PERLINI

COCKTAIL CARBONATING SYSTEM

CONTENTS

MEET PERLINI

Congratulations!

You are among the first owners of the Perlini Cocktail Carbonating System, a revolutionary new product for producing highly sparkling cocktails and other beverages.

Perlini is the first and only system designed by and for serious bartenders and mixologists, and the only product designed to withstand the rigors of heavy commercial use. Perlini can be used with either disposable cartridges or refillable CO_2 sources, making it the perfect solution for restaurants and bars, as well as for home and travel use.

With Perlini, you are limited only by your imagination: Carbonate juices, alcohols, even whole fruits like strawberries.

Bartenders, mixologists, home hobbyists, and molecular gastronomists rejoice: The Perlini revolution is here!

Features and Benefits

- Operates with cartridges or CO_2 cylinder (optional)
- Consistent with the traditions of cocktail production and service
- Easy to use with ice—no pre-chilling of ingredients required
- Same volume and weight as traditional Boston shaker
- Durable and easy to clean
- Can easily adjust amount of carbonation

What's Included

- **A** Perlini shaker
- **B** Perlini hand-held pressurizer
- **C** 16-gram CO_2 cartridges
- **D** 8-gram CO_2 cartridge
- **E** 8-gram cartridge adaptor (allows use of more readily available 8-gram cartridges)
- **F** Spare valve
- **G** Spare gasket
- **H** Flash drive (more information on Perlini can be found here)

SAFETY PRECAUTIONS

Read this first!

The Perlini System uses high-pressure gas, and the shaker is a pressure vessel. Like any high-pressure gas system, it must be treated with care. Improper use or handling of the Perlini System could result in physical injury. To avoid this risk:

- Do not drop or impact the cocktail shaker in any way, as this could cause damage which could lead to failure.
- Inspect the shaker before each use. Do not use the shaker if it is cracked, scratched, discolored, or otherwise damaged. If you suspect the shaker has been damaged, return it to Perlage System's customer service center for a replacement.
- DO NOT DISHWASH. Automatic dishwashers can damage the product components. Hand wash only, using ordinary dish soap.
- Do not use excessive force when assembling the components of the Perlini shaker. The components were designed to screw together with fingertip pressure only. Excessive force can damage the components, and make them difficult to unscrew.
- Do not point the cocktail shaker at anyone when it is pressurized.
- Keep shaker away from extreme temperatures and direct sunlight. Do not subject the Perlini shaker to freezing temperatures.
- Protect CO_2 cartridges from direct sunlight and heat above 122˚F/50˚C.

CARE AND MAINTENANCE

- Protect the uppermost edge of the lower body from nicks or other damage. A gas-tight seal is made at this surface, and it is important that it be smooth.
- Do not screw the components together tightly when not in use—leave them disassembled or loosely screwed together. This will prevent sticking.
- Rinse between each use with tap water. Periodically clean with soap and warm water, and leave the three parts (upper body, lower body, and cap) unattached to dry. Periodically remove the gasket and clean with soap and water.
- Removing and replacing the gasket: To remove the gasket, simply pull it out of the upper body. To easily reinstall the gasket, simply place it on the upper edge of the *lower* body, with the long flange of the gasket pointing up. Screw the upper body onto the lower body (A). This will force the gasket to seat itself in the upper body.
- Replacing the valve: Should it be necessary to replace a lost or defective valve, a spare has been included in the package. Using your fingertips, pull the valve out of the underside of the cap. Push the new valve into place. Make sure the red filling disk is oriented with the cap with the conical hole pointing up. Insert the valve with the snout pointing down (B). The valve and disk should spin freely if properly installed.

Set gasket, with long flange up, on lower body; screw on upper body finger tight to seat gasket in top half.

Proper orientation of filling disk and valve.

INSTRUCTIONS FOR USE

Insert cartridge with tip pointing out of cup.

Lower body, upper body, cap.

Add ingredients and ice.

