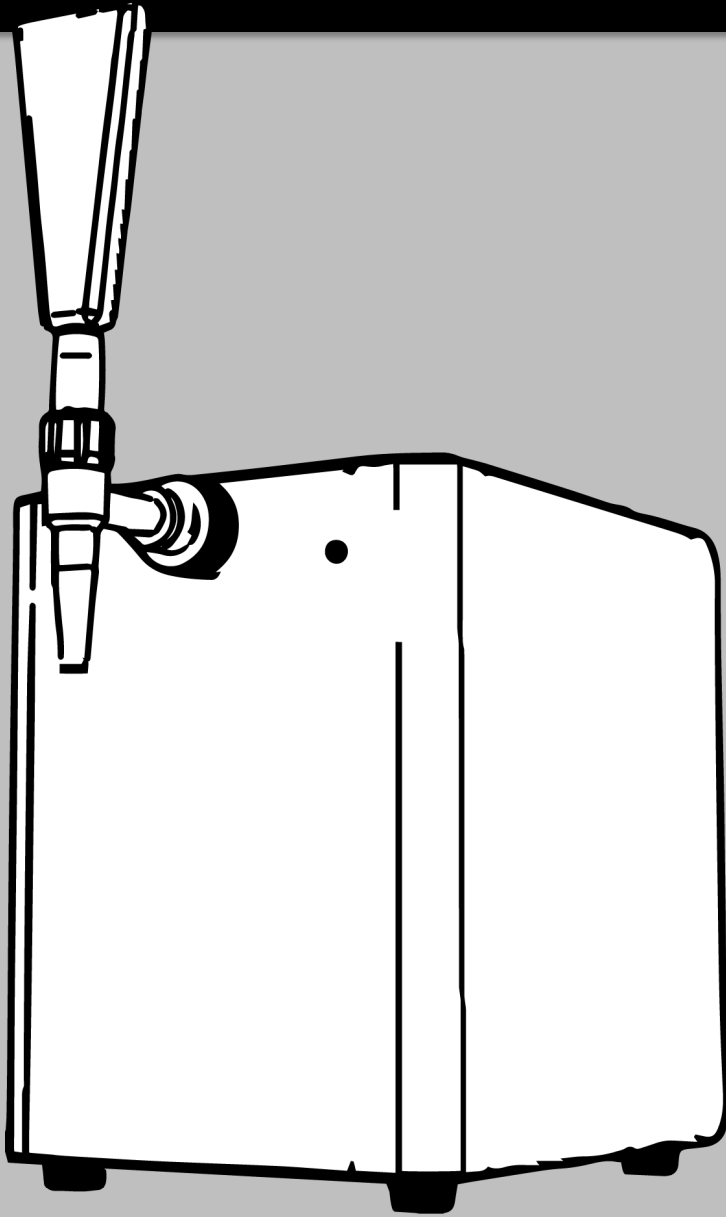


TONE NITRO



TONE NITRO

NITRO DP

Nitro DP ist eine eingetragene Wortmarke der **Gebrueder Schultes GmbH & Co. KG**.



Eine **CERTIFIED ORIGINAL NITRO DP®** wird ausschließlich an den Standorten in Bessenbach oder Goldbach montiert. Die **Gebrueder Schultes GmbH & Co. KG** distanziert sich ausdrücklich gegen Nachbauten und/oder Geräte, die sich als „Nitro DP“ bezeichnen und behält sich rechtliche Schritte vor.



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Wir denken global und fertigen lokal, kurze Wege auch in der Beschaffung sind uns wichtig. Wir nutzen erneuerbare Energien für unsere Fertigung.



Herausgeber:

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Germany
Revision 3 – Stand 04/2020 (Deutsch)



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Congratulations!

Congratulations on the purchase of your **TONE Nitro**.

A piece of exceptional craftsmanship and German engineering. Your **TONE Nitro** stands for sensational elegance, high performance and reliability. A machine that you will be happy to present to your customers and that you and your employees will have a lot of fun with.



1 INTRODUCTION



1.1 General information

This manual provides essential information for safe operation of your TONE Nitro. Please therefore read the enclosed safety instructions carefully.

1. This applies in particular to safety during installation, operation and cleaning. Please keep this manual in a safe place where it is accessible to all users.
2. Errors and technical changes reserved. Gebrueder Schultes GmbH & Co. KG (in accordance with its policy) is constantly developing the products further. Gebrueder Schultes GmbH & Co. KG therefore reserves the right to make changes and improvements to the product described in this documentation without prior notice.
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5. Please read the operating instructions carefully before use and keep them in a way that they are accessible to all users!



Mandatory sign:
Please read it.



Information sign:
Information.



Warning sign:
Attention!



