



BrewBuilt

# X2 UNI

## CONICAL ASSEMBLY & INSTRUCTION GUIDE

### WARNING



**Read entire manual for important safety information** before using your BrewBuilt X2 Uni Conical Fermenter. Failure to follow warnings could result in serious injury or death.

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X2 Shown  
With Popular  
Accessories

# GETTING STARTED

This guide will walk you through assembling and using your new conical fermenter.

## 1. READ AND UNDERSTAND THIS FULL MANUAL

Before your first use, read through this full manual, and make sure you understand the use & warnings.

## 2. CLEAN THE CONICAL

Before your first use, clean and rinse the conical along with all the parts and fittings. This will remove any leftover oil or dust from the manufacturing process. We recommend using PBW cleaner. Do not use bleach.

## 3. WATER TEST

After cleaning and rinsing, we also recommend filling your conical with water and familiarizing yourself with its operations prior to your first use.

### First Time Working With TC Clamps?

Before you tighten down TC clamps, make sure the gasket is seated correctly into both flanges.

Once the gasket is in place, loosen the clamp so it can be fitted around the flange ends.

You do not need to use any tools for leverage when tightening TC clamps. Hand tightening is enough for a secure, leak-proof connection.

#### **⚠ WARNING**

ALWAYS RELEASE PRESSURE from the fermenter before removing any TC connection, fitting, accessory, or lid clamp connected to the Fermenter. Read section below on how to release pressure from Fermenter.

## Parts List For X2 Uni

ITEM	DESCRIPTION	QTY
A	4" End Cap	1
B	4" TC Clamp	1
C	4" TC Gasket	1
D	1.5" Blowoff Barb	1
E	Silicone Blowoff Tube	1
F	1.5" TC Clamp	5
G	1.5" TC Gasket	5
H	1.5" TC End Cap	2
I	Conical Lid	1
J	Lid Clamp	1
K	Lid Gasket	1
L	Conical Body	1
M	1.5" TC Thermowell	1
N	1.5" TC Sample Valve	1
O	2" TC Gasket	1
P	2" TC Clamp	1
Q	2" Butterfly Valve	1
R	3/8" Leveling Foot	4



**SCAN QR**  
TO VIEW OUR  
POPULAR  
X2 CONICAL  
ACCESSORIES





## ASSEMBLING YOUR X2 CONICAL

### FEET

Thread each foot into the bottom of the legs on the Conical leaving about half an inch of thread visible. Adjust as needed.

### BLOWOFF

Place a 1.5" TC gasket into the open blowoff port on the conical lid and fasten the Blowoff U Barb with a 1.5" TC clamp, ensuring that the U Barb is pointing downward off the side of the conical. Slide ½" Silicone tubing over the barbed side of the U Barb. It's easiest to start with one side and then work it around until barbs are fully covered.

### THERMOWELL

Place 1.5" TC Gasket and Thermowell into the open port in front of the conical just below the etched BrewBuilt Logo and fasten in place using 1.5" TC clamp.

### SAMPLE VALVE

Place a 1.5" TC Gasket and Sample Valve into the open port halfway down the Conical base on the front of the unit and fasten using a 1.5" TC clamp. Make sure the Sample Valve is closed by turning it clockwise until it stops.

### BUTTERFLY VALVE

The Butterfly Valve opens in one direction, be sure to install it so the valve handle opens downward away from the conical bottom. Place 2" TC Gasket and Butterfly Valve on the bottom port of the conical and fasten in place using a 2" TC clamp.

### END CAPS

Place a 1.5" TC gasket into the open 1.5" TC port on the conical lid and fasten an end cap with a 1.5" TC clamp. Follow the same process to attach the other 1.5" end cap to the last open port on the cone.

## LID GASKET ASSEMBLY

- Flip the lid upside down and install a section of the gasket, flat side seating into the lid groove first. Lightly push the gasket in, installing it in the groove as you go around the lid.
- **Please Note**, the gasket is larger than the groove to help ensure a tight seal during fermentation. Continue pushing the gasket against itself and into the lid until it is in the groove and equally distributed without stretch points. Once you get the first piece of the gasket in the groove then you can use both hands to work the gasket around the lid and into the groove with your thumbs.



