

Bruteless™ Hash Washing Vessels and Systems

User Manual
Rev2.1

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1. Introduction



From all of us here at PurePressure, thank you for your purchase!

Our ice water hash washing vessels are engineered to last for many years with proper care. The following user manual covers virtually every topic, including how to set up your equipment, how to use your washer, maintenance, and much more.

The instructions in this user manual are specifically focused on our Bruteless hash washing vessels, systems, and accessories. If you need something else, please contact us and we'd be happy to help.

Sales Inquiries:

sales@gopurepressure.com

General Questions:

info@gopurepressure.com

Technical Support:

support@gopurepressure.com

Contact:

 720-446-9565

 purepressure.com

   @gopurepressure

— **We're always here to help. Talk to us!**

1.1 Warranty

PurePressure's Bruteless hash washing vessels are built to last for many years with proper care. We want you to be satisfied with your equipment so if there are ever any concerns, please do not hesitate to contact us. PurePressure offers the following warranty coverage for all Bruteless hash washing vessels (20 gallon, 30 gallon, 44 gallon, and 65 gallon vessels):

- Lifetime end-user support.
- 2 year limited warranty against manufacturing defects for stainless steel barrel, false bottoms, and water pumps.
- 1 year limited warranty against manufacturing defects for insulation jacketing, gaskets, clamps, and fittings.

Warranty Replacements: In event of an approved warranty replacement or service, PurePressure will supply the necessary part(s) and special tools, if needed. Shipping costs may be covered by PurePressure at its discretion.

Replacement Parts: Replacement parts for various components are available at reasonable prices for customers directly from PurePressure.

Exclusions: Warranty coverage eligibility will be determined by PurePressure and at PurePressure's sole discretion. PurePressure's warranty obligations do not include (i) reasonable wear and tear; (ii) damage or corrosion caused by operation outside of the product's intended use; (iii) use of unapproved parts or unproved alterations to components; (iv) defects or damage caused by misuse, improper electrical power supply; (v) vandalism, negligence, misuse or Force Majeure Events; or (vi) gaskets & items expected to be consumed or expended during the normal and routine operation and maintenance. This warranty is eligible for the original purchaser only and is not transferable.

Disclaimer: Except as expressly set forth in this Limited Warranty and to the greatest extent allowed by law, PurePressure makes no other representations, warranties or conditions, express or implied, including any implied representations, warranties or conditions of merchantability, fitness for a particular purpose, non-infringement, and non-interference.

Warranty Procedures: If your equipment is covered under the warranty period, please contact us with detailed information regarding the issue you are experiencing so that we can get you operational as soon as possible. If you are experiencing a problem and are outside of the warranty period, we will do everything in our power to get you affordable replacement component(s) in a timely manner. Please send all warranty and replacement part related inquiries to support@gopurepressure.com. All returned parts must be accompanied by an RMA number, which we will supply.

PurePressure Factory Location: 2625 S Santa Fe Dr, Unit 1J, Denver CO 80223

1.2 What's Included: Bruteless Vessels

What's Included With Your Bruteless Vessel

Items may differ depending on your kit or model. See page 5 for what's included with our Bruteless Base, Pro, and Commercial systems. See [section 2.2](#) for a full explanation of accessories and available addons.

- 1.5" stainless steel ball valve
- Stainless steel 90° drain valve
- Gasket, cap and clamp for every sanitary port on your vessel
- Stainless steel lid with gasket
- Stainless steel removable false bottom
- Closed cell foam insulation with neoprene cover.

20 Gallon



30 Gallon



44 Gallon



65 Gallon



1.3 What's Included: Bruteless Systems

Note: *Drain vessels come without false bottoms.

What's Included With Your Bruteless System

Items may differ depending on your kit or model. (Parentheses indicates quantity)

Base System

- 30 Gallon Bruteless (1)
- 4" Straight Piece (1)
- *30 Gallon Bruteless (1)
- Ball Valve 1.5" (4)
- Clamps & Gaskets
- 90 Degree Elbow 1.5" (1)
- Hash Washing Paddle (1)
- 30 Gallon Triangular Dolly (1)
- Sight Glass 1.5" (1)
- Bruteless™ Complete 2 Hose Kit (1)

Pro System

- Bruteless™ Temperature Gauge 1.5" (1)
- 44 Gallon Bruteless (1)
- *30 Gallon Bruteless (2)
- 4" Straight Piece (1)
- Clamps & Gaskets
- Ball Valve 1.5" (6)
- Hash Washing Paddle (1)
- 90 Degree Elbow 1.5" (9)
- 30 Gallon Triangular Dolly (2)
- Check Valve 1.5" (3)
- Bruteless™ Complete 2 Hose Kit (2)
- Wye - Tri Clamp (2)
- Bruteless™ Water Pump with Fittings (2)
- Tee - Tri Clamp (1)
- Sight Glass 2" (1)

Commercial System

- Bruteless™ Temperature Gauge 1.5" (1)
- 65 Gallon Bruteless (1)
- *44 Gallon Bruteless (2)
- 4" Straight Piece (1)
- Ball Valve 1.5" (6)
- Clamps & Gaskets
- 90 Degree Elbow 1.5" (9)
- Hash Washing Paddle (1)
- Check Valve 1.5" (3)
- 44 Gallon Triangular Dolly (2)
- Wye - Tri Clamp (2)
- Bruteless™ Complete 2 Hose Kit (2)
- Bruteless™ Water Pump with Fittings (2)
- Tee - Tri Clamp (1)
- Sight Glass 2" (1)

1.4 Technical Specifications

Specification	20 Gallon	30 Gallon	44 Gallon	65 Gallon
Weight (Empty & Full)	54 lb / 221 lb	54 lb / 304 lb	69 lb / 436 lb	87 lb / 629 lb
Overall Dimensions (Height x Interior Diameter)	Height: 21.25" Diameter: 18.75"	Height: 28.5" Diameter: 18.75"	Height: 28.25" Diameter: 23.5"	Height: 23.25" Diameter: 30"
Insulation	1" closed cell foam antimicrobial neoprene	1" closed cell foam antimicrobial neoprene	1" closed cell foam antimicrobial neoprene	1" closed cell foam antimicrobial neoprene
Vessel Metal	Passivated 16GA 304 2B finish stainless steel	Passivated 16GA 304 2B finish stainless steel	Passivated 16GA 304 2B finish stainless steel	Passivated 16GA 304 2B finish stainless steel
False Bottom Metal	Passivated 16GA 304 brushed stainless steel	Passivated 16GA 304 brushed stainless steel	Passivated 16GA 304 brushed stainless steel	Passivated 16GA 304 brushed stainless steel
Maximum Suggested Capacity Per Wash (fresh frozen)	2,500 fresh frozen grams or 500 dry grams	5,000 fresh frozen grams or 1,000 dry grams	10,000 fresh frozen grams or 2,000 dry grams	15,000 fresh frozen grams or 5,000 dry grams



20 Gallon



30 Gallon



44 Gallon



65 Gallon

1.5 Warnings & Disclaimers



Please review this information carefully prior to system operation!

WARNING: GRAVITY FILTERING, DO NOT ALLOW PUMP SUCTION TO DAMAGE FILTRATION MESH BAGS ON FALSE BOTTOM.

