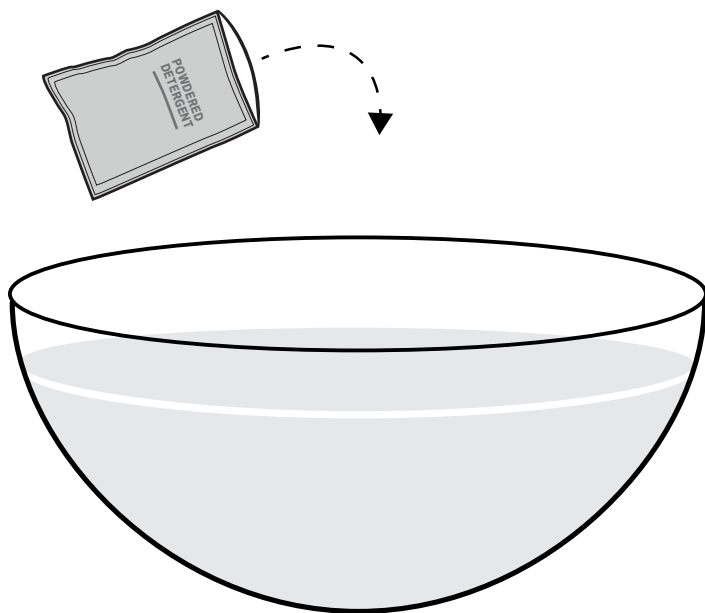
- 17mm wrench
- Brewing Keg
- Serving Keg
- All accessories used during brewing, fermentation, or serving (Metal Keg Lid, Black Keg Seal, Fast Fermentation Adapter, Pressure Relief Valve, Airlock, etc.)
- Keg Brush and Dip Tube Brush
- Large-sized container
- Fragrance-free powdered dishwasher detergent, or other homebrewing cleaning agent

# LET'S START THIS ADVENTURE WITH OUR BREWING KEG.

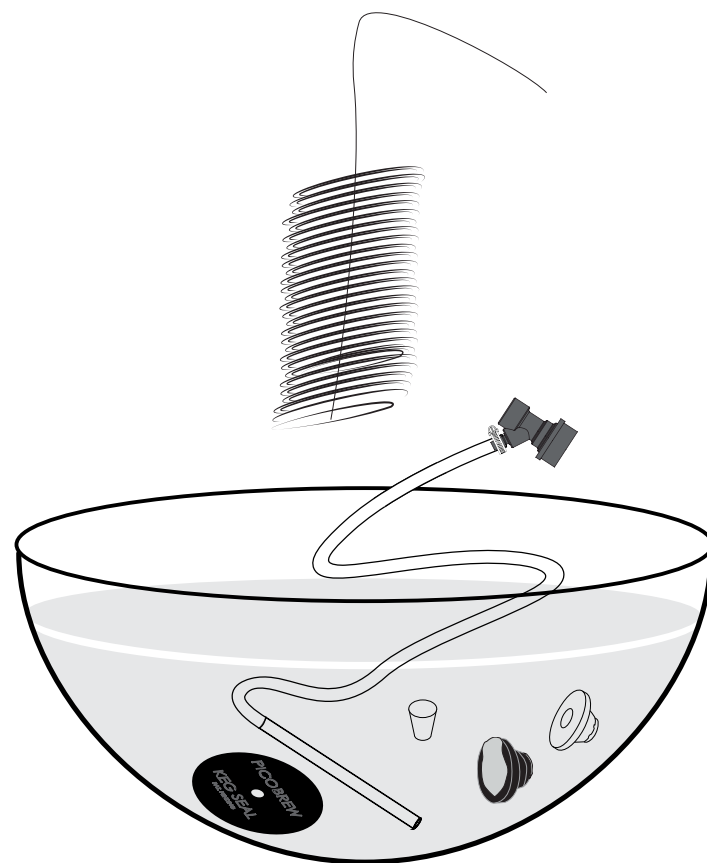
## **LINDSEY'S PRO TIP:**

After a keg has kicked give the keg a quick rinse with hot water, put the lid on and give it a good shake. This will make clean up easier if you can't get to cleaning the keg right away. Never leave old beer in the keg to clean later!

- 1** Fill a large container with  $\frac{1}{4}$  teaspoon fragrance-free powdered dishwasher detergent and enough hot tap water to almost fill container.