**GASKET ORIENTATION**  
Flat Side Into Lid Groove



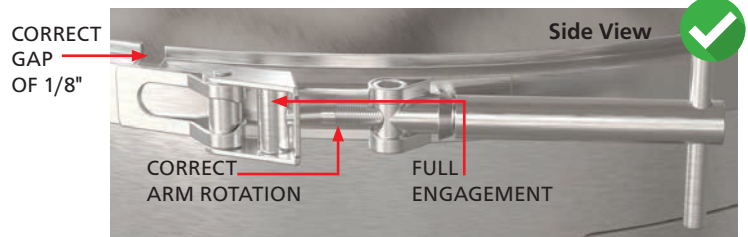
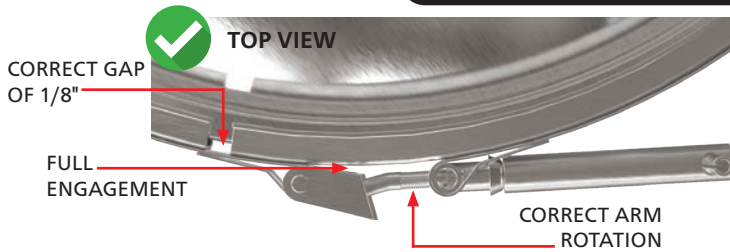
**GASKET INSTALLATION**  
With Lid Upside Down, Push Flat End Of Gasket Into Lid Groove

## LID CLAMP ASSEMBLY

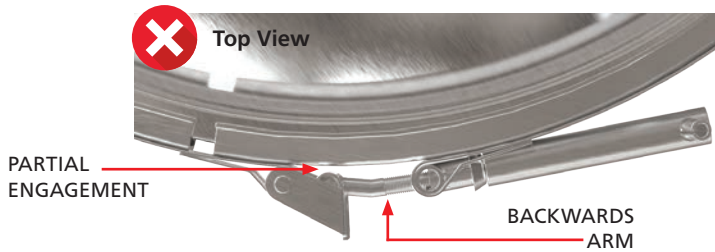
**⚠ WARNING** Improper assembly of the lid clamp can cause the X2 Lid to be released while under pressure, possibly resulting in injury or death.

- When installing the lid clamp, be careful to install it according to the pictures shown here.
- Ensure that the lid is centered on top of the conical body during assembly. The two should be centered so that the clamp seals down evenly.
- Lid Clamp should be entirely hand tightened so there is a 5/8" gap between the ends on the 25 and 38-gallon models and a 1/8" gap on the 7 and 14-gallon models. See assembly pictures below for proper setup.
- **Please Note:** The 25&38 gal models do not have a quick-release lid clamp. These sizes have a double barrel locked in place clamping system.
- **REQUIRED:** Before every use of your conical, add Vaseline or keg lube to your lid clamp threads before assembling. Lubrication reduces galling, extending the life of your lid clamp & eases installation.

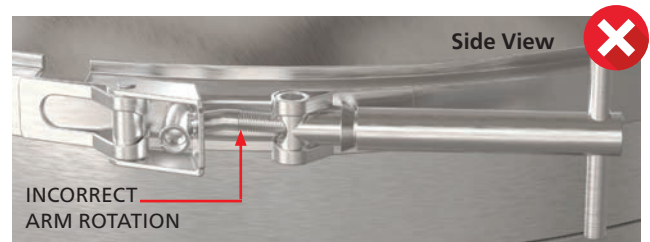
### CORRECT Lid Clamp Assembly for 7 & 14 Gallon X2



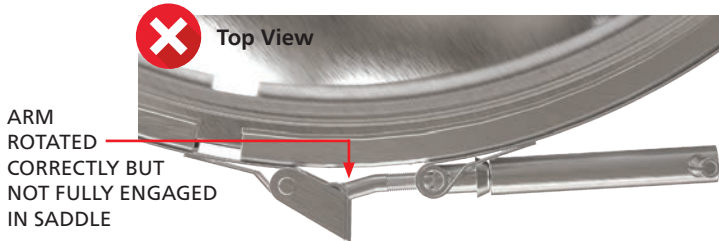
### INCORRECT Lid Clamp Assembly: Backwards Arm