1.2 Unpacking the machine

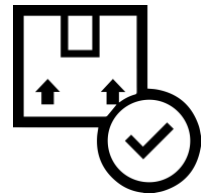
Check immediately whether any damage can be seen on the outer packaging of the machine. Immediately report any damage to the transporter or contract partner and document it.

If you do not do this as an entrepreneur, the goods will be considered "approved" and the recipient will no longer be able to rely on the transport damage later.

After you have carefully unpacked the machine, please check whether the device has any external damage.

Keep the packaging in case the machine may have to be shipped by a forwarding agent. The packaging materials (boxes, plastic bags) must never be allowed to fall into the hands of children.

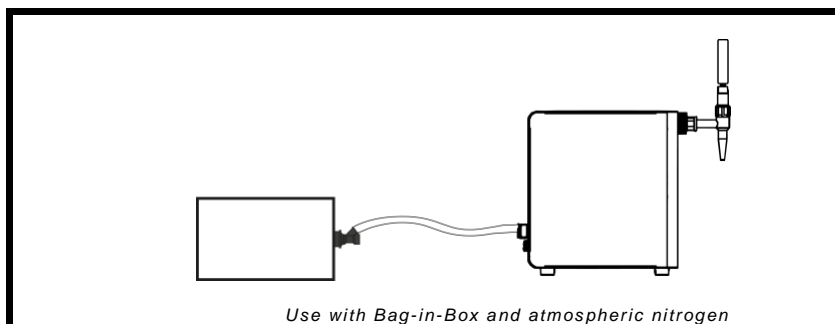
If any defects or damage to the machine are found, please inform the dealer where you purchased the machine immediately so that the matter can be dealt with.

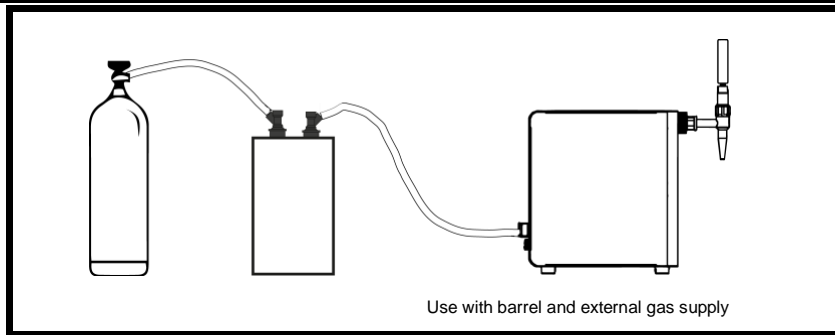


1.3 Mode of Operation

The **TONE Nitro** combines various functionalities in one device:

- Designed for bag-in-box applications / sucking a beverage from a pressureless container
- Vacuum switch switches off automatically when the box is empty
- Suitable for Cold Brew Coffee, fruit juice concentrates (without pulp), tea, wine, other alcoholic beverages
- Suitable for operation with air, nitrogen and CO₂ and adjustable via NEC "NITRO EASY CONTROL" on the unit or external gas supply
- Enrichment of the drink with atmospheric nitrogen
- Cooling the beverage in the appliance Cooling block
- Tapping the drink in Stout style





1.4 Requirements for the beverages

The **TONE Nitro** was primarily developed for use with Cold Brew Coffee. However, it can also be used with other beverages such as tea.

It is essential to ensure that the liquids are filtered to a filtration degree of at least 10 µm (cf. common disposable filters made of filter paper), as otherwise the pump inside the machine or the aerators can clog and damage the unit. Furthermore, it is essential that the unit is cleaned with fresh drinks after use. Only when used with pasteurised drinks do different cleaning intervals apply. Refer to "CLEANING SCHEDULE " for information on cleaning related issues.



1.5 Technical Data

Output capacity continuous	40 l / h
Output capacity continuous at 17°C → 7°C	25 l / h
Output capacity continuous at 22°C → 7°C	15 l / h
Built-in compressor	YES
Minimum cooling capacity	4 °C
Liquid Tap temperature	5°-8°C (+/- 2°C)
Required cooling time	2 – 4 min.
Supply voltage	230 V / 50 Hz
Cooling liquid	R – 134a (68g)
Power	Max. 300 W
Weight	23,5 kg
Measurements	Width: 26 cm Depth: 32 cm + 12,5 cm (=tap unit) Height: 35 cm



1.6 EC - Declaration of conformity

This device is EC-compliant according to the following EC directives:

- EU EMC Directive new 2014/30/EU
- NSP Directive new 2014/35/EU



1.7 FDA - Declaration of conformity

All parts in contact with the medium/liquid and all sealants used in the **TONE Nitro** meet the requirements of the FDA (Food and Drug Administration) and/or are made of stainless steel.