WARNING: CHECK WITH LOCAL REGULATORY AUTHORITIES FOR WASTEWATER REQUIREMENTS OR REGULATIONS.

WARNING: FULL BRUTELESS VESSELS WITH MATERIAL, ICE, AND WATER ARE EXTREMELY HEAVY. DO NOT TIP OR LET A FULL VESSEL FALL. ALWAYS SUPPORT WITH A STRUCTURE OR PLATFORM THAT IS LOAD RATED APPROPRIATELY.

WARNING: COLD TEMPERATURES WHEN WASHING ICE WATER HASH ARE PRESENT. USE GLOVES OR OTHER INSULATIVE CLOTHING WHENEVER POSSIBLE.

WARNING: ALWAYS WEAR EYE PROTECTION AS WELL AS INSULATED GLOVES FOR SAFE OPERATION.

WARNING: RISK OF ELECTRIC SHOCK. AVOID STANDING IN WATER WHILE OPERATING ELECTRICAL EQUIPMENT. FAILURE TO COMPLY CAN RESULT IN SERIOUS INJURY AND OR DEATH.

DISCLAIMER: PUREPRESSURE, LLC IS NOT RESPONSIBLE FOR INJURY OR LOSS DUE TO IMPROPER USE OF EQUIPMENT.

WARNING: PUREPRESSURE IS NOT RESPONSIBLE FOR ANY REGULATORY VIOLATIONS OR FINES INCURRED BY THE BUSINESS OUR INDIVIDUAL OPERATING THIS EQUIPMENT IN THEIR OWN MUNICIPALITY.

DISCLAIMER: THIS PRODUCT IS NOT INTENDED TO BE USED WITH SOLVENTS.

DISCLAIMER: RUNNING PUMPS OR DRAINING VESSELS WITHOUT MONITORING FLUID TRANSFER CAN RESULT IN DAMAGED EQUIPMENT OR MATERIAL. PUREPRESSURE IS NOT LIABLE FOR OPERATOR NEGLIGENCE.

WARNING: ISOPROPYL ALCOHOL IS TOXIC. ALWAYS WORK IN A WELL VENTILATED AREA.

WARNING: ISOPROPYL ALCOHOL IS FLAMMABLE. EXTREME CARE SHOULD BE TAKEN WHILE USING THIS SOLVENT.

DISCLAIMER: CLEAN YOUR EQUIPMENT BEFORE FIRST TIME USE.

DISCLAIMER: PROPER ONGOING CLEANING MAINTENANCE IS REQUIRED IN ORDER TO ENSURE ALL SURFACES, PORTS, GASKETS, AND EQUIPMENT CONTINUE TO WORK PROPERLY. PLEASE REFER TO THE CLEANING INSTRUCTIONS AT THE END OF THIS USER MANUAL.

DISCLAIMER: REVERSE OSMOSIS (RO) PERMEATE IS MORE CORROSIVE THAN WATER PRODUCED BY THERMAL DISTILLATION DUE TO ITS HIGH DISSOLVED SALTS (TDS) LEVEL, PARTICULARLY CHLORIDES ([SOURCE](#)). IF YOU LEAVE STANDING WATER ON YOUR EQUIPMENT TO AIR DRY IT WILL CAUSE SURFACE CORROSION. PUREPRESSURE IS NOT RESPONSIBLE FOR ANY DAMAGES CAUSED DUE TO IMPROPER MAINTENANCE, CLEANING, OR CARE OF YOUR EQUIPMENT. CLEANING RECOMMENDATION SEE PAGE 28 FOR MORE DETAILS ON CLEANING YOUR EQUIPMENT PROPERLY.

(SOURCE: <https://www.sciencedirect.com/science/article/abs/pii/S0011916406004292>)

2. Bruteless Setup

Note: Ensure the work surface or table you are using is rated for the vessel you plan to use - a full vessel may weigh up to 650lbs (for a full 65 gallon vessel).

Setting Up Your Bruteless Vessel

Setting up your Bruteless hash washing station is simple. A little planning and forethought will go a very long way to ensure that your operation is set up as efficiently as possible. Before you proceed, make sure you are fully aware of where your water source is and where you intend to drain your waste water. Once a vessel is full of water, ice, and your material, it can be very difficult, if not impossible, to move until drained. We recommend to use a PurePressure dolly.

There are a large variety of accessories and configurations that are possible with Bruteless hash washers. This guide will explain first how to set up a single vessel, and then show you how to set up a Base, Pro, or Commercial system.



2.1 Unboxing your Bruteless

Steps to Safely Unbox your Vessel

- Ensure that the box or pallet your Bruteless vessel or system came in is on the floor or a level, sturdy surface.
- Carefully cut open boxes and packaging materials, being careful not to damage your equipment.
 - If your equipment was delivered on a pallet, take extra care to cut the packing material without damaging your insulating jacket.
- Remove all accessories and items from inside the vessel on to a separate table or work area. Stage your equipment for for assembly.
- Grab a friend and lift your Bruteless vessel off of the pallet or out of the cardboard box and set it onto the floor.



or



Platform Setup

If you purchased our lab grade hash washing platform or hash pump, please refer to the separate user manuals that are included with these respective add-ons for detailed construction steps.



2.2 Fittings & Vessel Accessories

Note: Accessory images are not to scale.

Your Bruteless Hash Washing Vessel or System Can be Customized in Numerous Ways

Multiple accessories are available to make your hash washing experience more productive. Below is a brief explanation of each and how they can be utilized; many of these items attach directly to the ports on your Bruteless washer simply using a gasket and clamp.



Sight Glass (2" or 1.5")

Allows you to view your trichome detachment and wash in real time



Ball Valve

Allows for flow control and water transfer management



Check Valve

Allows you to fill your vessel with a one-way valve; prevents backflow



Sanitary Clamp

Allows you to attach various accessories to your Bruteless ports, requires a gasket



Port Gasket

Creates a watertight seal when combined with a sanitary clamp for your port attachment



Port Cap

Allows you to cap a port when not in use



Wye

Allows you to split a fill or drain connection



Tee

Allows you to split a fill or drain connection

2.2.1 Accessories Cont.

Note: Accessory images are not to scale.



Wash Paddle

Used for agitating the material in your Bruteless washer



Water Pumps

Allows you to efficiently move water in and out of your Bruteless washer



Complete 2 Hose Kit

Gives you 25' of water fill and drain hose length, with fittings



Pump Remote Controls

Allows you to quickly turn your pumps on and off from a distance



Bruteless Dollies

Enables you to quickly and easily transport a filled Bruteless wash vessel - available in all 3 vessel matching sizes



Temperature Gauge

Allows you to quickly monitor wash temperatures. Available in analog or digital gauges.



220µm Open Wash Bags

Enables you to maximize your batch capacity - available in all 3 vessel matching sizes



Extra Clamps & Gaskets

Additional clamps and gasket packs help you swap accessories quickly and can be used for backups

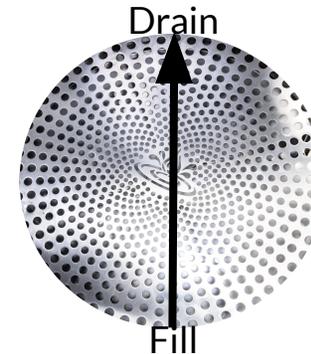
2.3 Ports

Bruteless Ports

Your Bruteless vessel comes with strategically placed ports. The 20 gallon comes with 2 ports, the 30 gallon comes with 4 ports, and both the 44 & 65 gallon vessels come with 5 ports. We recommend using them the following configuration.