### INCORRECT Lid Clamp Assembly: Rotated Arm



### INCORRECT Lid Clamp Assembly: Partial Engagement

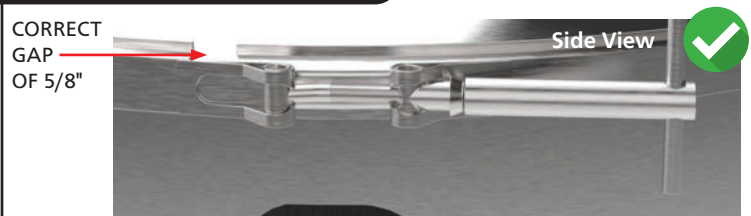
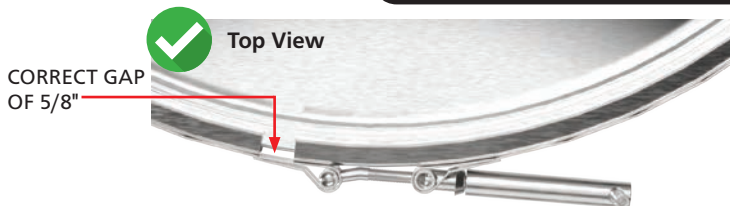


## ⚠ WARNING



Improper assembly of the lid clamp can cause the X2 Lid to be released while under pressure, possibly resulting in injury or death.

### CORRECT Lid Clamp Assembly for 25 and 38 Gallon X2



# IMPORTANT SAFETY INFORMATION

Please read this entire instruction manual for important safety information before using your BrewBuilt X2 Uni Conical Fermenter.

**⚠ WARNING** Failure to follow these warnings could result in serious injury or death.

## GENERAL PRECAUTIONS

- Follow all instructions and warnings provided with cleaning agents when cleaning and sanitizing Fermenter.
- Do not pick up Fermenter when full; it is heavy and the handles are not designed to safely lift a full Fermenter.

## PRESSURE HAZARDS

If sealed, the fermenter can be pressurized due to the production of CO<sub>2</sub> in fermentation or the introduction of compressed gas. When the Fermenter is pressurized, incorrect use can lead to a risk of the lid or fittings being launched with great force and causing serious injury or death. To reduce this risk, follow these precautions to safely pressurize and release pressure, and to prevent unintentional pressurization:

- Before removing the lid clamp, TC (Tri-Clamp) fittings, or accessories, release all pressure by opening the Pressure Relief Valve (PRV).
- Do not overfill your conical past the maximum volumes listed below. Overfilling can cause fermentation material called Krausen to clog the blowoff and airlock.
- Do not place pellet hops, whole hops, oak chips, or other items directly into the fermenter. Loose material can clog the blowoff and airlock. Use a mesh bag to contain these types of materials.
- Do not alter or change the Pressure Relief Valve (PRV) built into the lid.
- Pressurize with compressed gas only with the Pressure Pack with Clear Float Technology. Always use an approved CO<sub>2</sub> regulator, with a functional low-pressure gauge. Never exceed 15 PSI.
- Do not seal/cap an actively fermenting beer, except when using the BrewBuilt Kit for Fermenting Under Pressure.
- When the optional BrewBuilt Flex Chamber is installed always keep the bottom butterfly valve open, allowing CO<sub>2</sub> to be released. Failure to keep the valve open could cause the Flex Chamber to become over pressurized and explode.

## GENERAL USE

**SANITIZE** — Always sanitize your Conical before filling it with wort. This includes opening your sample valve and dump ports to ensure sanitizer makes contact with every nook 'n cranny. We recommend Star San or a similar sanitizer. Never use a bleach solution as bleach will cause pitting and corrosion on the surface of the stainless steel.

**FILLING** — Your conical can be filled by dumping wort through the top, or pumped in via the sample valve.

**⚠ WARNING** Do not overfill your conical past the maximum volumes listed below. Excess volume during fermentation can cause fermentation material called Krausen to clog the blowoff and airlock causing over-pressurization of the conical to occur.