1.8 TONE Nitro - Warranty

TONE Nitro offers a **12-month limited warranty on all electrical and mechanical parts.**

If your **TONE Nitro** requires warranty service, please contact your dealer.

YOUR WARRANTY

1. The warranty period is 15 months and begins on the day of sale to the end user. The date of purchase and the type of device must be documented by a purchase receipt.
2. Within the warranty period **TONE Nitro** will eliminate all defects. **TONE Nitro** may choose to repair, replace defective parts or replace the instrument. The performance of warranty services does not cause an extension or a new start of the warranty period. Replaced parts become the property of **TONE Nitro**.
3. Damage to or failure of your **TONE Nitro** machine due to inadequately treated water and/or other liquids is not covered by the warranty See "Beverage Requirements" for information on beverage-related questions.
4. No warranty is provided for damage or defects resulting from improper connection, improper handling, repair attempts by unauthorized persons or failure to follow the instructions for use. In particular, if **TONE Nitro** operating or maintenance instructions are not followed, or if consumables (cleaning agents, descaling agents, water filters) are used that do not meet the original specifications, any warranty is also void.
5. Parts subject to wear and tear (e.g. rubber seals, gaskets, O-rings, taps, valves) are excluded from the warranty, as are damages caused by foreign bodies in the beverage or air circuit. Labour or shipping costs are also excluded from the warranty.
6. Due to the nature and characteristics of the wood(s) used for the handles of **TONE Nitro** machines, cracks, shrinkage and/or deformation of this wood are not covered by the warranty.
7. The same applies to the powder coatings on the machines. We strive to achieve the highest possible quality but cannot exclude small deviations in the surface due to manual production, so that the surface quality is not covered by the guarantee.
8. Warranty services are provided in the Federal Republic of Germany. For devices which were purchased in an EU country and brought to another EU country, services are provided within the scope of the **TONE Nitro** warranty conditions valid for this EU country.
9. Warranty service is provided by **TONE Nitro** or by **Authorized TONE dealers**.

TONE NITRO

2 SAFETY REGULATIONS



2.1 General safety regulations

The device corresponds to the current state of the art. Operational safety is only guaranteed if the operating instructions are followed. Work instructions must be followed taking into account the following dangers.

During the installation and operation of the TONE Nitro we also point out that the following relevant laws, ordinances, guidelines and regulations must be observed and complied with:

1. Equipment and product safety law - GPSG
2. Occupational Safety and Health Act - ArbSchG
3. Industrial safety ordinance - BetrSichV
4. Food hygiene regulation – LMHV
5. Beverage Dispensing Systems Ordinance - SchankV (until 30.06.2005)
6. Technical rules for beverage dispensing systems (TRSK and DIN standards)
7. Ordinance on Hazardous Substances (Gefahrstoff V)
8. Generally accepted rules of technology

Relevant country-specific rules, guidelines and regulations are to be applied. Conversions or changes to safety-relevant components or elements are generally prohibited and automatically lead to the expiration of the manufacturer's warranty.

- Check the device at least once a day for visible damage and defects. Contact a qualified service technician if you need to make any changes or repair work. The power cord may only be replaced by authorized service personnel. Use only original spare parts and accessories.
- Make sure that only authorized personnel work on the device and that the operating personnel is provided with operating instructions and this user manual.
- Make sure that no unauthorized person changes settings on the device or interferes with the device.

TONE accepts no liability for damage resulting from the use of non-original spare parts or accessories, as well as from improper handling or use outside the device's intended purpose.



2.2 Electrical hazard

Electric shock can be fatal or lead to serious injury! Unauthorized interference with the electrical system is therefore strictly prohibited. Water and electricity produce a deadly mixture!

The device is supplied with a moulded safety plug and may only be connected to a grounded safety socket.

If there is no corresponding socket outlet with earthing contact, the connection may only be carried out by authorized personnel, whereby the regulations valid at the place of installation (e.g. in Germany VDE-DIN standard) must be observed.



2.3 Operating overpressure

Some components are under overpressure during operation and are therefore a potential source of danger. Do not loosen or dismantle any parts that are under excess operating pressure.



2.4 Danger due to operational cooling

The evaporation temperature in the coolant circuit can be as low as -10°C. There is therefore a potential source of danger if maintenance, servicing, cleaning etc. are carried out on components at the appropriate temperature without suitable protective measures.



2.5 Danger due to operational heating up

Do not touch the compressor, condenser, motors and piping, as these parts can heat up during operation, which may cause injury if touched.



2.6 Danger from sheet edges

There is a residual risk of injury at sheet edges and corners despite constructive prevention.