1. Install CO_2 cartridge in the pressurizer

Unscrew the two halves of the pressurizer. Place one of the provided 16-gram Perlage Champagne-certified CO_2 cartridges inside the cup half, with the narrow neck of the cartridge pointing upwards (A). Screw the cup onto the body of the pressurizer unit until tight. DO NOT OVERTIGHTEN—if you can't hear any gas escaping, it is tight enough. It is now ready for use. There will be a small gap between the cup and the body of the pressurizer when you screw it back together; this is normal.

- *An adaptor has been provided for use with the more commonly available 8-gram cartridges. To use the adaptor, simply insert the cartridge in the adaptor and then place the adaptor in the cup as described above.*

2. Disassemble Perlini

Unscrew the upper body from the lower body, and remove the cap (B). Inspect components for wear or damage. DO NOT USE PRODUCT IF DAMAGED. Make sure the gasket is properly installed *(see page 3)*.

3. Mix cocktail and add ice

Mix the ingredients of your cocktail in the lower body as you would with a cocktail shaker, and fill with cubed ice (C).

- *Liquids must be ice cold to produce satisfactory carbonation levels. If ice is not used, liquid ingredients must be pre-chilled.*

4. Assemble Perlini

Screw the two halves of the shaker together finger tight; screw the cap on finger tight (D).

- *Overtightening can damage the components, and make Perlini difficult to disassemble. Only fingertip pressure is necessary. For the cap, only one-quarter revolution of tightening is required after the cap stops spinning freely.*

5. Pressurize Perlini

Holding the Perlini shaker at a 45-degree angle, press the nozzle of the pressurizer against the conical orifice in the cap, and press the trigger on the handle (E). Hold the trigger down for 8-10 seconds, until the gas stops flowing.

- *Before shaking the cocktail, verify that you have a good seal by listening for escaping gas. If you hear gas escaping, slowly remove the cap, and unscrew the two halves to check the seal.*

6. Shake

Shake the pressurized cocktail for 7-10 seconds.

7. Rest

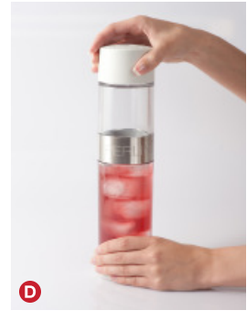
Allow the shaken cocktail to sit for 15-30 seconds to allow the foam and bubbles to subside.

8. Remove cap and serve

SLOWLY open the cap (F). The liquid will start to foam up with the escape of CO_2 as the headspace pressure drops; if it looks like the liquid will escape the top the shaker, close the cap and give the liquid more time to settle down.

Remove the cap and pour the drink directly from the spout through the built-in strainer into the serving glass (G). Pour the drink quietly down the side of the glass to prevent agitation and subsequent CO_2 loss.

Separate the two halves of the shaker and remove the cap. Rinse in tap water with each and every use and set aside to dry.



Screw components finger tight.

Pressurize Perlini at 45° angle.

Slowly open cap after foam settles.

Pour gently into glass.

THE SCIENCE OF CARBONATION

Corpse Reviver #CO2

*This is a adaptation of the classic Corpse Reviver #2 from **Jim Romdall** of Vessel in Seattle, circa 2008.*

As the name implies, this really comes alive with bubbles.

1 oz Plymouth gin

1 oz Lillet Blanc

3/4 oz Cointreau

1 oz lemon juice

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into absinthe-rinsed glass*
- *Garnish with brandied cherry*

There are a few scientific principles about carbonation that are helpful to understand in order to get the best results out of Perlini. Bear with us—it's not as bad as it sounds.

What makes a beverage fizzy? The answer is: dissolved carbon dioxide (CO_2). You want to get CO_2 into solution, and keep it there long enough to enjoy the resulting sparkling beverage. So, the key to understanding Perlini is to understand how carbon dioxide gets into and out of solution, and what factors most greatly affect this process.