### MAXIMUM FILL LEVELS:

- 7 Gallon X2 – 5.5 gallons liquid
- 14 Gallon X2 – 11 gallons liquid
- 25 Gallon X2 – 21.5 gallons liquid
- 38 Gallon X2 – 33 gallons liquid

**FERMENTATION** — With the blowoff barb and silicone blowoff hose connected, place the end of the silicone blowoff tubing into a bucket filled with water. We prefer the silicone tubing as opposed to a rigid stainless blowoff as silicone tubing is much easier to remove and clean between batches. Silicone also allows greater flexibility with regards to blowoff location.

**⚠ WARNING** During fermentation, never close off/cap your X2 except when using the BrewBuilt Kit for Fermenting Under Pressure. This includes capping towards the end of fermentation!

If you wish to add pellet hops, whole hops, oak, or any other loose material to the fermentation we recommend using a mesh bag. Boil the mesh bag before use to ensure sanitization.

**⚠ WARNING** Do not place pellet hops, whole hops, oak chips, or other items directly into the fermenter. Loose material can clog the blowoff and airlock causing over-pressurization of the conical to occur. Use a mesh bag to contain these types of materials.

**TEMP CONTROL** — Controlling your fermentation temperature is one of the most important things you can do to make better beer. There are several options for temperature control. One option is to place your Conical in a temp controlled environment. The easiest way to do this is by using a refrigerator that is hooked up to a temperature controller, effectively turning it on and off as needed to maintain your set point. Or you can build your own fermentation chamber using insulation and an AC unit. The downside of these options is they require more space and take longer to cool since it's cooling the fermenting wort from the outside in. Either way, your BrewBuilt Conical comes with a Thermowell that allows you to insert the temperature probe from a temp controller, which will monitor your fermentation temp and power on the fridge or AC unit whenever chilling is needed.

For the ultimate in fermentation temperature control, upgrade to a BrewBuilt CoolStix & Neoprene jacket along with a BrewBuilt IceMaster Glycol Chiller. Learn more about using a CoolStix™ in the USING OPTIONAL COOLSTIX™ section on page 8.

**DUMPING YEAST AND TRUB** — One of the most significant benefits of a Conical Fermenter is the ability to dump yeast & trub from the bottom port. This couldn't be easier with the 2" TC Butterfly Valve on the bottom of your conical. Another added advantage is being able to harvest your yeast for use in future batches. Regardless of whether you're dumping trub, hops, or yeast, you will want to guide that slurry into a drain or receiving vessel like a bucket or jar. Be sure to spray the Butterfly Valve down with sanitizer prior to dumping. Also, keep in mind that you will need to open one of the ports on the

top of the conical to allow air to replace the liquid that is flowing out the bottom. Another option is the BrewBuilt Flex Chamber that connects to the bottom of the conical and allows you to collect and dump yeast and trub. Learn more about using the Flex Chamber in the USING OPTIONAL X2 ACCESSORIES section below.

**TRANSFERRING FINISHED BEER** — Racking your beer with the sample port is as easy as hooking up some sanitized tubing and opening the valve. Remember that you will need to either open one of the ports on the top of the conical to allow air to replace the liquid that is flowing out. To transfer out of your X2 using CO<sub>2</sub> pressure see the section under Pressure Package below.

## USING OPTIONAL X2 ACCESSORIES

Additional information on using optional accessories including the BrewBuilt Pressure Pack, Flex Chamber, and Coolstix. You will find additional instructions for these products below.

### The Flex Chamber

#### **⚠ WARNING**

*When the optional BrewBuilt Flex Chamber is installed, always keep the bottom butterfly valve open, allowing CO<sub>2</sub> to be released. Failure to keep the valve open could cause the Flex Chamber to become over-pressurized and explode. When ready to remove the Flex Chamber, depressurize the system with the butterfly valve open. This allows any pressure to leave the Flex Chamber. After relieving all pressure in the system, you can close the butterfly valve and safely remove the Flex Chamber.*

The Flex Chamber is explicitly designed for use with a BrewBuilt X2 Conical Fermenter. It attaches directly to the 2" butterfly dump valve and can be used for removing trub, harvesting yeast, and many other tasks.