3 REQUIREMENTS FOR THE LOCATION OF OPERATION



3.1 General requirements

The respective valid national regulations regarding the place of installation must be observed. Since the **TONE Nitro** is basically a dispensing system, please also observe the technical regulations for beverage dispensing systems TRSK 400 "Installation of beverage dispensing systems".

Attention: Low voltage can damage the compressor. The same applies if several units are supplied with power via one power connection.

The power plug must be freely accessible.



3.2 Electrical connections

→ see technical specification

Voltage	230 V~ +/- 10% 50 Hz
Power	300 W
Fuse protection	max. 16 A

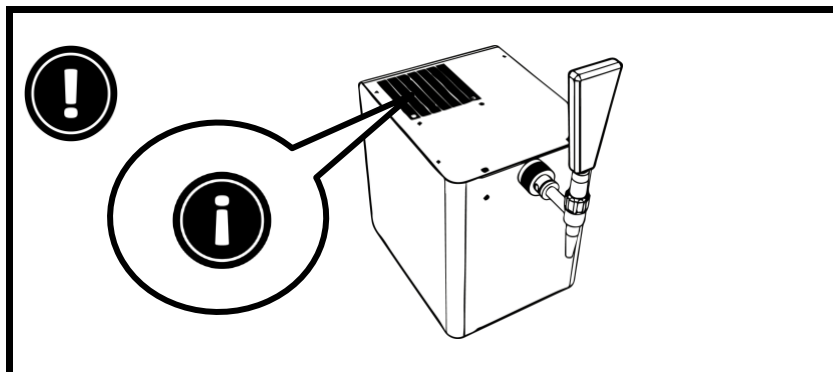


3.3 Location of operation

Adequate ventilation and extraction must be ensured. For this purpose, the distance to the next wall should be at least 30 cm.

Attention:










- Never cover and/or block the air slots. Otherwise there will be insufficient cooling capacity and the cooling system may fail.
- Never place the unit near heat sources or direct sunlight.
- Under no circumstances should liquid enter the upper opening of the unit, otherwise there is a danger of short circuit!



4 DESCRIPTION OF THE MACHINE

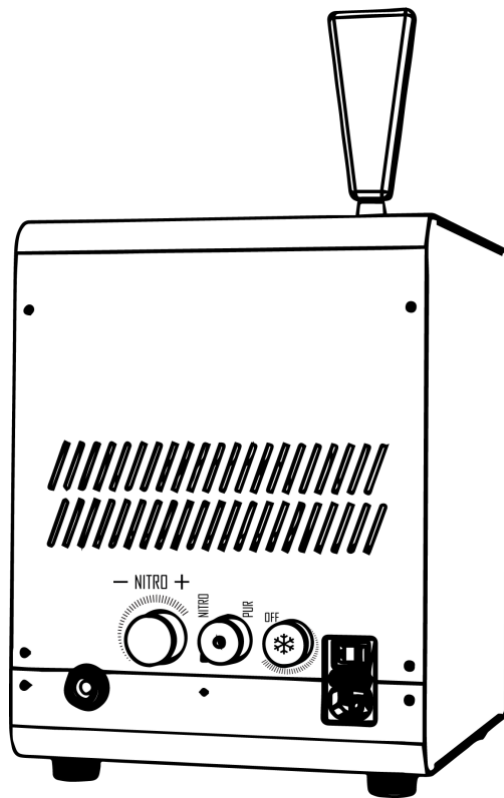
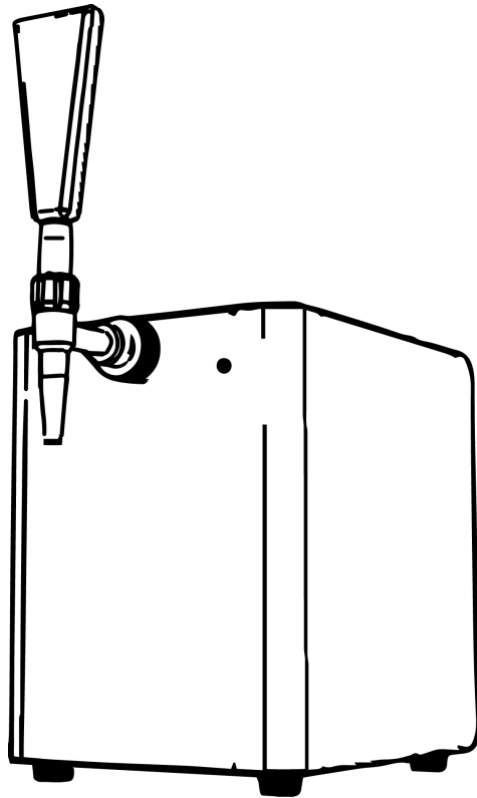