- 2** Place all accessories used during brewing or fermentation in to the container to soak. Use Keg Brush to clean all items inside container, making sure to scrub any surface that may have had any contact with beer.

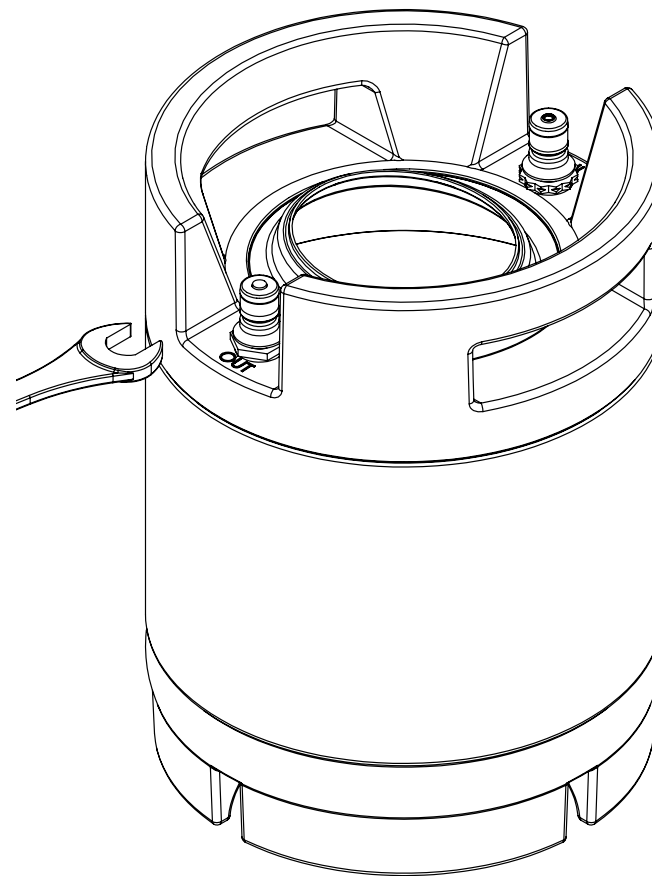


# STOP! BEFORE GOING FURTHER REMOVE YOUR BREWING KEG POSTS:

We recommend removing one post at a time so that there is less confusion and chance of putting the IN on the OUT post or vice versa when reassembling. There are subtle notches on the outside edges of the IN Keg Post Ball Lock in case you want to remove both posts at one time.

## 3

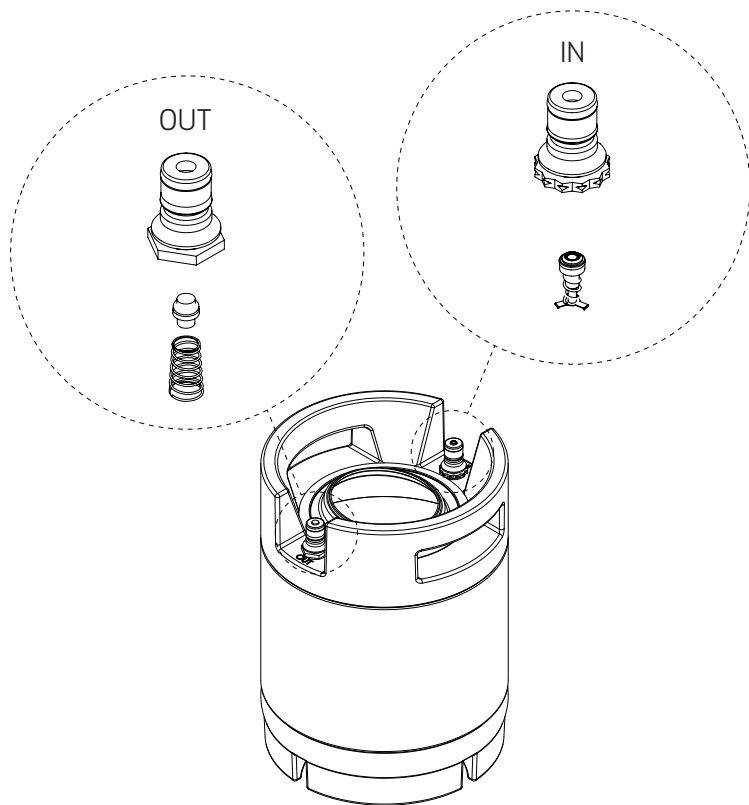
Use a 17mm wrench to remove Keg Posts.