#### **PREPARING YOUR FLEX CHAMBER FOR USE EACH TIME**

1. Soak or spray the Flex Chamber and all parts — caps, gaskets, clamps, etc. — with sanitizer before assembling and attaching it to your conical dump port.
2. Assemble your Flex Chamber by attaching the lid and threading the caps onto the threaded ports on each side.
3. Spray sanitizer into the closed butterfly valve on your conical dump port and the top of the Flex Chamber and its TC gasket. Fasten the Flex Chamber to the butterfly valve with a 2" TC clamp.

**TIP:** *If you are connecting the Flex Chamber to a full X2 conical, it's essential to understand some basic displacement concepts. The empty Flex Chamber is filled with gas (oxygen) that will be sent up through your beer. If this happens post-fermentation it could negatively impact the beer's flavor. See below to learn how to use your Flex Chamber side ports to flush with CO<sub>2</sub>.*

#### **COLLECTING & DUMPING TRUB WITH FLEX CHAMBER**

The ability to remove trub and hop sediment is one of the key advantages of a conical fermenter. With the butterfly valve open and the Flex Chamber attached, trub separates directly into the Flex Chamber, which can then be easily removed. Follow the process outlined next.

1. If you are using the conical with the Pressure Pack lid, make sure the entire conical system has been depressurized and that the bottom butterfly valve is in the open position. For instructions on releasing pressure see the section below titled "Releasing Pressure".
2. When you are sure the system has been depressurized, close the butterfly valve at the bottom of the conical.
3. Place a bowl or small bucket below the Flex Chamber to collect drips and un-clamp the Flex Chamber from the butterfly valve.

#### **FLUSHING THE FLEX CHAMBER WITH CO<sub>2</sub>**

An optional step is to flush your Flex Chamber with CO<sub>2</sub> before attaching it. This will help eliminate oxygen from the Flex Chamber. You can easily do this by attaching a ball lock adapter (Part# KG500) to one of the threaded side ports. Here's how to effectively flush the Flex Chamber with CO<sub>2</sub>.

1. Soak or spray the Flex Chamber and all parts — caps, gaskets, clamps, etc. — with sanitizer before assembling and attaching it to your conical dump port.
2. Attach the Flex Chamber to the bottom of the butterfly valve, keeping the butterfly valve closed. Remove one black side cap and install the KG500 ball lock adapter. Slightly loosen the other black cap on the opposite side of the Flex Chamber so that CO<sub>2</sub> can escape while flushing.
3. Set the regulator on your CO<sub>2</sub> tank to its lowest possible setting, i.e. 1–2 psi, and connect your Ball Lock Gas QD to the KG500 ball lock adapter.
4. Allow gas to flow out of the Flex Chamber for a few seconds to ensure all the oxygen has been flushed. Tighten the black cap. You can replace the KG500 with the black cap or leave it in place for fermentation.

### Pressure Package

#### **⚠ WARNING**

If sealed, the fermenter can be pressurized due to the production of CO<sub>2</sub> in fermentation or the introduction of compressed gas. When the Fermenter is pressurized, incorrect use can lead to a risk of the lid or fittings being launched with great force and causing serious injury or death. To reduce this risk, follow these precautions to safely pressurize and release pressure, and to prevent unintentional pressurization:

- *Before removing the lid clamp, TC (Tri-Clamp) fittings, or accessories, release all pressure by opening the Pressure Relief Valve (PRV).*
- *Do not overfill your conical past the maximum volumes listed below. Overfilling can cause fermentation material called Krausen to clog the blowoff and airlock.*
- *Do not place pellet hops, whole hops, oak chips, or other items directly into the fermenter. Loose material can clog the blowoff and airlock. Use a mesh bag to contain these types of materials.*
- *Do not alter or change the Pressure Relief Valve (PRV) built into the lid.*
- *Pressurize with compressed gas only with the BrewBuilt Kit for Fermenting Under Pressure. Always use an approved CO<sub>2</sub> regulator, with a functional low-pressure gauge. Never exceed 15 PSI.*
- *During fermentation, never close off/cap your X2 except when using the BrewBuilt Kit for Fermenting Under Pressure.*
- *When the optional BrewBuilt Flex Chamber is installed always keep the bottom butterfly valve open, allowing CO<sub>2</sub> to be*

released. Failure to keep the valve open could cause the Flex Chamber to become over-pressurized and explode.