4.1 Scope of delivery: Accessories

Picture	Article-Nr.	Name	Information
	103010	Perlator-unit „green“	Perlator-unit consisting of: 1X 103011-Perlator A „green“ 1X 103012-Perlator B „green“ 1X 103013-Perlator C „green“
	108010	O-Ring Set (all)	O-Ring Set
	102010	Tap "TONE Nitro"	Tap for TONE Nitro with "TONE Nitro" laser engraving
	105010	Schlauch mit NC-Anschluss	Hose with NC connection for TONE Nitro systems
	109010	Power cable EU - angled (L)	Power cable EU
	106010	Cleaning-Canister 5l	Folding cleaning canister with 5l capacity and NC-connection for TONE Nitro
	107010	Cleaning powder 3X	Reliable quality cleaner with active oxygen for regular alkaline cleaning
	107014	Cleaning ball	Bevi Clean Ball, transparent throughout, no gaps and valves, for indoor and outdoor cleaning
	107015	Cleaning brush	Cleaning brush for the cleaning of the mixer housing built in TONE Nitro.



4.2 Illustration





4.3 Bag-in-Box and Nitro Canister

The TONE Nitro was designed exclusively for dispensing clear and/or filtered liquids that are drawn from a pressureless container (= bag-in-box / nitro canister). The use with insufficiently filtered liquids is expressly forbidden (as it can lead to contamination or blockages in the device) and will result in the loss of warranty if this is not observed!

Use with pasteurised bag-in-boxes is expressly recommended, as these have a high oxygen barrier, so that no ambient air can reach the drink and thus no mould can form.

Picture	Article-Nr.	Name	Information
	106010	Cleaning-Canister 5l	Folding cleaning canister with 5l capacity for TONE Nitro
	106011	Cleaning-Canister 10l	Folding cleaning canister with 10l capacity for TONE Nitro
	106012	Wide neck canister 6,4l	6,4 Liter UV-resistant wide-neck canister for TONE Nitro with stainless steel adapter and NC keg closure, plastic barrel with screw cap
	106013	Wide neck canister 15l	15 Liter UV-resistant wide-neck canister for TONE Nitro with stainless steel adapter and NC keg closure, plastic barrel with screw cap
	106014	Wide neck canister 26l	26 Liter UV-resistant wide-neck canister for TONE Nitro with stainless steel adapter and NC keg closure, plastic barrel with screw cap
	106015	Wide neck canister 55l	55 Liter UV-resistant wide-neck canister for TONE Nitro with stainless steel adapter and NC keg closure, plastic barrel with screw cap



The wide-neck canister sucks in ambient air to compensate for the negative pressure created by the suction of the liquid.





The wide-neck canister does not guarantee any shelf life of the liquids and must always be cleaned after daily use.

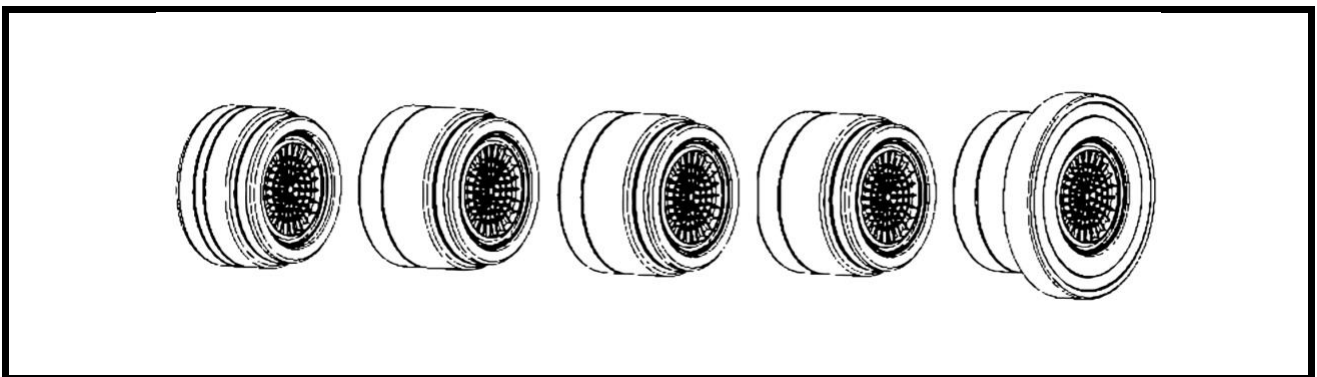
5 INSTALLATION



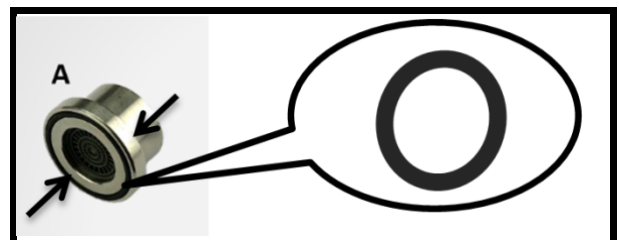
5.1 Installation (Step by Step)