Note: Additional accessories are suggested for optimal functionality. For a full list of Bruteless add-ons, visit our website at www.purepressure.com.

Vessel Top View



Your fill port and drain port are directly across from one another.

1.5" Skim Port
For pre-draining debris.

1.5" Temperature Gauge Port
Digital or Analog options available.

2" Sight Glass
For viewing your wash progress. (Not included on 30 gal vessel)



Vessel Front View

1.5" Drain Port
For draining into your filter vessel & bags.

1.5" Fill Port
For filling your vessel if using a pump.



Vessel Rear View

3. Bruteless Assembly Instructions

Assembling Your Bruteless System is Easy

The following instructions will show you how to set up your Bruteless hash washing system. This covers the Base, Pro, and Commercial setups.

While each system is designed to be used in a certain way, there are opportunities to customize the set up to your liking as you become more familiar with using it. Please refer to the accessories on [section 2.2](#) for more information on what kinds of accessories and addons are available.

We strongly suggest laying out each gasket, tri-clamp, accessories, and other components on a table before beginning setup to ensure that you have all of the parts you'll need in one place.

Before running your first wash, you should first fully clean your vessels, fittings, and hoses. Please see [section 4.6](#) for detailed cleaning instructions.

Lastly, if you need any help with assembly or want to talk to someone on the team, please contact us at support@gopurepressure.com or give us a call at 720-446-9565 during normal business hours.



3.1 Base System Assembly

Note: Gaskets must be used at every port connection in order to form a seal between the ports. The sanitary clamp holds the port assembly together, hand tighten only.

Bruteless Base System Assembly Instructions

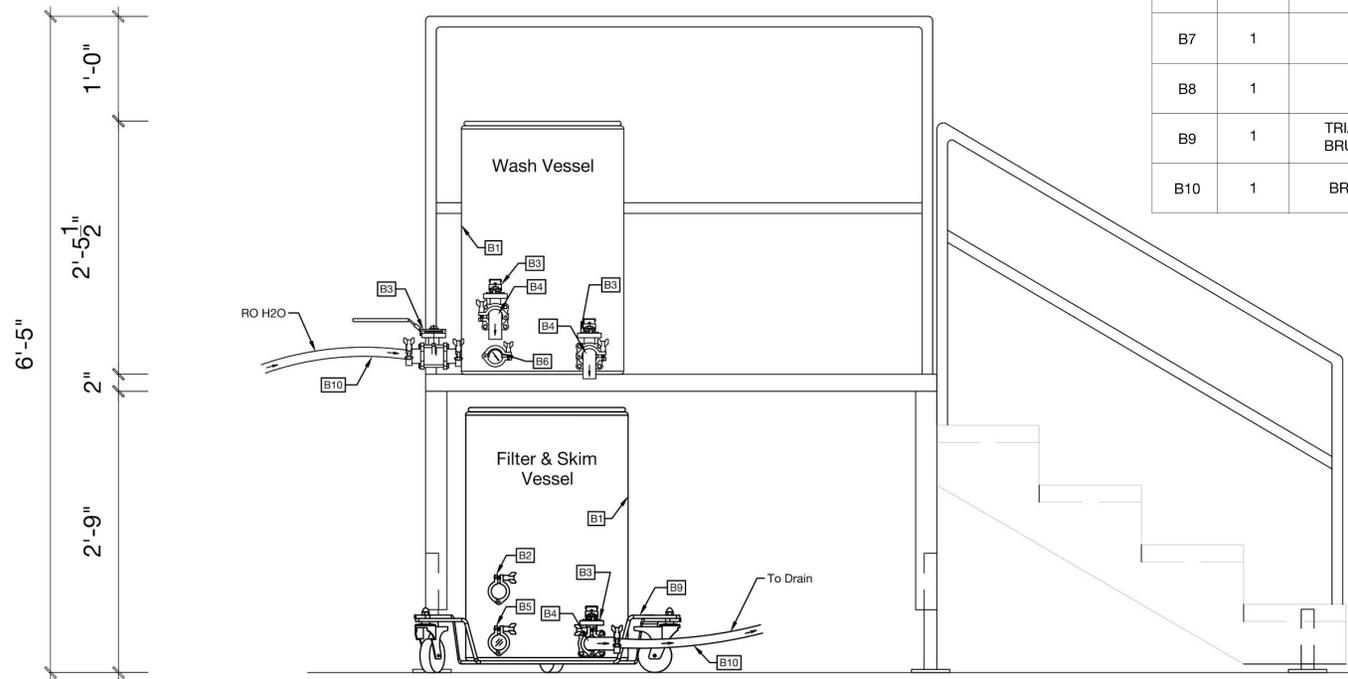
- Set up the platform and allow for 29" minimum platform height (from the floor to the platform standing area). This is required for the downspout to clear the lower filtration vessel. The false bottom goes into the upper vessel.
- The drain port needs to be oriented to drain into the lower filtration vessel.
- Place second vessel on triangular dolly and position directly under drain and skim ports. The lower filtration vessel shall contain the micron filtration bags.
- Attach ball valves and 90 degree elbows to the skim and drain ports to use both for draining.
 - There are options & alternatives for the skimport, sight glass, and temperature gauge. You can also utilize the skim port for a site glass or filling.
 - Do not use the temperature gauge in the upper skim port, it can damage the temperature gauge probe.
- The rear port is typically used for filling the vessel with a hose & ball valve assembly from your pump.
 - Alternatively, it can also be an additional port for a sight glass or temperature gauge. If you choose to use both the temperature gauge and the sight glass, top filling the vessel will be required.
- Be sure all additional unused ports are capped and ball valves closed before filling.