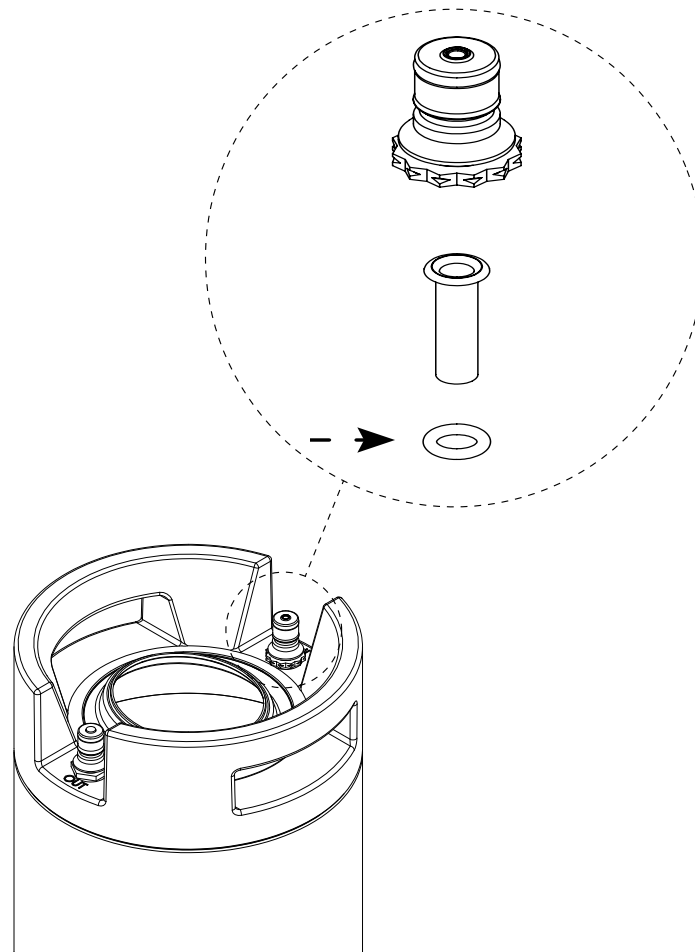
# 4

**CAREFUL!** There is a metal spring and valve inside both the IN and OUT post Ball Locks, this is called the Poppet Valve. It may jump out as soon as the IN or OUT posts are taken off. Make sure you are standing over a contained area, not a sink with an open disposal or drain, nor a patterned carpet.



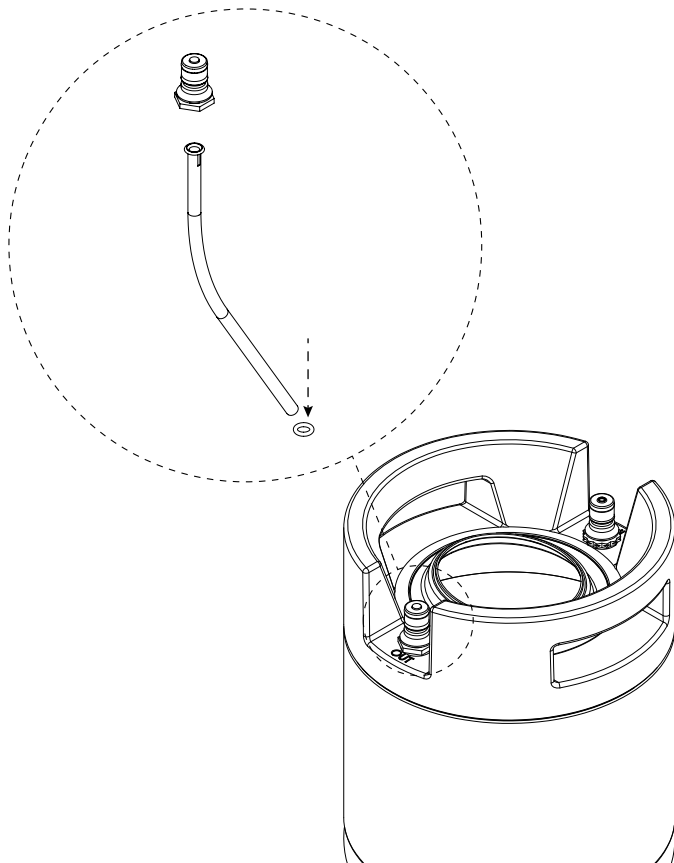
# 5

The IN post is connected to a short tube. Remove the black O-ring attached to this tube