5.1.1 Perlator-unit

Picture	Article-Nr.	Name	Information	Amount
1 	103010	Perlator-unit "green"	consisting of: <ul style="list-style-type: none"> 1 X - 103011-Perlator – A "green" 3 X - 103012-Perlator - B "green" 1 X - 103013-Perlator - C "green" 	Set =
2 	103011	Perlator - A " green "	Front-Perlator for TONE Nitro	1
3 	103012	Perlator - B " green "	Perlator for TONE Nitro	3
4 	103013	Perlator - C " green "	Perlator for TONE Nitro	1



Note:



- A ventilated perlator does not present a significantly increased risk of aerosol formation. The supplied nitrogen is sufficiently cleaned by air filters.
- To prevent the perlators from being contaminated with biofilm growth, the individual perlators (Perlator - A "green", Perlator - B "green", Perlator - C "green") must be cleaned after use. In addition, the inserts (103019 Perlator spare part "green") should be replaced at regular intervals. Read "MAINTENANCE" for information on cleaning.
- In the front piece Perlator - A "green" there are two O-rings: one at the front and one at the back. **Make sure that the O-rings are in the notch of the stainless steel part before inserting the perlator-unit into the mixer unit. If the O-rings are missing, the tap cannot seal and the unit will drip on the mixer unit.**



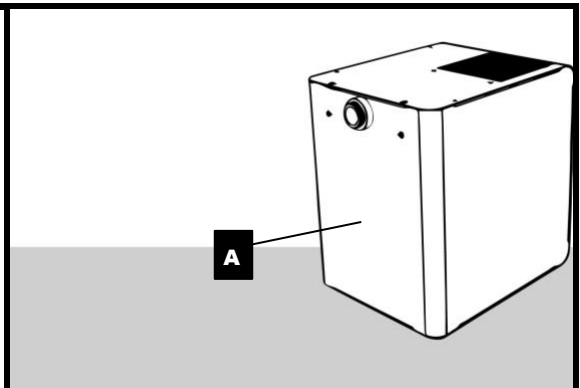
5.1.2 First time installation

1

Place **TONE Nitro [A]** in its place.



Note: Keep ventilation and exhaust air slots free and do not block them under any circumstances! When first installed at a new location, **the machine must be left standing quietly for at least 30 minutes before use.**

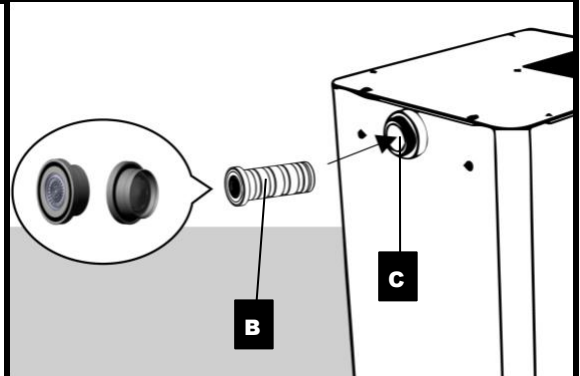


2

Insert **perlator-unit [B]** into **mixer housing [C]**.



Note: Watch out for O-rings! Before inserting, it is essential to remove the plugs.

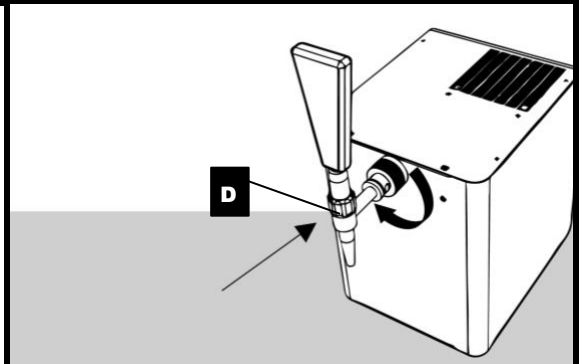


3

Screw **tap unit [D]** onto the external thread of the **mixer housing [C]** and tighten slightly.

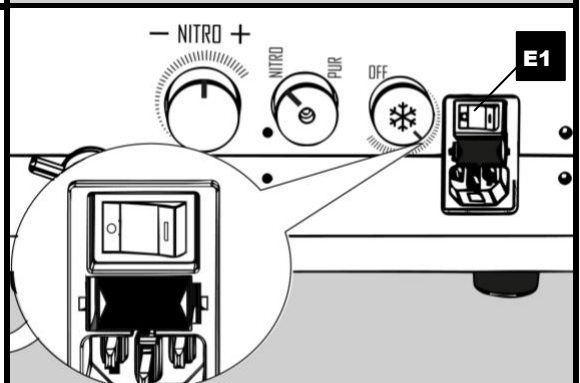


Note: Under no circumstances should pliers be used for tightening!