Getting CO_2 Into Solution

Nature loves to have things in balance. Perlini makes carbon dioxide go into solution by creating an *imbalance*. When you first mix a cocktail with Perlini and then pressurize it, there is a large quantity of high-pressure CO_2 in the headspace above the liquid, and little or no CO_2 dissolved in the liquid. Under these conditions, CO_2 will dissolve into solution all on its own, molecule by molecule, until a balance is reached, where the concentration of gaseous CO_2 molecules in the headspace is in balance with the concentration of dissolved CO_2 molecules in the liquid. This balance, where no more CO_2 is dissolving into solution, is called *equilibrium*.

Factors Affecting Carbonation

The two most important factors that determine how much CO_2 will "fit" in solution are pressure and temperature. The pressure variable is sort of obvious: You might guess that the higher the pressure in the headspace of Perlini, the more CO_2 would be forced into solution at equilibrium, and you'd be right. With Perlini, however, the gas delivery pressure is preset by a regulator to an optimum value (65 psi), so you don't need to consider variations in pressure.

More interesting is temperature—this *can* vary and you can control this aspect of the process. Much more CO_2 can dissolve into cold water than into warm water; and since nearly all beverages we might consider for Perlini are mostly water, this is extremely important. For CO_2 absorption, the colder the beverage, the better.

How CO_2 Escapes from Solution

When you open the cap of Perlini after carbonating your beverage, the situation is one of great imbalance: There is a huge amount of CO_2 in solution, and very little CO_2 in the headspace. And nature *really* abhors imbalance. From the moment you open the cap, all that extra CO_2 you added will, all on its own, molecule by molecule, come out of solution until equilibrium is once again eventually restored (which means there will be only as much dissolved CO_2 in solution as there is in the air around you—and that's not enough to make your drink fizzy). Your goal is to keep as much added CO2 as you can in solution long enough to enjoy your sparkling beverage.

This process of CO_2 molecules going into and out of solution is called *diffusion*. If the diffusion happens at the surface, it's invisible, because molecules of CO_2 are too small to see. But if diffusion happens beneath the surface—say, CO_2 diffuses into a trapped pocket of gas—a bubble of CO_2 may form and rise to the surface, which you very much can see. Bubbles are evidence of CO_2 diffusing out of solution back into the gaseous state. So, to keep as much carbonation in the beverage as possible, we want to minimize the amount of bubbling once the beverage has been carbonated.

Making Bubbles

Here's where we have to get a little technical. It turns out that bubbles can only form on existing bubbles. That's right—there already has to be a bubble in order to make a bubble!

Have you ever noticed that when you pour a carbonated drink into a glass, streams of bubbles seem to rise to the surface from particular locations on the inside surface of the glass? This is because there are microscopic pockets of gas trapped in microscopic imperfections in the glass (or debris on the glass). CO_2 diffuses into these pockets of gas, which blow up like little balloons until their buoyancy causes them to break free and float to the surface. This process usually leaves a microscopic bit of the bubble behind, which serves as the "seed" to start another bubble, and the process begins again. These little seed bubbles on which other

(more science on the following page)

Seelbach Perlini

*This is a fabulous adaptation of a classic from **Jamie Boudreau**, owner of newly opened canon in Seattle.*

This cocktail traditionally has a float of sparkling wine added after shaking, but because the Perlini shaker is a pressure vessel, you can shake carbonated ingredients with the others.

1 oz bourbon

1/2 oz Cointreau

7 dashes Peychaud's bitters

7 dashes Angostura bitters

4 oz Champagne

- *Mix all ingredients (including Champagne) in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into chilled martini glass*
- *Garnish with orange or lemon twist*

Captain Handsome

*Here's an original creation from **Jim Romdall** of Vessel, Seattle, that cries out for bubbles.*

Previously, this was done with seltzer; with Perlini, you get bubbles and no dilution.

1 1/2 oz Plymouth gin

1/2 oz Creme de Violette

1/4 oz Limoncello

3/4 oz lime juice

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into absinthe-rinsed glass*
- *Garnish with brandied cherry*

bubbles form are called nucleation sites. You want to minimize nucleation sites, to make sure as much CO_2 as possible makes it from the Perlini shaker into your glass.

Saturation and Stability

Once the cap or cork has been removed, a carbonated beverage is a highly unbalanced, unstable system that wants to return to equilibrium as quickly as possible. If you've ever shaken an open bottle of Champagne, you know that the return to equilibrium of this unstable system can be rapid, foamy, and dramatic!