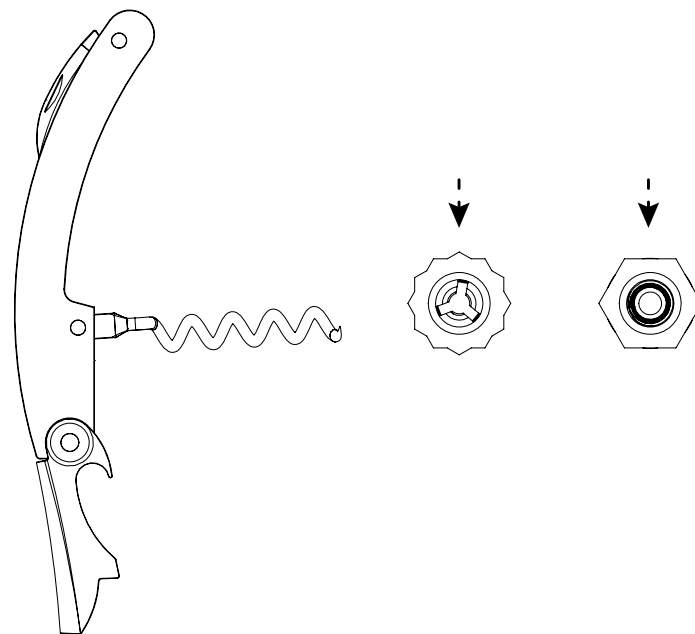
# 6

The OUT post is connected to a long Dip Tube that reaches the bottom of the keg. Remove the black O-ring attached to this tube.



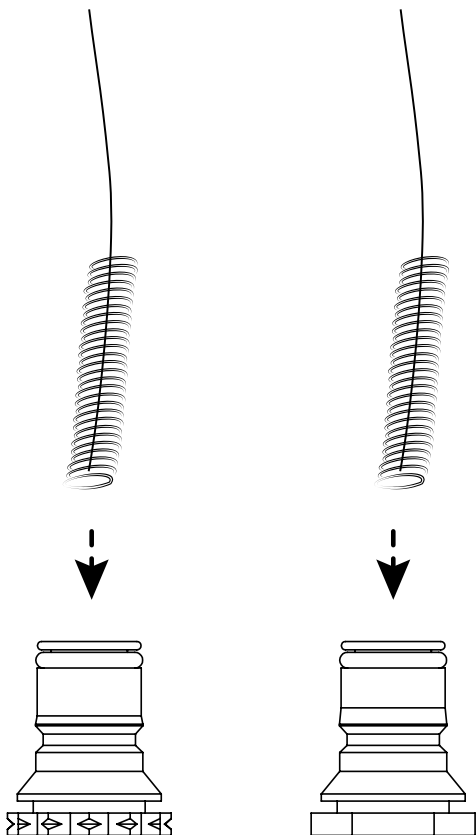
# 7

Remove the black O-rings from both the IN and OUT Keg Post Ball Locks. Wine corkscrew or tiny pliers work well.



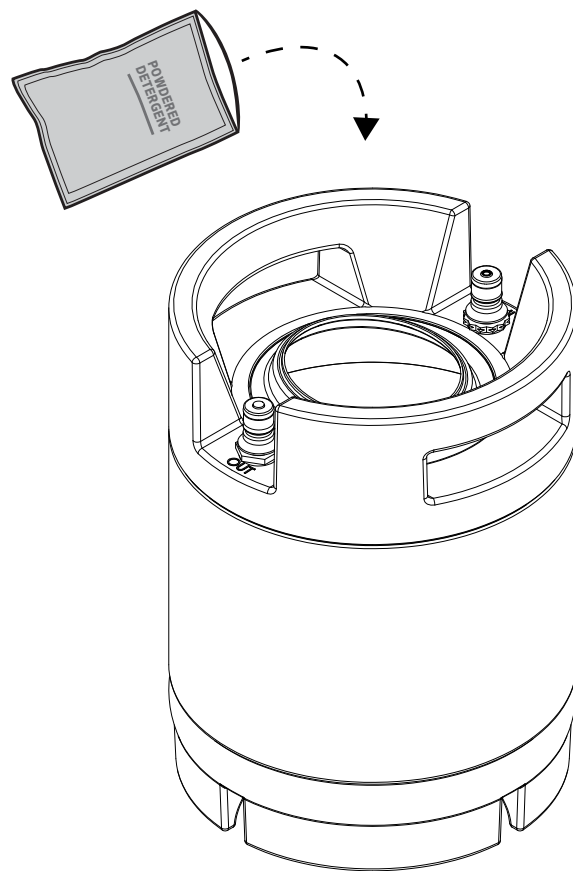
8

Use the Dip Tube Brush to clean the inside of Keg IN/OUT Posts thoroughly. Place all parts but the Dip Tube in to container and let soak.