4

Set **device switch [E1]** on the rear panel to "0 OFF".

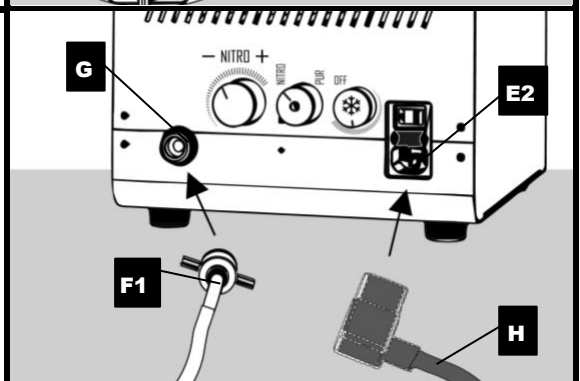


5

Screw the suction hose with screw **connection [F1]** to the **rear opening [G]**. Plug the **cable [H]** of the cold appliance into the **socket [E2]** provided for this purpose.



Note: Clean the **suction hose with screw connection [F1]** and the **rear opening [G]** with **disinfection spray before use.**

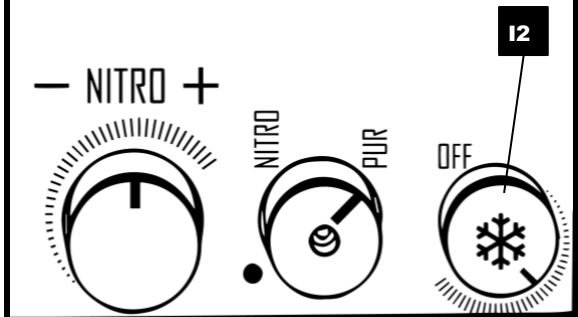


6

Turn the right-hand knob thermostat [I2] on the back of the unit counterclockwise for less cooling and clockwise for more cooling.



Note: Do not set the thermostat to **MAX**, as the unit may freeze. To switch off the cooling completely, turn the rotary switch all the way to the left until a "click" is heard.



5.1.2 Connection suction hose and connector with NC-coupling

1

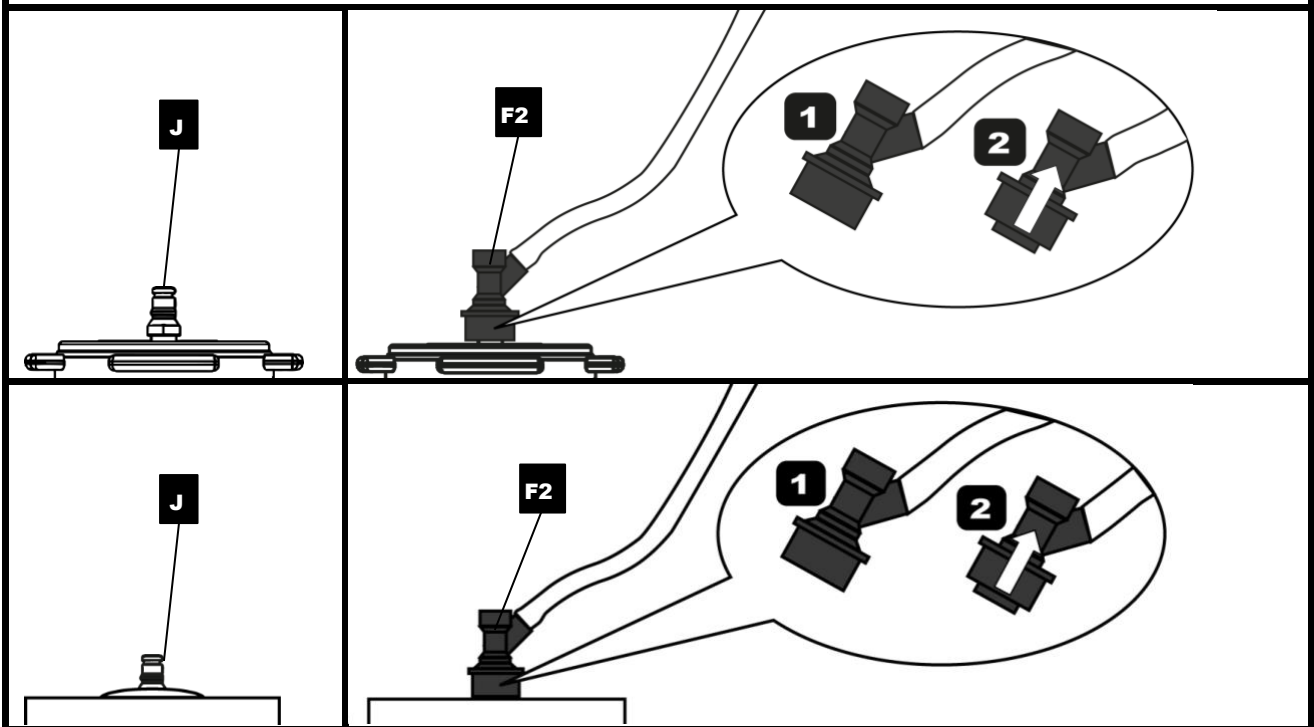
Open the valve at **connector [F2]** by pulling the snap-lock upwards and put it onto the **coupling [J]**.