****REMEMBER TO CLEAN YOUR EQUIPMENT BEFORE USE***



3.2 Base System Assembly Cont.

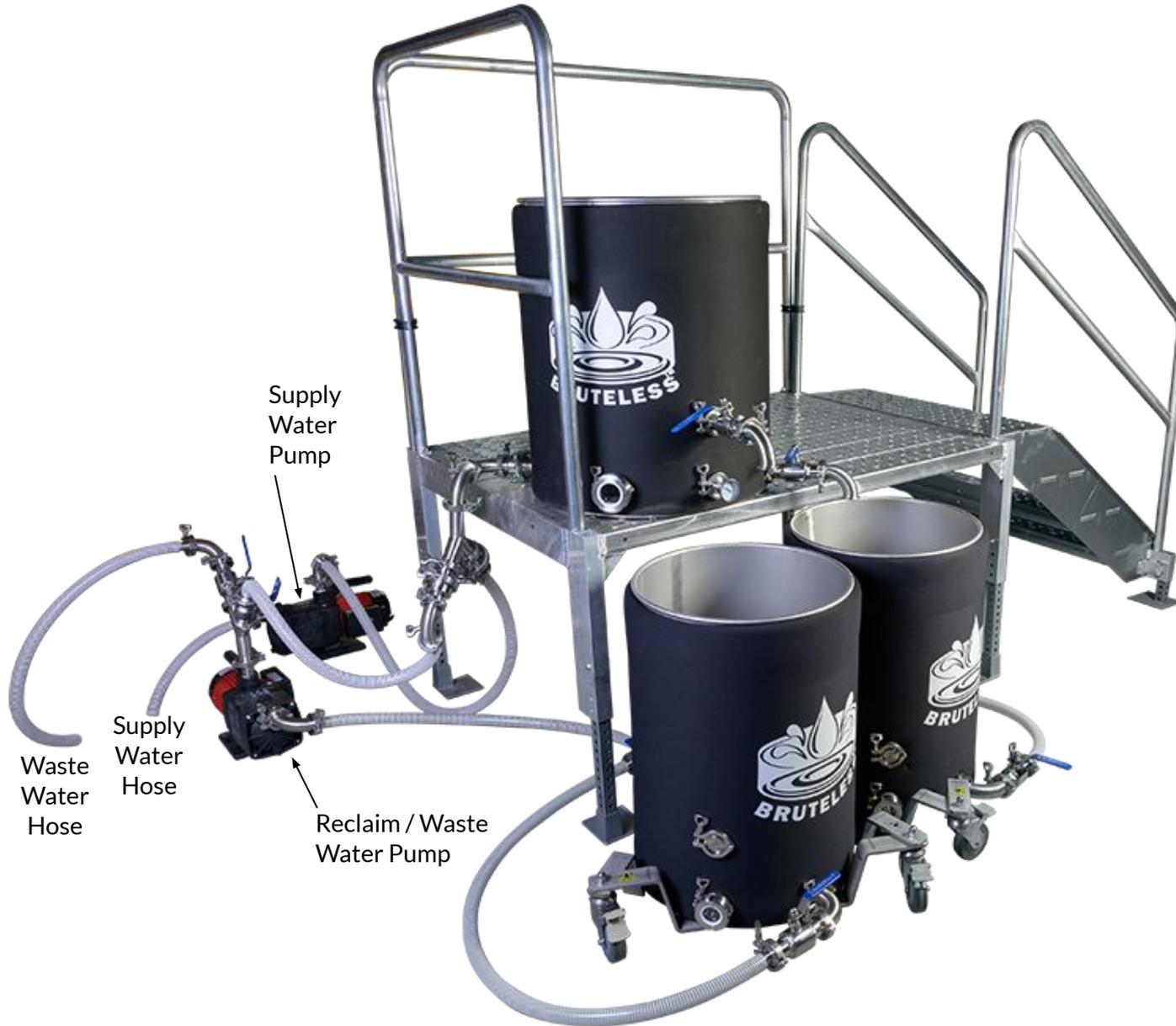
Bruteless Base System Assembly Diagram



Bruteless™ Base Hash Washing System				
TAG	QTY.	DESCRIPTION	SIZE	NOTES
B1	2	30 GALLON BRUTELESS HASH WASHING VESSEL	DIA:18.75" / H: 29.72"	16 GA. 304 STAINLESS STEEL 2B FOOD GRADE FINISH
B2	8	PORT CAP W/1.5" TRI-CLAMP FOR BRUTELESS HASH WASHING VESSEL	DIA: 1.984" / H: .25"	304 STAINLESS STEEL 3A CERTIFICATION
B3	4	BALL VALVE w/1.5" TRI-CLAMP CONNECTIONS	L: 8.5" / H: 4.5" / W: 2.375"	304 STAINLESS STEEL 3A CERTIFICATION
B4	2	90 DEGREE ELBOW W/1.5" TRI-CLAMP CONNECTIONS	L: 3.742" / H: 3.742" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B5	1	SIGHT GLASS w/1.5" TRI-CLAMP CONNECTIONS	L: 3.25" / H: 1.75" / W: 3.25"	304 STAINLESS STEEL 3A CERTIFICATION
B6	1	TEMPERATURE GAUGE w/1.5" TRI-CLAMP CONNECTIONS	L: 6" / DIA: 3.5"	304 STAINLESS STEEL 3A CERTIFICATION
B7	1	STRAIGHT SPOOL (4') w/1.5" TRI-CLAMP CONNECTIONS	L: 4" / H: 1.984" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B8	1	HASH WASHING PADDLE	L: 49" / DIA: 1" / PADDLE W: 5"	STAINLESS STEEL & POLYETHYLENE
B9	1	TRIANGULAR DOLLY FOR 30 GALLON BRUTELESS HASH WASHING VESSEL	500LBS MAX	304 STAINLESS STEEL LAB GRADE CASTERS
B10	1	BRUTELESS COMPLETE 2 HOSE KIT	L: 25' / DIA: 1"	FOOD GRADE PVC HOSE & STAINLESS STEEL FITTINGS

Bruteless Base Hash Washing™ System Elevation View

3.3 Pro System Assembly



3.4 Commercial System Assembly



3.5 Pro & Commercial System Assembly

Note: Gaskets must be used at every port connection in order to form a seal between the ports. The sanitary clamp holds the port assembly together, hand tighten only.

UPPER WASH VESSEL SETUP

- Set up the platform and allow for 29" minimum platform height (from the floor to the platform standing area). This is required for the downspout to clear the lower filtration vessels. The false bottom goes into the upper wash vessel.
- Gaskets must be used at every port connection in order to form a seal between the ports. The sanitary clamp holds the port assembly together, hand tighten only.
- The drain and skim ports need to be oriented to drain into the lower filtration vessels.
- Attach 90 degree elbows & ball valves to the skim and drain ports.
- The sight glass goes on the larger 2" port.
- Attach the temperature gauge directly underneath the skim port.
- The rear port is used for filling the vessel with one of the two pumps.
 - First, attach the check valve on your fill port. The flow arrow should point toward the vessel.
 - Attach the elbow, and Wye fitting next. The 2 ports on the Wye fitting also get check valves to prevent cross contamination from one water supply to another. The flow arrows should point toward the vessel.
 - Attach the two hoses to the Wye fitting. One will come from your supply water pump. The other will come from your reclaim / waste water pump.
 - The reclaim water pump is also used to recirculate water from the filtration vessels back to the upper wash vessel during operation. This pump is also used to transfer the waste water to a drain or collection tank after the batch is completed.
- Be sure any unused ports on the wash vessel are capped and ball valves closed before filling.