The key to preventing rapid CO_2 loss through uncontrolled foaming is to minimize the things that cause bubbling. That means minimizing agitation (splashing creates bubbles which serve as seeds for more bubbles); reducing contact with surfaces rich in nucleation sites; and keeping the liquid temperature as low as possible to maximize the amount of CO_2 that can "comfortably" be in solution. Your tongue is loaded with nucleation sites, and you want to hoard the CO_2 in your beverage until it can fizz where it counts.

There is no limit in principle to how much CO_2 can be dissolved in a liquid, but for a particular beverage in a particular vessel (say, a freshly carbonated drink in the Perlini shaker), there is a practical limit as to how much CO_2 can remain in solution when the headspace pressure is removed. This limit is the beverage's saturation point. Any "excess" dissolved CO_2 will foam rapidly out of solution.

You can see this phenomenon with Perlini. As you slowly unscrew the cap and let gas escape, the pressure inside the shaker drops; at some pressure level, the liquid will "bloom" with a rapid release of bubbles. This is because at that pressure, the amount of dissolved CO_2 is greater than the saturation level for that particular set of conditions (*e.g.,* type of ingredients, ice, temperature, etc.). There is no point trying to add more carbonation, because any additional CO_2 will simply turn to foam as soon as you release the headspace pressure again.

This is everything you need to know about the science of carbonation to become a Perlini expert!

Let's apply what we know about the science of carbonation to get the carbonation level you desire from Perlini.

Give It the Gas

- Remember, the more dissolved CO_2, the more sparkle. Make sure you fully pressurize the Perlini shaker before shaking—hold the trigger down on the pressurizer until the gas stops flowing (and, of course, make sure that the cartridge hasn't run out before full pressure is reached in the shaker).
- Perlini was designed so that when the lower body is completely filled with liquid and ice, and the shaker is fully pressurized, there is typically adequate CO_2 in the headspace to completely saturate the beverage with CO_2. However, if the ingredients are low in nucleation sites (clear beverages, or those that use pre-chilled ingredients rather than ice), the CO_2 saturation point may be lower than Perlini's filling pressure. If this is the case, you can possibly boost the carbonation level by pressurizing twice: Pressurize, then shake; then pressurize and shake again.

Chill Out

- The colder the beverage in Perlini, the greater the CO_2 absorption. You can either add ice to the Perlini shaker (preferred), or pre-chill all the ingredients. The colder the ice used, the better.
- So, ice is good, but the surface of ice is also loaded with nucleation sites, which increases the amount of bubbles formed after Perlini's cap is removed. Large, smooth, clear cubes of ice are best; crushed ice is the worst.

Water, Water, Everywhere

- Basically, it is the water in a beverage that contains most of the dissolved CO_2. Carbon dioxide is extremely soluble in water; much less so in alcohol. Luckily, even a 100-proof spirit is half water, and will carbonate quite well.

(more tips on the following page)

Crux Perlini

*Here's a personal favorite from the legendary **Murray Stenson** of the Zig Zag Café in Seattle.*

This is another classic that is transformed by bubbles into a perfect year-round, any-time-of-day cocktail.

1 oz Cognac

1 oz Dubonnet Rouge

1 oz Cointreau

1 oz fresh lemon juice

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into martini glass; no garnish*

CARBONATION TIPS

Grape Martini

Here's a delight from master mixologist ***Antonio Lai****, all the way from FINDS in Hong Kong.*

2 oz G'Vine Gin

1/2 oz Cointreau

3/4 oz grape juice

1/4 oz lemon

1 dash bitters

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into chilled martini glass; garnish with grape*

Shake It, Baby

- Shaking Perlini after pressurizing the vessel greatly speeds CO_2 absorption, as well as quickly chilling the beverage over ice. We recommend 7-10 seconds of moderate shaking.