The Pressure Pack, specifically designed to work with BrewBuilt X2 Conical Unitanks, unlocks many possibilities. Apply low pressure before cooling to eliminate sucking oxygen back in. Use it to grab a sample or transfer finished beer to a keg in a true oxygen-free environment. The Clear Float allows sampling or transferring of the clearest possible beer from the top down! In this guide. Please read and follow the additional instructions that come with your Pressure Pack Kit.

## INSTALLATION

Assemble the Pressure Pack lid per the diagram. **DO NOT USE TEFLON TAPE** to assemble threaded body connects as they seal with the included o-rings. When attaching the Pressure Pack lid to your X2 conical, be sure your TC gasket is seated correctly, and then tighten down the TC clamp. Follow instructions that come with your Pressure Pack lid.

**TIP:** A welded U-Hook on the bottom of the Pressure Pack Lid can be used to hang drawstring bags for flavoring additions.

## APPLYING PRESSURE

**FIRST TEST** — First, take a moment and read the warnings above. For safety, we always recommend the first pressure test be made while the conical is filled with water. After the conical is filled with water, replace the u-shaped blowoff with an included TC end cap. Before connecting CO<sub>2</sub> pressure be sure you have a working, accurate regulator with a low-pressure gauge. We recommend setting your regulator to 1–2 psi to start with and always less than 15 psi. Connect your gas-in ball lock QD on your CO<sub>2</sub> draft system to the gas-in body connect located on the Pressure Pack. The gas-in body connect has a notch on the side, while the beverage-out body connect does not. With 1-2 psi applied to the conical, practice releasing the pressure by unthreading the PRV cap. Read the section on releasing pressure slowly as instructed in the section 'Releasing Pressure' below.

## TRANSFERRING AND SAMPLING

The bev-out fitting is equipped with a unique floating dip tube that will pull beer from the top rather than the middle or bottom of the conical. We recommend using a ball lock jumper, a section of beer line with a beverage-out QD at both sides, to transfer beer from your X2 to the bottom of your keg. When applying pressure for sampling or transferring, start with a low pressure and increase only as needed. Keep in mind that your X2 Uni and Pressure Pack lid are rated at 15 psi, and the PRV will start releasing pressure around this point. Never apply more than 15 PSI to your X2.

**TIP:** Filling your keg from the bottom up will keep splashing to a minimum as beer will flow down the beverage dip tube and gently fill the keg from the bottom up. Lastly, pull up the PRV ring on the keg and set it in the open position to allow air (or CO<sub>2</sub> if you pre-purged the keg) to escape as your fresh beer flows in.

## RELEASING PRESSURE

**WARNING** Before removing the lid clamp, TC fitting, or any accessory, you must first release any pressure from your BrewBuilt Fermenter.

Releasing pressure can be achieved by pulling the ring on the Pressure Relief Valve (PRV) that is built into the lid (see image to the right). Slowly pull the ring until you hear the release of CO<sub>2</sub> (hissing) exiting the PRV. When the slow release of CO<sub>2</sub> has stopped, slowly unthread the PRV assembly. At any point while unthreading the PRV you hear additional CO<sub>2</sub> being released, stop and wait until the hissing stops. When no additional CO<sub>2</sub> is being released, slowly remove the PRV completely to ensure that all pressure has been removed from the fermenter. Only then is it safe to begin removing fittings or the lid clamp.



## TRANSFER CLEAR BEER TO KEG UNDER PRESSURE

Push your finished beer into a keg using CO<sub>2</sub> so it never becomes exposed to oxygen—it's simple and fast using the Pressure Pack. Thanks to the Clear Float stainless steel floating pick up, you'll be transferring the clearest beer from the top down.

Once your beer is ready to be packaged into a keg, follow these instructions. **NOTE:** you will need a Corny Keg Ball Lock Jumper Line (beverage tubing with bev-out ball lock connectors at both ends).