LOWER FILTRATION VESSEL SETUP

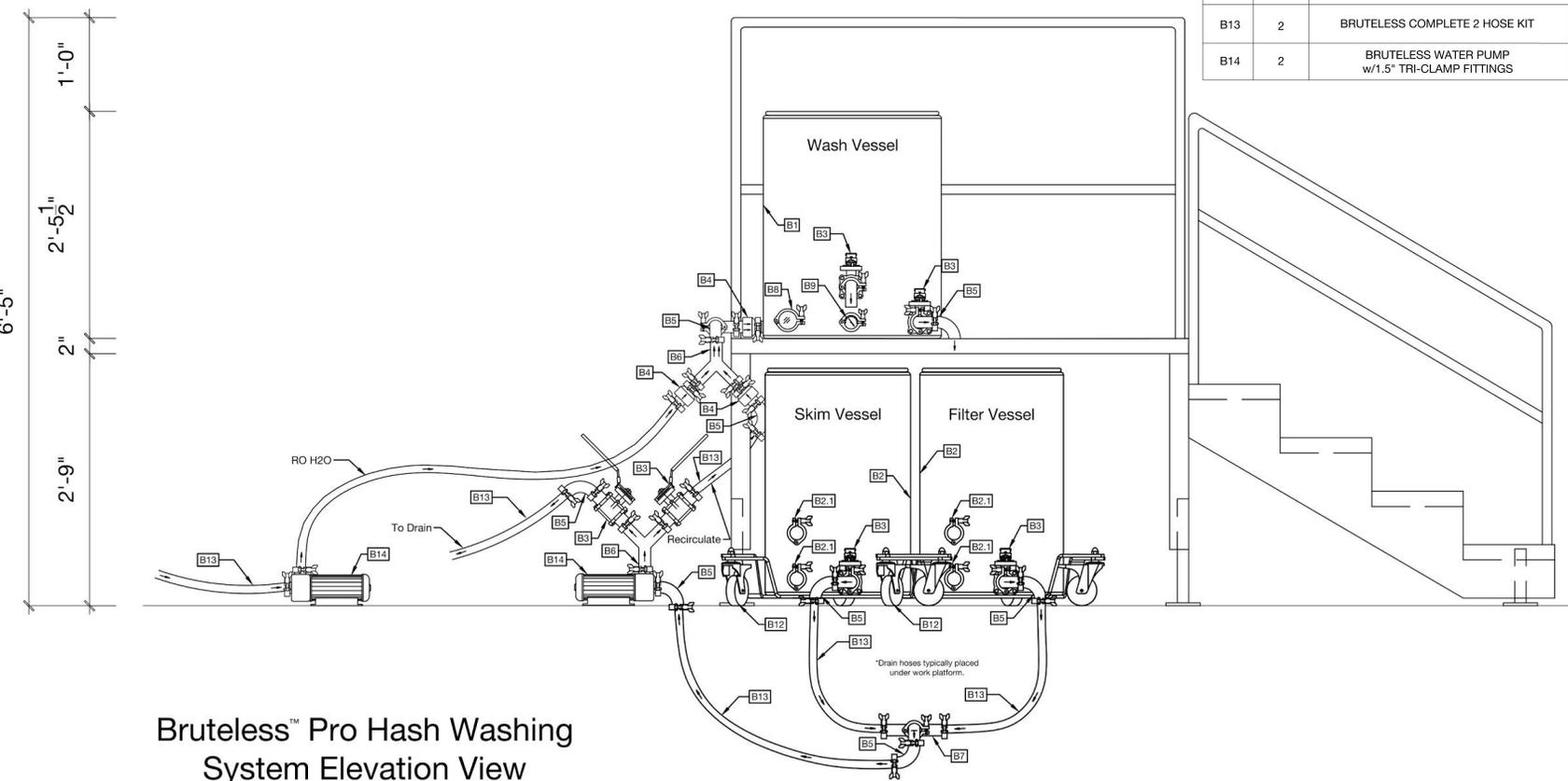
- Place the lower vessels on the assembled triangular dollies and position under the drain and skim ports. These filtration vessels will contain the stack of micron filtration bags during operation.
- Attach a single ball valve, 90 degree elbow and hose to the drain port of each vessel. Those two hoses are attached to a Tee fitting. A single hose will go from the Tee fitting to the inlet side of the pump used for waste water & recirculation.
- The outlet side of this pump gets a Wye fitting and 2 ball valves. One hose goes to waste water, the other goes back to the upper wash vessel Wye fitting.
- Be sure any unused ports on the filtration vessels are capped and ball valves closed before filling.

REMEMBER TO CLEAN YOUR EQUIPMENT BEFORE USE

3.6 Pro System Assembly

Bruteless Pro System Assembly Diagram

Bruteless™ Pro Hash Washing System				
TAG	QTY.	DESCRIPTION	SIZE	NOTES
B1	1	44 GALLON BRUTELESS HASH WASHING VESSEL	DIA: 23.5" / H: 29.47"	16 GA. 304 STAINLESS STEEL 2B FOOD GRADE FINISH
B2	2	30 GALLON BRUTELESS HASH WASHING VESSEL	DIA: 18.75" / H: 29.72"	16 GA. 304 STAINLESS STEEL 2B FOOD GRADE FINISH
B2.1	15	PORT CAP w/1.5" TRI-CLAMP FOR BRUTELESS HASH WASHING VESSEL	DIA: 1.984" / H: .25"	304 STAINLESS STEEL 3A CERTIFICATION
B3	6	BALL VALVE w/1.5" TRI-CLAMP CONNECTIONS	L: 8.5" / H: 4.5" / W: 2.375"	304 STAINLESS STEEL 3A CERTIFICATION
B4	3	CHECK VALVE w/1.5" TRI-CLAMP CONNECTIONS	L: 4.5" / DIA: 4"	304 STAINLESS STEEL 3A CERTIFICATION
B5	9	90 DEGREE ELBOW w/1.5" TRI-CLAMP CONNECTIONS	L: 3.742" / H: 3.742" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B6	2	WYE FITTING w/1.5" TRI-CLAMP CONNECTIONS	L: 6.5" / H: 6.75" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B7	1	TEE FITTING w/1.5" TRI-CLAMP CONNECTIONS	L: 5.5" / H: 2.367" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B8	1	SIGHT GLASS w/2" TRI-CLAMP CONNECTIONS	L: 3.25" / H: 1.75" / W: 3.25"	304 STAINLESS STEEL 3A CERTIFICATION
B9	1	TEMPERATURE GAUGE w/1.5" TRI-CLAMP CONNECTIONS	L: 6" / DIA: 3.5"	304 STAINLESS STEEL 3A CERTIFICATION
B10	1	STRAIGHT SPOOL (4') w/1.5" TRI-CLAMP CONNECTIONS	L: 4" / H: 1.984" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B11	1	HASH WASHING PADDLE	L: 49" / DIA: 1" / PADDLE W: 5"	STAINLESS STEEL & POLYETHYLENE
B12	2	TRIANGULAR DOLLY FOR 30 GALLON BRUTELESS HASH WASHING VESSEL	500LBS MAX	304 STAINLESS STEEL LAB GRADE CASTERS
B13	2	BRUTELESS COMPLETE 2 HOSE KIT	L: 25' / DIA: 1"	FOOD GRADE PVC HOSE & STAINLESS STEEL FITTINGS
B14	2	BRUTELESS WATER PUMP w/1.5" TRI-CLAMP FITTINGS	L: 4" / H: 1.984" / W: 1.984"	27 GPM w/1/2HP MOTOR 110v / 800w

