



shipping

10/10/2021

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**Infinity
Supercritical LLC**

Extraction System Shipping Information and Owner Resources

Structured Data

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Page Contents: Details on shipping and receiving systems, operation, resources, and training."
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Company Name: Infinity Supercritical LLC
Page Contents: Details on shipping and receiving systems, operation, resources, and training.

PDF Version of the webpage

This webpage QR code

<https://infinitysupercritical.com/shipping.html>

A. System and Operational Videos:

For current videos on testing, operation, and pump maintenance.

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B. Delivery of Crate:

When you get your crate delivered, here is what to expect, and please inspect carefully:

1. The freight company should give you some notice of delivery. Delivery truckers are awful about notifying (they're all the same), and poor at reading the time. Feel free to call the trucking company and if you see on the tracking that it is at the local terminal, ask for a delivery time.
2. Upon arrival, the large crate will be offloaded using the truck lift-gate and a pallet jack. It is the responsibility of the trucker to only offload. They are not responsible for putting in your garage, uncrating, etc. (Yes, we've had customers complain that the trucker did not uncrate the machine for them).
3. Immediately upon arrival, please inspect the exterior of the crate for any damage. Pay special attention to the tip indicators on the crate.
4. If you see any damage, photograph immediately, and especially photograph the entire crate regardless, including the tip indicators. We recommend you take photos regardless, in case you have any warranty issue.
5. Whether or not there is damage, you need to sign the delivery paper. If there is damage, indicate Exterior Damage and any other comments, get a copy of the receipt, and the trucker will leave. Typically these delivery truckers are not patient.
6. As you uncrate your machine, please take lots of photos. If you notice any interior tip-indicator or damage, take photos and notify Infinity as soon as possible.
7. In most cases the shop tries to bolt down the frame to the inside bottom of the crate. You will need to unbolt the frame from the crate to move out.
8. Since the crate is about 6 inches above the floor level, you may need a small ramp or board as a transition from the crate to the floor, when wheeling the system out.
9. Do not destroy the crate, in case you need to return for service or warranty issue. If a replacement crate is needed, the fee is \$1,000 for the crate and shipping to your destination. Please store in a dry location. The crate is designed to unscrew into a flat pack to reduce storage space.



Installation Checklist

Installation checklist for the 10L system.

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C. On-Site System Operational Training and Basic Installation:

For Pro Tips and Professional Support Consultants, please see the consultants link below. We highly recommend you contract one of our hemp operational customers for the best advice and consulting. Without proper training you can expect zero results.

- Preparation (Please confirm that the following have been taken care of prior to confirming training schedule)
- Equipment needs to be out of the crate and setup in an appropriate space
- Appropriate power needs to be available for each machine
- Dedicated 30A 220v 60 hz Single Phase circuit able to connect to the system L14-30 plug – You need to have 60 hz (for European installations).
- Exhaust manifold needs to be vented to the outside atmosphere
- CO2 Monitor needs to be setup and functional
- A minimum of 200 lbs of liquid CO2 (with Syphon Tube cylinders) must be on hand for each machine
- An appropriate chiller must be on site and along with any necessary components to properly connect to the extraction system (if the chiller requires anything other than water for example glycol or other antifreeze, it should be on hand or already set up). The standard chiller we sell will ship with the straight blade plug (NEMA 6-15)

- The focus of this standard training is on the safe and effective operation of the equipment along with a few basic maintenance items. This training does not cover extraction theory, technique, or practice. At no time during the training will plant material be used in the extraction vessel. All training will take place on systems that contain nothing other than CO2.
- Please have basic tools available in the event that minor adjustments need to be made during training.



D. Manuals and Data:

Please email Infinity Supercritical for current manuals and checklists.

Operation:

20190218-10L1BP-MFE-Operation-Manual-10

Installation:

Preparation for the 10L CO2 System Installation (pdf): 20190327-10l-installation-checklist

Training:

Customer Training Checklist PDF:

20170306-customer-training-checklist

Chiller:

Installation and Operation:

polyscience-6160t21a130d-208230v-manual

polyscience-durachill-1pt5-hp-manual

polyscience-durachill-2-3hp-manual

Parts Price List for 10L System (updated April 11, 2019):

20190411-infinity-supercritical-parts-10-liter



Parts and Consumables:

We have a complete list of parts, suppliers, and online order links available for a one-time fee. We have found this to be more cost effective for machine owners. Please use the convenient online order button below to pay by credit card on PayPal.

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Cat Pumps

Cat 310 Plunger Pump Low and High Pressure Seals. Please purchase low and high pressure seals from Cat Pumps directly. We have canvassed successful operators of the Cat 310 pump and they claim that the Cat Pump seals work fine with CO2 as of August 20, 2020. Proper machine operation is attributed to longevity of seals (more than a month per set).

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Peer Review Certification: (Please contact Infinity by email for the full report)

Engineer Review COC for California:

20180108-Infinity-Supercritical-COC-California
(Please email with your machine serial number for a copy.)

Engineer Review COC States – CA AZ NV CO WA OR:
20170119-states-only-161206-1ER_KirklandDynamics-Engineer-Reviewed-WA-OR-CA-AZ-NV-CO-43-50
(Please email with your machine serial number for a copy.)

Full Engineer Review for All States:
(Please email with your machine serial number for a copy.)

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CO2 Pump Info:

Pump Parts Diagram

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CO2 Pump Info:

Pump crankcase.

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Machine Flow Diagram:

Supercritical CO2 flow diagram for the Infinity Supercritical CO2 10L system.