1. Fill your keg with sanitizer solution. Push the sanitizer out using CO<sub>2</sub>. Open the keg pressure relief valve to let CO<sub>2</sub> exit the keg during filling.
2. Attach your CO<sub>2</sub> tank to the gas-in post on your Pressure Pack lid and set it to around 10–12 psi.
3. Attach the Corny Keg Ball Lock Jumper Line to the bev-out post on your Pressure Pack lid.
4. Once you hook up the bev-out to the keg, beer will start flowing from the pressurized X2 Unitank into the unpressurized keg.
5. Once your beer has transferred, unhook the bev-out and gas-in connectors. Pressurize your keg.
6. Be sure to release any pressure from inside your X2 before opening it for cleaning.

## FERMENTING UNDER PRESSURE

**WARNING** Follow all special warnings and instructions that come with the optional BrewBuilt Kit for Fermenting Under Pressure. Do not pressure ferment without using the optional Kit for Fermenting Under Pressure.

If you wish to ferment under pressure, or capture CO<sub>2</sub> at the end of fermentation, you must use the optional BrewBuilt Kit for Fermenting Under Pressure. The optional hardware kit comes with a commercial-grade pressure relief that connects to the 1.5" TC port on the lid. It also comes with an adjustable spunding valve. The spunding valve allows you to set a safe pressure to ferment. With the BrewBuilt Kit for Fermenting Under Pressure installed, there are three safety relief valves: the standard pressure relief valve welded into the lid, the commercial 1.5" TC relief valve, and the PRV on the Spunding Valve. The Fermentation kit includes a no-foam krausen reducer, CellarScience® Foam-Axe to reduce the chance that krausen could enter any of the PRVs.



**SCAN QR**

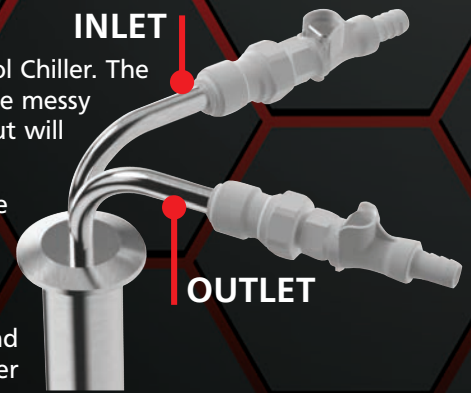
**TO PURCHASE OPTIONAL X2 ACCESSORIES!**

## Using Optional CoolStix™

A CoolStix™ mates with a cold liquid source such as our BrewBuilt Max 2 or Max 4 Glycol Chiller. The CoolStix includes quick disconnects that stay sealed when disconnected to help eliminate messy leaks. **NOTE** that CoolStix™ are designed to help regulate fermentation temperatures but will not lower your beer to cold crash temperatures (below 40°F) in all situations.

To connect the CoolStix™ to a Max 2 or Max 4 glycol system use 3/8" ID tubing and hose clamps. Insert the temperature probe from your Max 2 or Max 4 into the X2 Thermowell and follow the directions that come with the unit to set the temperature you wish to keep your X2 conical at.

The 7-gallon and 14-gallon models use a single rod CoolStix™ while the 25-gallon and 38-gallon models use the CoolStix™ Reactor Rod™ with four cooling rods. The larger CoolStix™ Reactor Rod™ is made using a 4" TC fitting, so you will need to remove the Pressure Pack top to insert the Reactor Rod™. After fermentation and cold aging are complete, you can replace the Reactor Rod™ with the Pressure Pack to sample and transfer under pressure.



1  
7 & 14 GALLON  
WITH COOLSTIX™



2  
25 GALLON WITH  
COOLSTIX™ REACTOR ROD™



3  
38 GALLON WITH  
COOLSTIX™ REACTOR ROD™



## SCAN QR

TO VIEW OUR POPULAR X2 ACCESSORIES



A

A | Neoprene Jacket



B

B | Conical Casters



C

C | Conical Heaters



D

D | Kit for Fermenting Under Pressure



E

E | CIP Spray Ball



F

F | Oxygen & Carbonation Stone