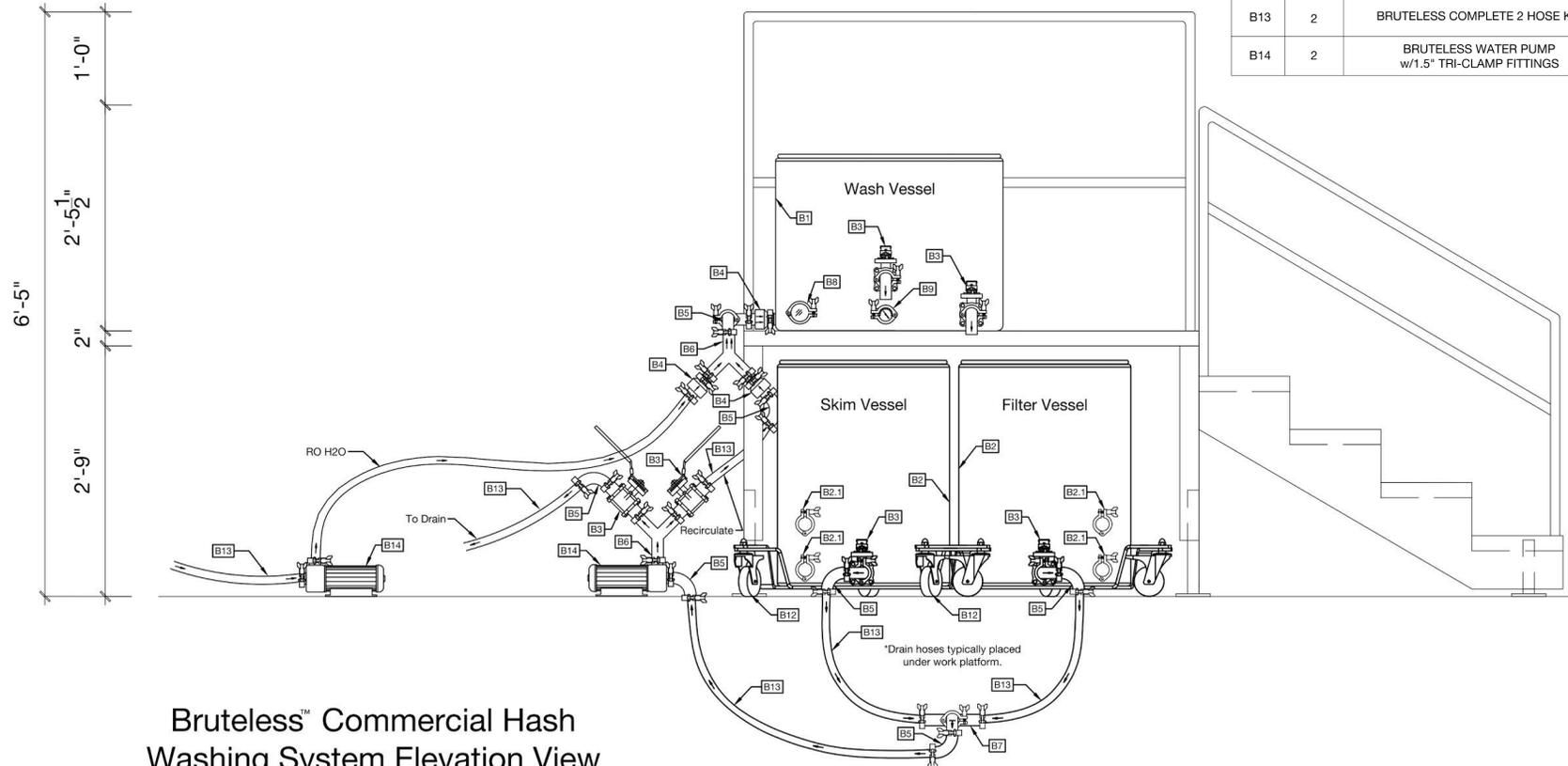


Bruteless™ Pro Hash Washing System Elevation View

3.7 Commercial System Assembly

Bruteless Commercial System Assembly Diagram

Bruteless™ Commercial Hash Washing System				
TAG	QTY.	DESCRIPTION	SIZE	NOTES
B1	1	65 GALLON BRUTELESS HASH WASHING VESSEL	DIA: 30" / H: 23.25"	16 GA. 304 STAINLESS STEEL 2B FOOD GRADE FINISH
B2	2	44 GALLON BRUTELESS HASH WASHING VESSEL	DIA: 23.5" / H: 29.47"	16 GA. 304 STAINLESS STEEL 2B FOOD GRADE FINISH
B2.1	15	PORT CAP W/1.5" TRI-CLAMP FOR BRUTELESS HASH WASHING VESSEL	DIA: 1.984" / H: .25"	304 STAINLESS STEEL 3A CERTIFICATION
B3	6	BALL VALVE w/1.5" TRI-CLAMP CONNECTIONS	L: 8.5" / H: 4.5" / W: 2.375"	304 STAINLESS STEEL 3A CERTIFICATION
B4	3	CHECK VALVE w/1.5" TRI-CLAMP CONNECTIONS	L: 4.5" / DIA: 4"	304 STAINLESS STEEL 3A CERTIFICATION
B5	9	90 DEGREE ELBOW W/1.5" TRI-CLAMP CONNECTIONS	L: 3.742" / H: 3.742" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B6	2	WYE FITTING w/1.5" TRI-CLAMP CONNECTIONS	L: 6.5" / H: 6.75" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B7	1	TEE FITTING w/1.5" TRI-CLAMP CONNECTIONS	L: 5.5" / H: 2.367" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B8	1	SIGHT GLASS w/2" TRI-CLAMP CONNECTIONS	L: 3.25" / H: 1.75" / W: 3.25"	304 STAINLESS STEEL 3A CERTIFICATION
B9	1	TEMPERATURE GAUGE w/1.5" TRI-CLAMP CONNECTIONS	L: 6" / DIA: 3.5"	304 STAINLESS STEEL 3A CERTIFICATION
B10	1	STRAIGHT SPOOL (4') w/1.5" TRI-CLAMP CONNECTIONS	L: 4' / H: 1.984" / W: 1.984"	304 STAINLESS STEEL 3A CERTIFICATION
B11	1	HASH WASHING PADDLE	L: 49" / DIA: 1" / PADDLE W: 5"	STAINLESS STEEL & POLYETHYLENE
B12	2	TRIANGULAR DOLLY FOR 44 GALLON BRUTELESS HASH WASHING VESSEL	700LBS MAX	304 STAINLESS STEEL LAB GRADE CASTERS
B13	2	BRUTELESS COMPLETE 2 HOSE KIT	L: 25' / DIA: 1"	FOOD GRADE PVC HOSE & STAINLESS STEEL FITTINGS
B14	2	BRUTELESS WATER PUMP w/1.5" TRI-CLAMP FITTINGS	L: 4" / H: 1.984" / W: 1.984"	27 GPM w/1/2HP MOTOR 110v / 800w



Bruteless™ Commercial Hash Washing System Elevation View

4. Washing Suggestions

Getting The Most Out of Your Bruteless System

There are a number of helpful tips and tricks contained in section 3 to help you extract the best possible quality and yield from your ice water hash washing process. For further reading, please review the following sections:

1. Fresh Frozen vs. Dried Material (section 4.1)
2. How to Wash & Agitation Suggestions (section 4.2)
3. Filtration & Collection (section 4.3)
4. Freeze Drying (section 4.5)
5. Process Temperature Management (section 4.6)

Dry Ice Water Hash Macro



Wet Ice Water Hash Macro



4.1 Fresh Frozen vs. Dried Material

PurePressure Typically Recommends Using Fresh Frozen if Possible

Using fresh frozen vs. dried cannabis to make ice water hash is a highly debated subject. For now, the consensus is that fresh frozen (non-dried/non-cured) flower makes for the highest quality product.