Give It a Rest

- Shaking also causes lots of tiny bubbles from the agitation. Each of these bubbles can serve as a nucleation site, which can cause the liquid to bloom and foam up if the cap is removed too soon after shaking. The longer and harder you shake, the longer you will need to let the beverage rest before unscrewing the cap. The longer you let it rest, the better the CO_2 retention, but keep in mind that the ice continues to melt slightly during this time, which increases the dilution of the drink a bit.
- The amount of time you need to let the beverage rest also depends on the nature of the ingredients. The bubbles from shaking take longer to dissipate in more viscous beverages, such as those that have a high sugar or protein content. The amount of rest time can range from just a few seconds for pure water to 30-60 seconds for a very sweet beverage.

Don't Strain Yourself

- For best results, do not strain the beverage through a secondary strainer. Mesh strainers, in particular, have rough surfaces that are loaded with nucleation sites. Perlini's built-in strainer is adequate to retain the ice, and is very highly polished to minimize outgassing from nucleation as the liquid runs through it.

Be Quiet

- Agitation causes foaming in carbonated drinks, as anyone who has ever shaken a can of open soda knows. Handle the carbonated beverage "quietly": Open the cap very slowly to avoid a rapid pressure change that can shock the highly carbonated beverage and cause foaming. Pour the beverage gently down the side of a tilted glass to avoid turbulence.

Let's Be Clear

- In general, clear ingredients retain carbonation better than cloudy ingredients with a lot of dissolved solids. Fruit pulp, for example, provides nucleation sites that tend to increase the amount of foaming upon pressure release, making the drink lose carbonation more rapidly. One solution to this is to strain pulpy liquids before using them in Perlini. Filtered juices are ideal.

Drink with the Eyes

- Tall, narrow glasses are more effective at showing bubbles than short, wide glasses. Also, beverages in wide, shallow glasses lose carbonation more quickly due to the large surface through which CO_2 can be lost.

Crimson & Co.

This treat comes from ***Jacob Sweetapple****, from the summer cocktail menu of the bar at the Fairmont Pacific Rim in Vancouver, BC.*

1 oz Cointreau

3/4 oz Campari

2/3 oz orange juice

1/3 oz lemon juice

1 dash orange blossom water

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Unscrew cap to release pressure*
- *Unscrew upper body and and pour contents, ice and all, into rocks glass*

RECIPE DESIGN

Negroni Perlini

*Here's another beautiful adaptation from **Jamie Boudreau** of canon in Seattle.*

This is a perfect example of how a traditional recipe can be adjusted to account for the extra acidity that carbonation brings, by increasing slightly the amount of sweet vermouth.

1 oz gin

1 oz Campari

1 oz sweet vermouth

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake, let rest*
- *Decant into chilled coupe or martini glass*

Please visit www.perlini.biz/recipes for more recipes and ideas.

With Perlini, what you can create is limited only by your imagination. You can carbonate soft drinks, cocktails, fruit (yes, fruit!), garnishes, foams—the possibilities are virtually endless.

There are a few considerations to keep in mind when designing carbonated cocktails and other beverages.

- Pucker Up: When CO_2 dissolves in water, it produces carbonic acid. ***Carbonic acid is neutral in flavor, but adds tartness; keep this in mind when designing recipes.*** All drinks made with Perlini will be slightly more tart when carbonated than the same ingredients uncarbonated. In fact, light carbonation is an excellent way to add a neutral acidity without adding a citrus flavor, as from lemons or limes. In other cases, you may wish to balance this extra acidity by increasing sweet ingredients.

  (When CO_2 goes out of solution, the carbonic acid goes away, but as long as your drink is fizzy, it contains carbonic acid.)

- Choice of Base Spirit: In general, clear spirits tend to be easier to design recipes around than heavy wood-aged spirits, which are the most challenging (but arguably the most interesting). The acidity from the carbonic acid can interact with the tannins of wood-aged spirits in a way that emphasizes acerbic notes in their flavor profiles, requiring extra care in optimizing recipes.

- Serve It Up: Ice is high in nucleation sites. Pouring a carbonated beverage over fresh ice in the glass will cause significant foaming and hence CO_2 loss. Serving cocktails "up" gives best results; if you wish to serve over ice, consider unscrewing the upper body after carbonating the beverage and pouring the entire contents of the Perlini, ice and all, into the glass.