9

Inside the Brewing Keg mix  $\frac{1}{2}$  teaspoon powdered detergent with enough hot tap water to almost fill the keg. Place the Dip Tube in the Brewing Keg and let soak for 10 minutes, longer if there is hardened build-up.



UNBOXING

SETUP

FIRST  
RINSELET'S  
BREWAFTER  
BREWINGFERMENT  
YOUR BEERDRY  
HOPPINGRACK &  
CARBONATE

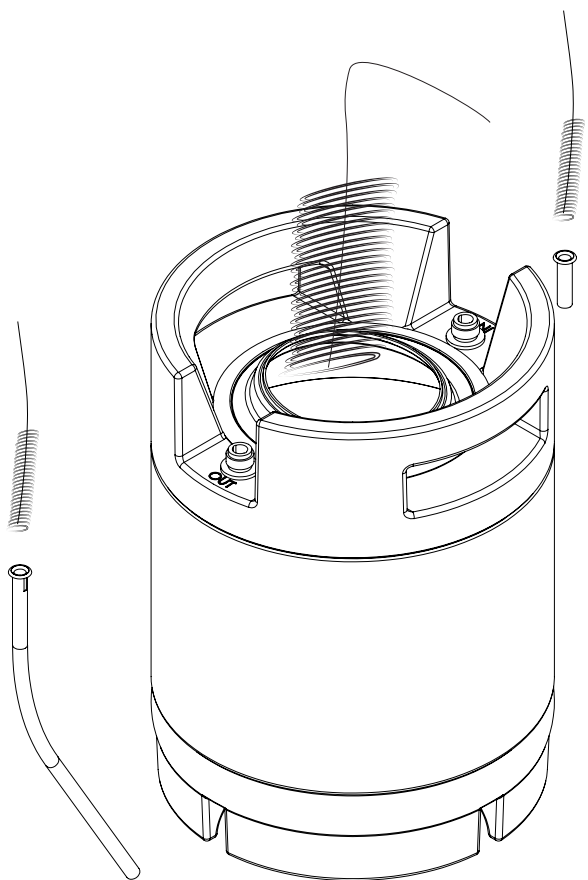
SERVING

USAGE &  
CARE

GLOSSARY

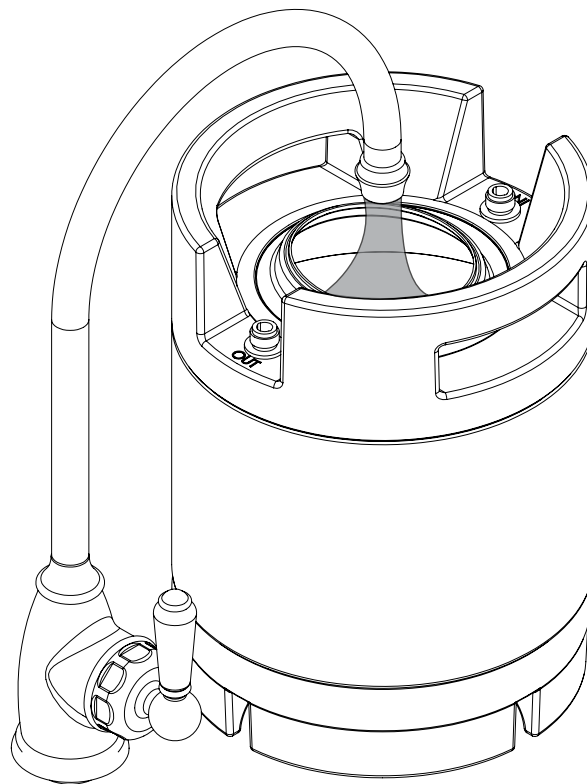
# 10

Use the Keg Brush to scrub the inside of the Brewing Keg, making sure to get in contact with all internal walls and crevices of keg, and the outside of the keg making sure to get the top opening and any spot that had contact with beer. Use Dip Tube brush to clean the Dip Tube.