You can absolutely make hash with either product in a Bruteless hash washing vessel, but fresh frozen cannabis/hemp offers a few significant advantages. Most importantly, trichome and terpene preservation is maximized with fresh frozen product due to a lack of exposure to ambient conditions. Some terpenes are known to volatilize during the curing process, leaving less on the table for extraction. Another key benefit to washing fresh frozen material is trichome detachability. The storage temperatures of fresh frozen lends itself nicely to be transferred from the freezer to an ice bath. Temperatures stabilize relatively quickly and trichomes remain frozen and brittle, which aids significantly to the detachment process. Trying to bring your raw material down to temperature with the ice water bath is much more difficult and can lead to trichomes sticking to the wash equipment and therefore, reducing yields.



Pictured: fresh frozen Daywrecker Diesel, about to be washed.

Pro Tip: if you use fresh frozen material, your resulting rosin is considered “live” - such as “live rosin” is the solventless equivalent of “live resin”. This designation typically carries extra weight with connoisseurs and hash lovers.

4.2 Washing & Agitation Methods

Hand Washing Your Material Gives You the Best Shot at Premium Ice Water Hash

For now, the industry standard bubble hash agitation method is hand washing with a paddle. This enables significantly more control over the process. Hand washing allows an operator to agitate very gently to attempt to create a full melt product, or to wash longer and harder for the best yield possible into a full spectrum capture.

General Wash Times

Full Melt: gently stir, drain, then rewash

Full Spectrum: aggressively stir, drain, then rewash (repeat up to 3 times)

How to Wash Your Material Properly

Step 1: Fill your wash vessel 1/3rd full of cold RO water

Step 2: Insert your open wash liner or wash bags with material into the vessel

Step 2: Place your material into the wash vessel (if using an open wash liner)

Step 3: Fill your wash vessel about another 1/3rd of the way with RO ice; gently mix the ice with your material

Step 4: Firmly place the lid on top of the vessel and wait for the entire batch to soak and cool

Step 5: Remove the lid and start stirring your material with your wash paddle



4.3 Filtration & Collection

Note: We strongly recommend freeze drying your ice water hash for optimal clarity and terpene preservation. Air drying techniques are not covered in this manual.

Filtering and Collecting Your Hash

After you've completed your wash, it's time to drain your vessel into your collection bags and then scoop it out onto your freeze drying trays to be properly dried (Note - make sure to put a sheet of parchment down on the tray before scooping material onto it.)

Draining Your Vessel

- Step 1:** Place your collection bags over your drain vessel in sequence of lowest micron to highest micron.
- Step 2:** Position your drain vessel underneath your wash vessel and turn the valve to open the flow of water.
- (Figure 1A)**
- Step 3:** Wait for all of your ice water and hash to drain from your vessel into your collection bags, then using a cold water sprayer, consolidate your ice water hash (per micron bag) into a pile to scoop. **(Figure 2A)**

Figure 1A



Figure 2A



Collecting Your Hash

- Step 1:** Using a cold spoon, gently scoop your hash out of your bags, one micron size at a time, and onto your pre-lined parchment freeze dryer trays. Remove each bag once you've finished scooping to move on to the next one. **(Figure 3A, 4A)**
- Step 2:** Repeat Step 1 until all of your fresh, wet ice water hash has been collected.

Figure 3A



Figure 4A



4.4 Filtration & Collection Cont.

Grading Your Hash and Making Product Decisions

After you've finished draining, collecting, and prepping your material for freeze drying (or air drying), then you can better determine what the strain you just washed is capable of, and where most of its trichome sizes ended up. Typically, for a full spectrum wash for general hash rosin and related SKUs, your 45, 73, 90, and 120 micron bags will collect the lion's share of your trichomes. For full melt and premium ice water hash SKUs, typically you will find your best results in the 120 micron to 73 micron range for most strains.

Generalized Micron Filter Guideline

220 μm	●	Work bag
190 μm	●	Clean up bag
160 μm	●	Food grade
120 μm	●	Excellent grade
90 μm	●	Excellent grade
73 μm	●	Excellent grade
45 μm	○	Secondary grade
25 μm	●	Food grade

Example of a Filled Full Spectrum Tray



4.5 Freeze Drying

Freeze Drying Your Hash is Strongly Recommended

While there are a few ways you can dry your hash, the most effective and consistent way is with a freeze dryer. When done correctly, the sublimation process removes the moisture from your hash while preserving as many terpenes as possible, and is typically completed in 24 hours or less. While you can air dry your hash, this process is less predictable and typically reduces clarity, resulting in a darker, less terpene rich product. If you do not have a freeze dryer, please contact us to review your options!

Fresh Freeze Dried Hash



Hash Freeze Drying in a Tray



4.6 Process Temperature Management

Process Temperature is Crucial to Success

While there are a number of key steps in the hash washing and creation process, ensuring that your temperatures remain cold throughout is critical to both cannabinoid and terpene preservation. Depending on your location, geography, building, and many other factors, this may be fairly simple or difficult. We highly encourage you to invest whatever time and funds are possible to achieve a cold wash environment as described below for optimal results. This may mean operating in a walk-in fridge or adding air conditioning to your wash room, if possible.