- Acidity tends to increase CO_2 absorption; dissolved sugar tends to decrease CO_2 absorption.

- Drinks high in protein can be problematic for carbonating. In particular, drinks with egg white are challenging, because shaking the egg white produces a very persistent foam that wants to expand greatly when the pressure is released.

TROUBLESHOOTING

- When dispensing gas from the hand-held pressurizer, it is important that the end of the CO_2 cartridge is lower than the tip, so that liquid CO_2 doesn't flow into the regulator and cause dry ice to form. This will not harm the pressurizer, but it will impede the flow of gas for 15-30 seconds until the ice evaporates. To prevent this, always hold the pressurizer with the tip higher than the end when dispensing gas.

- The first few seconds of gas flow of a new cartridge are more subject to dry ice blockage than subsequent fillings. Be a little patient with a new cartridge; if the flow sputters and stops, wait a few seconds and begin again.

- It is sometimes difficult to know whether gas stops flowing because the shaker is fully pressurized, or because the cartridge is empty. After each use, hold the pressurizer up and briefly press the trigger. If the gas doesn't flow as vigorously as when the cartridge was new, then the cartridge is empty. Replace the cartridge and continue filling the shaker. You can make two to four cocktails with one 16-gram cartridge, depending on usage.

- If the tip of the pressurizer is properly aligned with the red disk, you will need only a small force to create a proper seal while pressurizing the shaker. If you hear a hissing sound as you pressurize the shaker, gas is escaping while filling. Try adjusting the angle of the filler to get better alignment, or push down a little harder on the pressurizer to make a better seal.

- If you pull the pressurizer away and hear gas escaping from the cap region, you may need to screw the cap down a little tighter. If you hear gas escaping from the mid-body region, you may need to screw the upper and lower body together with slightly more force.

- If your shaker is not holding pressure over time, it is possible that the valve or gasket is leaking. You can check this by holding the pressurized shaker under water in the sink for a couple minutes. If there is a constant production of bubbles, you should change the valve and/or gasket with the spare supplied *(see page 3)*.

Le Mot d'Amour (The Love Note)

*This lovely libation comes from **Stephen Martin**, bar chef at the Jazz Club at Etoile Le Meridien in Paris. Guaranteed to make you swoon!*

1 1/2 oz Bacardi Rum Superior

1/2 oz Marie Brizard Parfait Amour

1/4 oz Marie Brizard Anisette

1/2 oz lime juice

1/4 oz simple syrup

1/2 oz egg white

- *Mix all ingredients in Perlini; add ice*
- *Pressurize, shake 12 seconds, let rest*
- *Decant into chilled martini glass*

ORDERING AND SUPPORT

Perlini Commercial Carbonating System

Perlini 16-gram CO_2 cartridges

To Upgrade

This version of the Perlini Cocktail Carbonating System is designed for light commercial use and home use. We strongly recommend the Perlini Commercial Carbonating System for restaurant and bar use. The Commercial System provides much faster pressurization rates and is much more economical.

Both the Perlini Cocktail Carbonating System pressurizer and the Perlini Commercial Carbonating System pressurizer are interoperable with the Perlage Champagne Preservation System.

For information on upgrading to the Commercial System, email us at info@perlagesystems.com.

To Order Supplies

For replacement 16-gram CO_2 cartridges, valves, or gaskets for your Perlini, email us at info@perlagesystems.com or visit us on the Web at www.perlagesystems.com/purchase.

Customer Support

If you need technical support with this product, please email us at info@perlagesystems.com.

WARRANTY

Perlage Systems Inc. warrants that the Perlini Cocktail Carbonation System will be free from defects in materials and workmanship for a period of six (6) months from the date of shipment. If the product proves defective during the warranty period, Perlage Systems Inc. at its option, will:

(1) Repair the product by means of telephone support or depot service at no charge for parts or labor,

(2) Replace the product with a comparable product which may be new or refurbished or,

(3) Refund the amount paid for the product, less a reasonable allowance for usage, upon its return.