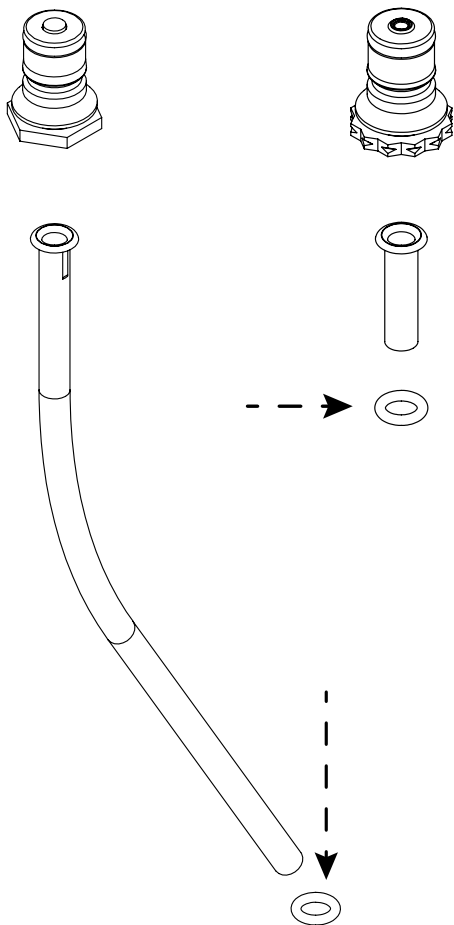
# 11

Dump all water inside Brewing Keg, give a quick rinse with clean water and let air-dry upside down until dry. Rinse all items inside container with clean water and let air dry. Be careful not to lose any O-rings!



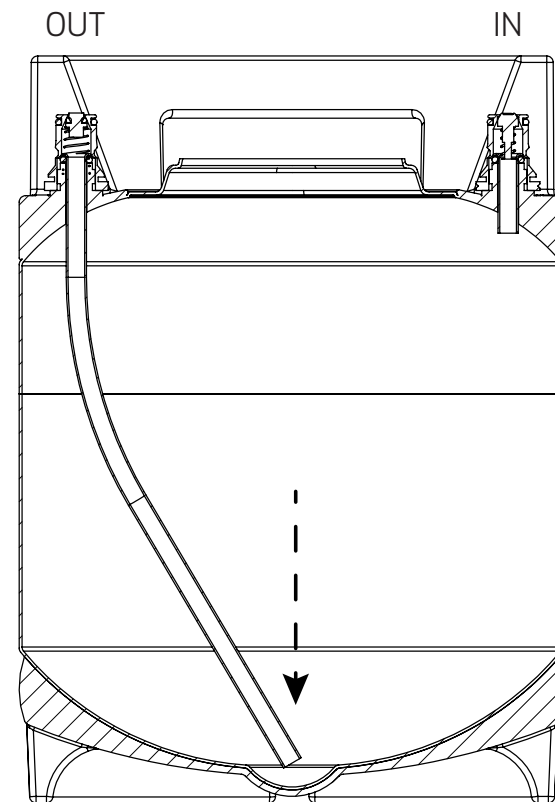
# 12

Reassemble all O-rings to their original part locations. When reassembling the O-rings make sure to use either water or a food-grade lubricant to ease them back into place.



# 13

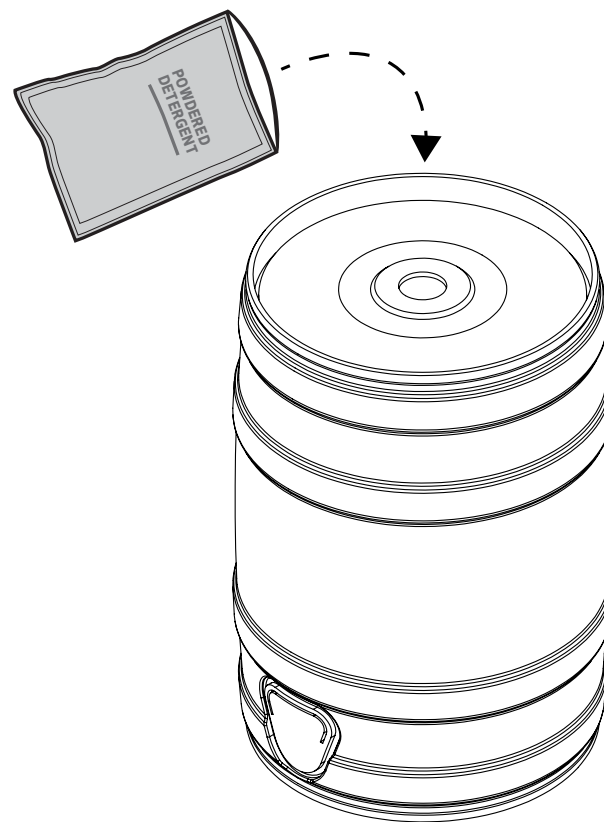
Make sure the IN/OUT keg posts are on the correct sides and are tightened down. Remember, the tube for the IN post is shorter than the Dip Tube for the OUT post. The Dip Tube is slightly angled and the end of it should touch the center of the bottom inside the Brewing Keg.