Ideal Wash Vessel

Temperature: 34°F or 1.1°C

Ideal Wash Room

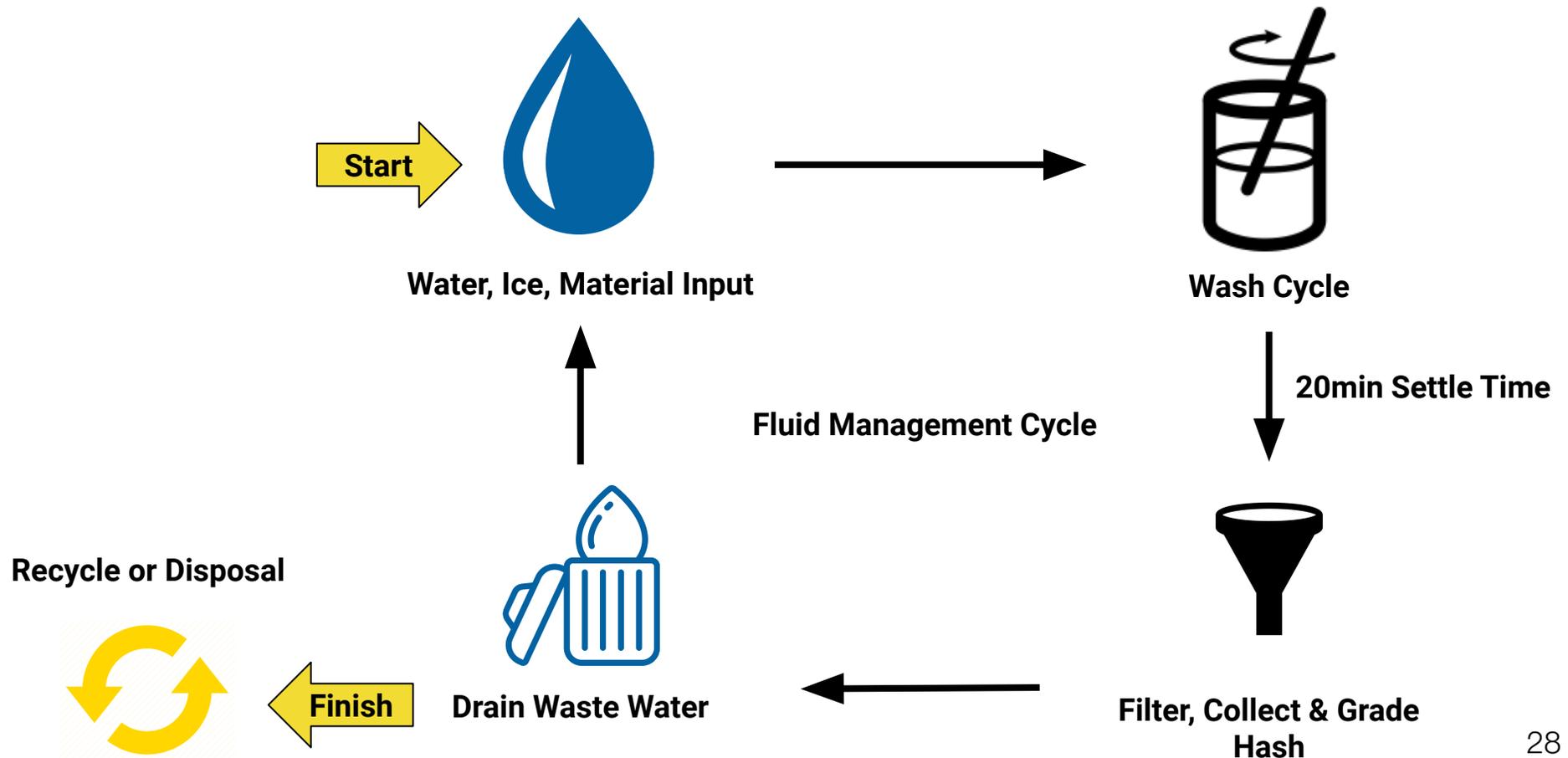
Temperature: ≤60°F or 15°C



5. Fluid Management

Managing Your Water, Ice, and Material

In order to get the most of your Bruteless hash washing system or vessel, ensuring that your fluids are being managed properly is paramount to success. In the following section, we will outline exactly how to think about your input fluids as well as your outputs, in order to create a seamless production cycle.



6. Cleaning Instructions

Note:

Make sure to check your local waste management regulations for proper fluid disposal protocols.

Care Instructions and Cleaning Advice

We strongly recommend deep cleaning your Bruteless stainless steel vessel, fittings, and paddle at the end of each day's washing. This will help ensure that your system stays contaminant free, which is crucial. RO water can be extremely corrosive; surface rust can appear even on stainless steel because of rogue particulate in standing water on the metal. We have two different cleaning recommendations depending on if you are cleaning your lines or the stainless steel surfaces of your system.

Lines, tubes, fittings cleaning: It is important to clean your equipment on a daily basis in order to keep your equipment operating at peak performance! Removable parts shall be removed and cleaned in a hot water commercial dishwasher or equivalent. The use of isopropyl alcohol mixture with water may be circulated in our equipment. Consult the label on the isopropyl alcohol container to achieve an appropriate concentration. Use a water rinse cycle after any alcohol cleaning cycle before placing the equipment back into service.

WARNING – alcohol is toxic – always work in a well ventilated area.

WARNING – alcohol is flammable – extreme care shall be taken during the use of this solvent.

Stainless steel surface cleaning: Use tap water with Bar Keepers Friend. We recommend using Bar Keepers Friend brand cleaning powder because it passivates your stainless and prevents rust. Use a gentle abrasive pad such as the Scotch-Brite 7445 Light Duty Cleansing Pads. Dry the surfaces well & do not leave standing water on the metal to dry off.

Never Use These Products

Bleach, Comet, or any other abrasive cleaning product or solution.

Neoprene Insulation Sleeve Care

The insulation jacket is composed of a shell and a core. The shell is neoprene and can be wiped clean if needed. The core is a moisture resistant closed cell foam and should not absorb liquid.



7. FAQ Part 1

Should I pre-chill my vessel?

We recommend to pre-chill your system for 5 minutes (minimum 2-3 min) before getting started with the lid on tightly. We recommend reaching 35°F before getting started. You can track your temperature using the Bruteless temperature gauge accessory.

Can I run my pumps dry?

Do not run the pumps dry for > 5min or else you may permanently damage your water pump(s) and it will void the warranty.

How do I clean my hoses?

We recommend cleaning all hoses regularly with an isopropyl alcohol and water mixture, with a dilution based on the label of the alcohol itself. Thoroughly clean your hoses afterwards with clean water and you're ready to go.

Do I need to purge my system or vessel before washing each time?

Yes. We highly suggest it. Ensure that you purge or flush the system with water before using each time. This will help keep your system and your hash as clean as possible.

Do I need to do anything special to sanitize my wash paddle?

We recommend that you sanitize and clean your paddle after every day's use. You can do this with diluted isopropyl alcohol on a clean, lint-free cloth or paper towel. We recommend detaching and thoroughly cleaning the paddle blade as well. To complete the cleaning process, rinse your paddle with clean water and let it dry before using again. Make sure to clean your paddle in a well ventilated area.

I have a leak, what do I do?

If you have a small leak in your Bruteless System, make sure to check your gaskets to ensure they are installed properly. If the gasket is nicked or cut, replace the gasket before use. Check that the tri-clamps are tightened. Hand tight is sufficient. Lastly, check that the hose clamp is tightened where the hose connects to the barbed fitting.

7.1 FAQ Part 2

Why do I need to use RO water?

It is recommended that your water supply be RO or reverse osmosis water, and cooled. This is standard practice in the professional hash making community because RO water is filtered of contaminants of various kinds which can exist in nearly any tap water source. These potential contaminants could cause you to fail a product quality test, costing thousands. Do yourself and your hash a favor by using RO water!

What can I do with my waste water?

One of the many benefits of this system is the ability to recirculate and reuse your RO water, saving you time, water, and money. When it is time to dispose of your wash water, hash makers who are also cultivators will use their water in their grow, further extending their savings and efficiency. Otherwise, once your wash is finished, the wastewater can be drained and discarded.

*Be sure to check with your local regulation authorities for proper waste water removal.

Which direction does my pump flow?

The inlet on most pumps is the lower of the two ports. This is true for all of our pumps. You can also verify by reading the pump user manual.

Can I wash hemp?

Yes, hemp can absolutely be washed, but often the trichomes are much smaller than with cannabis (or THC-heavy) strains, so yields are much more variable.

Why are my wash bags getting damaged?

When hard surfaces collide with one another, they can potentially damage or tear filtration media. You will want to keep your paddle off of the bottom and side walls as much as possible to reduce colliding with the filtration media.



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___ **We're always here to help.**



Pure Cannalabs

Need help with your hash washing process or SKUs? Contact us for professional consulting options to fit any business's needs today.

www.purecannalabs.com

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