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Cat Pumps CO2 Pump Troubleshooting

CO2 Pump Troubleshooting: For stalling issues from operator learning, please use our Professional Support Consultants, see link below.

Cat 310 Plunger Pump Low and High Pressure Seals: Please purchase low and high pressure seals from Cat Pumps directly. We have canvassed successful operators of the Cat 310 pump and they claim that the Cat Pump seals work fine with CO2 as of August 20, 2020. Proper machine operation is attributed to longevity of seals (more than a month per set). For Pro Tips, please see our page link below.

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E. Learning Resources:

Start First Extraction Using Hops

The best way to learn a supercritical CO₂ extraction is to first get system training. This can be done at our shop in Ferndale, Washington, or at your facility (travel expenses are additional to the training fee).

Practice Soon After Training: You should practice with your 10L system within 1 week of training, or you most likely will forget what you learned. Practice = experience. 100 percent of problems we've seen at start-up is from operators who forget training.

1. First Run With CO₂ Only – No Botanicals: The first practice runs should be with CO₂ only, and running the system to pressure without any botanicals. We recommend a minimum of 10 runs with just CO₂.
2. First Botanicals Use Beer Hops: Then do a minimum of 10 runs with leaf beer hops – which have a good know amount of oil. Order beer hops with known oil content (8-20 percent works great). This will give you valuable experience in starting and running the machine. Make a deal with your local hops supplier to do extracts for them in exchange for the hops if you want. Otherwise, just purchase the hops.
3. Can I Use My Trim For Practice ? No. The common conversation we get from customers: But we already have cheap trim. Do you know the oil content of the trim? No. But it's free. Well, how do you know if it has any oil in it ? Um, we don't. So how much oil can you extract from that cheap trim with unknown oil quantity ? We don't know, but nothing is coming out.

If you want to be a successful extractor, please follow our guidance of starting with a empty machine and then using hops to practice with. If you want to fail fast, go ahead and use your trim or other botanicals, which will result in a longer learning curve, or failure. Expect zero results without proper training.

If you want to use your own learning process, and use your poor quality trim or untested other material with low to no oil content, expect poor results (if any).

Pump Cleaning and Re-assembly: We recommend using a magnifying glass to inspect the seals and ceramic pistons as you are putting back together the pump. Inspect for any small particles of botanicals or grit, which may cause the seals not to seal properly, and not allow the system to build pressure. When you clean the pump head, please do so in a clean environment (i.e. not where there is dust and dirt present).

Cleaning: Respect your equipment, and it will operate great. We recently had one customer comment that the 10L was a gold mine and was looking forward to his second machine, to make even more profit. Keeping a system clean so that it operates correctly is true with most equipment. We recommend always keeping your machine clean, and at least every 15 cycles do a thorough ethanol clean out of the system. If you do not clean your machine, expect that it will not work at all. We've had customers that don't clean their machine at all, and they go through seals on a weekly basis, then wonder why it isn't operating up to expectations. We've had a few groups return machines for repair, and all that was needed was a good machine cleaning. Have some respect for your profit center, and you'll get great results.



F. Testing:

Test Your Botanicals For Oil Content

Get your botanicals tested. It's the only way to determine how much oil you can extract. If you have cheap or free material, you may not have any oil content for extracting.

Testing is inexpensive, and a good insurance policy that you are buying what is advertised. If you get free material, that is not tested, don't expect any results.



Learn Extraction Properly:

Recommended Learning Schedule and Strategy: After selling lots of systems, and determining the best practice to learn extraction, we have developed a learning system to help you minimize pump maintenance, and maximize yield and successful extraction runs. If you follow our learning plan, and practice extraction runs on hops, you can expect proper system operation, low pump maintenance, and extractions up to the full oil content of your botanicals.

If you follow this schedule, you will learn quickly. If you do not follow this schedule, then you can expect pump clogging, building pressure issues, and lack of yield or extract. If you decide to not follow our plan, then you can expect to have pump problems (from improperly running the system) and little to no yield (extraction). To be clear, if you do not follow our recommended plan, you may get zero results. Prior experience on other CO2 extraction machines doesn't make any difference to running a new machine, with a different configuration. To be clear, you need proper training, and follow a well thought-out plan to succeed if you want to have great extractions.

Learning Schedule For Extraction

We suggest you do several practice runs with the machine empty (no botanicals – just CO2) and then practicing using hops (with known oil content). We recommend using 1 pound of hops in the extraction vessel, and doing at least 10 practice runs up to 1,400 psi. Adjust the extraction time from 1 to 4 hours, and see how your results may vary. You may also practice with doing the first 30-45 minutes without any heat, to collect terpenes. Practice on low value hops first, gain experience, then move on to your trim or bud.

Improper use of the 10L system can result in component damage, which is not a warranty issue, it's a flag for the operator to continue to learn, and train with the system for proper, profitable operation. Unless you have had your botanicals tested for oil content, we do not recommend learning on any botanicals with unknown oil content. To be clear, do not use your trim or bud to start with.

Used Machines

Buyer beware. You have no idea if your machine runs, if you purchase from Ebay, or used, unless it has been certified/reconditioned and tested by Infinity. We do not provide support for used machines, unless you have either done a reconditioned/certification at our shop. Support is not included with your used machine. Any recertification, parts, support, or any time, is extra, and billed on a customer and per-case basis. If your machine does not run, we may not support it at all (since we have no idea if it has been damaged, modified, etc.). There is no warranty for used machines.