# SERVING KEG CLEANING:

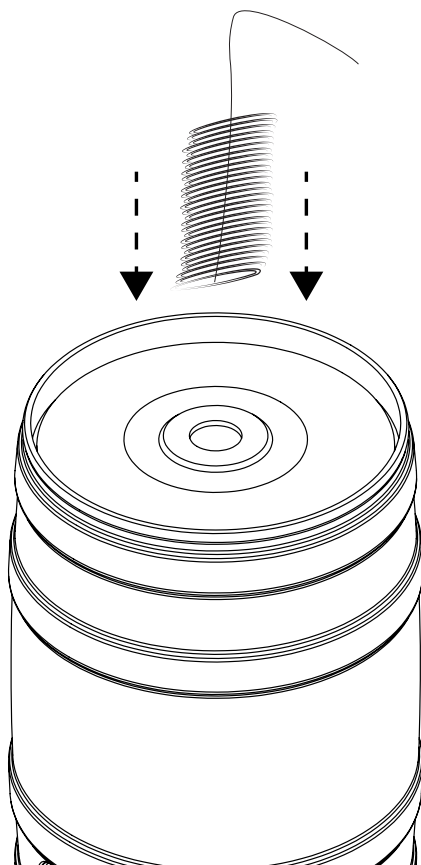
## 14

Inside the Serving Keg mix  $\frac{1}{2}$  teaspoon powdered dish washing detergent with enough hot tap water to almost fill the keg. Let it soak for 10 minutes, longer if there is hardened build-up.



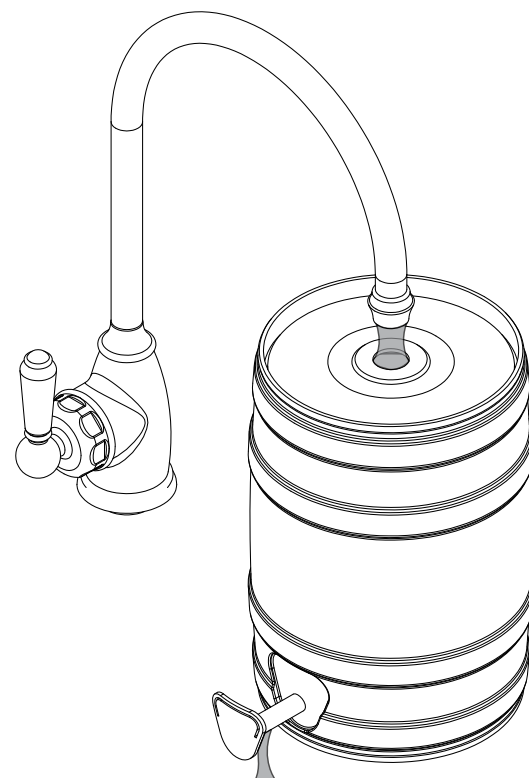
# 15

Use the Keg Brush to scrub the inside of the Serving Keg, making sure to get in contact with all internal walls and crevices of keg, and the outside of the keg making sure to get the top opening and any spot that had contact with beer. Scrub Dispensing Plug and rinse with clean water.



# 16

Place Serving Keg over a waste container or sink. Pull the spout of Serving Keg outward. Twist the spout counter clockwise to start dispensing the cleaning agent water from keg and through the spout. Let flow into sink or waste container for approximately 10 seconds. Turn spout clockwise to stop dispensing water and then push spout back into the keg.



# 17

Dump all water inside Serving Keg, give a quick rinse with clean water and let air-dry upside down until dry.