Perlage Systems Inc. recommends the Customer first utilize support materials shipped with the product and Perlage Systems Technical Support. If unsuccessful, to obtain service under this warranty the Customer must notify Perlage Systems Inc. or its authorized service representative of the defect before the expiration of the warranty period. Customers will provide appropriate assistance to Support personnel to resolve issues. If Support is unsuccessful, Perlage Systems Inc. or its authorized service representative will instruct the customer on how to receive warranty repair. Service is available in the United States, for products purchased in and outside of the United States. Perlage Systems Inc. reserves the right to charge for service in exceptional cases.

A description of the depot process may be obtained from the Perlage Systems Inc. Customer Support Center or authorized reseller/distributor. Depot service is at Perlage Systems Inc. or its authorized service representative's sole discretion and is considered an option of last resort.

In the maintenance of the product, Perlage Systems Inc. may use new or equivalent to new parts, assemblies or products for equal or improved quality. All defective parts, assemblies, and products become the property of Perlage Systems Inc. Perlage Systems Inc. may require the return of parts, assemblies and products to a designated Perlage Systems Inc. Depot or the Perlage Systems Inc. representative from which the part, assembly, or product was originally purchased. Return and claims will be handled according to the current Perlage Systems Inc. procedure.

Perlage Systems Inc. warrants that the Perlage hand held pressurizer will function properly and safely for a period of six months. Should this product fail to perform safely or properly, please contact Perlage Systems Inc. Customer Service department for return authorization information. Warranty excludes improper or unsafe use, abuse, or any use that is not consistent with the operating instructions and warnings. Always use Perlage approved CO_2 cartridges.

Perlage Systems Inc. warrants that the Perlage CO_2 cartridge will be free from defects in materials and workmanship until the original CO_2 cartridge has been depleted. Under this warranty, the Customer must notify Perlage Systems Inc. or its authorized service representative of the defect before the expiration of the warranty period. Warranty excludes improper or unsafe use, abuse, or any use that is not consistent with the operating instructions and warnings. PERLAGE SYSTEMS INC. MAY REQUIRE THAT THE DEFECTIVE CO_2 CARTRIDGE BE RETURNED TO A DESIGNATED PERLAGE SYSTEMS INC. DEPOT OR THE PERLAGE SYSTEMS INC. REPRESENTATIVE FROM WHICH THE CARTRIDGE WAS ORIGINALLY PURCHASED. Claims will be handled according to the current Perlage Systems Inc. procedure.

For the Perlage Commercial pressurizer, these warranties shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. Perlage Systems Inc. shall not be obligated under these warranties:

a) To repair damage resulting from attempts by personnel other than Perlage Systems Inc. representatives to install, repair or service the product unless directed by a Perlage Systems Inc. representative.

(more warranty on next page)

WARRANTY

b) To repair damage, malfunction, or degradation of performance resulting from improper use or connection to incompatible equipment.

c) To repair damage, malfunction, or degradation of performance caused by the use of non Perlage Systems Inc. supplies or consumables or the use of supplies not specified for use with this product.

d) To repair an item that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product or degrades performance or reliability.

e) To perform user maintenance or cleaning or to repair damage, malfunction, or degradation of performance resulting from failure to perform user maintenance and cleaning as prescribed in published product materials.

f) To repair damage, malfunction, or degradation of performance resulting from use of the product in an environment not meeting the operating specifications set forth in the user manual.

g) To repair damage, malfunction, or degradation of performance resulting from failure to properly prepare and transport the product as prescribed in published product materials.

h) To replace items that have been refilled, are used up, abused, misused, or tampered with in any way.

i) To install replacement items that are considered customer replaceable.

j) To support parts not supplied by Perlage Systems Inc.

k) To provide parts or hardware updates or upgrades.

Any service identified in the above list and provided by Perlage Systems Inc. at the Customer's request, shall be invoiced to Customer at Perlage Systems Inc. then current rates for parts, labor and travel.

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Perlage Systems, Inc.
www.perlagesystems.com

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