**REMEBER:  
NEVER  
USE  
ANY  
CLEANING  
AGENT  
INSIDE  
THE  
PICO  
UNIT.**

**POWDERED DETERGENTS  
OR DRY PACKS SHOULD  
ALWAYS BE USED  
IN CONTAINERS  
SEPARATE FROM  
THE PICO, LIKE A BUCKET  
OR BREWING KEG.**



# MANUAL GLOSSARY

**EVERYTHING  
 YOU NEED TO  
 IMPRESS  
 YOUR FRIENDS  
 AND BREW  
 CORRECTLY.**

<b>ADJUNCT</b>	A fermentable addition to the mash that includes sugars, syrups, and unmalted cereal grains such as corn, rice, oats that provide extra sugars in the wort.
<b>AERATE</b>	Introducing oxygen into the wort to make sure yeast can reproduce abundantly.
<b>ALE</b>	A generic term used for beers that are created using a top-fermenting yeast strain at a higher temperature than lager yeast strains.
<b>BACTERIA</b>	Single-celled organisms that reproduce quickly in specific environments. Integral to specific beer styles, particularly sours, and considered an off-flavor and flaw in the majority of all other beer styles.
<b>BUNG</b>	A plug inserted into the Bung Hole at the top of a cask or keg.
<b>CARBONATION</b>	Carbon dioxide (CO <sub>2</sub> ) is a naturally occurring by-product of fermentation. Keg Conditioning is natural carbonation created during fermentation when yeast metabolize sugars. Forced carbonation is the addition of CO <sub>2</sub> to the final beer.
<b>DOUGH IN</b>	Part of the mash process where grains soak to activate and distribute temperature-specific enzymes.

<b>DRY HOP</b>	The addition of hops after initial fermentation to increase hop aroma without increasing hop bitterness.
<b>ESTERS</b>	Aromatic flavor compound created by yeast during fermentation. Esters contribute fruity aromas to beers.
<b>FERMENTATION</b>	The process where yeast break down sugars into carbon dioxide (CO <sub>2</sub> ) and alcohol.
<b>HOPS</b>	Hops are the flower cones of a the hop plant, used to contribute bitterness, aroma, and anti-microbial qualities to beer. Commercially available in pellet, plugs, whole cone, or extracted forms.
<b>KRAUSEN</b>	Thick, moussy foam on the top of fermenting wort that occurs during the beginning of fermentation.
<b>LAGER</b>	A generic term used for beers that are created using a bottom-fermenting yeast strain at a lower temperature than ale yeast strains. Also a term for cold-storing a beer for an extended amount of time.
<b>MALT</b>	Barley, or other grains, used during the mash and brewing process. Contributes a wide range of flavors from uncooked bread to roasted coffee, depending on its kiln or roasted level.

<b>MASH</b>	The process of steeping milled grains in hot water in order to activate enzymes and extract sugars from the malt.
<b>PHENOLS</b>	Chemical compounds derived from yeast activity during fermentation. Vary from spicy, peppery, smoky, medicinal, and many more.
<b>PITCH</b>	The process of adding yeast to cooled wort to start fermentation.
<b>PRIMING</b>	The act of adding a small amount of sugar to fermented beer in order to restart fermentation and create carbonation inside bottle or keg.
<b>PSI</b>	Pounds per square inch. Measurement used for determining how much CO <sub>2</sub> is diffused into the beer.
<b>TRUB</b>	A solid material composed of proteins and hop particles that fall out of solution during brewing and fermentation.
<b>WILD YEAST</b>	Yeast that is naturally airborne and ubiquitous. Typically used in sours or wild ales, considered an off-flavor in a majority of other beer styles.

<b>WORT</b>	Unfermented liquid containing sugars extracted from the malt grain during the mash process. Adding yeast to wort starts the fermentation process which transforms the wort into beer.
<b>YEAST</b>	Single-celled fungus that breaks down sugars in the wort during fermentation into carbon dioxide, alcohol, and creates various phenols or esters.

**WE  
HIGHLY  
SUGGEST  
USING THE  
FOLLOWING  
PAGES TO  
DOCUMENT  
YOUR  
BREWING  
JOURNEY.**

**SCRIBBLE,  
DOODLE,  
RECORD.  
IT'S UP  
TO YOU.**

## BREWING NOTES

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## BREWING NOTES

[illegible]

## BREWING NOTES

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## BREWING NOTES

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## BREWING NOTES

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# PICO INSTRUCTION MANUAL