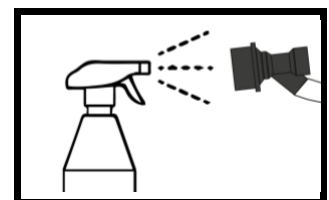
Note: Plug the **connector [F2]** flush onto the **coupling [J]**.

Make absolutely sure that the **connector [F2]** is plugged flush onto the **coupling [J]**, otherwise

- the system sucks in air and the system "spits" air during tapping and/or
- the valve inside the **connector [F2]** does not open and the system does not suck in liquid



Note: Whenever the **connector [F2]** is reconnected to the **coupling [J]**, the **connector [F2]** must be cleaned with a disinfectant spray.





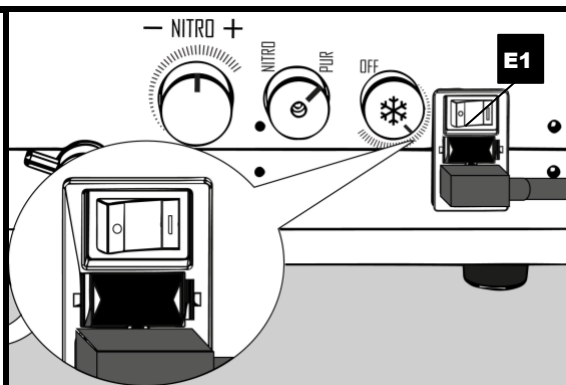
5.1.2 Switching on the device / Ready for operation

1

Set the **unit switch [E1]** on the rear panel to "1 ON". The system starts automatically and switches off after reaching the set temperature and pressure. **The system is ready for operation after approx. 5 minutes.**

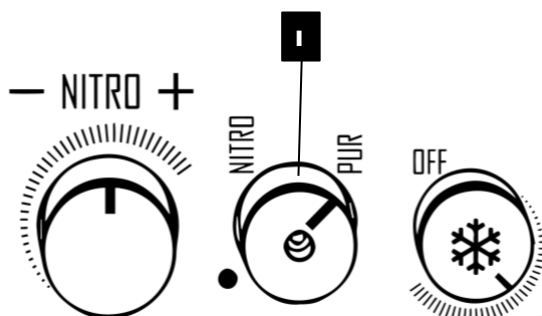


Note: For initial commissioning, the process may take 1-2 minutes longer.



2

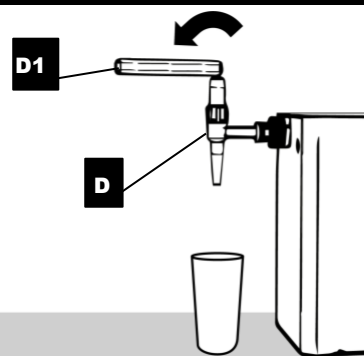
Turn the **middle rotary knob [I]** 90° clockwise to "PUR".



3

Place the glass under the **tap [D]** and pull the **handle [D1]** forward by 90°. The appliance sucks in the liquid and after a short time it flows out of the tap in a cooled manner.

To stop the tapping process, flip the tap handle upwards again.



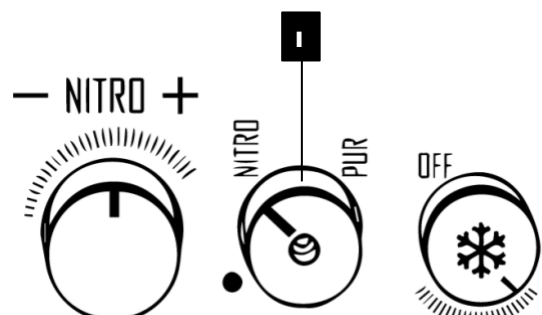
4

As soon as the liquid flows, turn the **middle knob [I]** 90° counterclockwise to "NITRO".



Now the NITRO settings can be made to adjust the foaming.

More information under "5.1.3 Adjusting the foaming with NITRO EASY CONTROL".





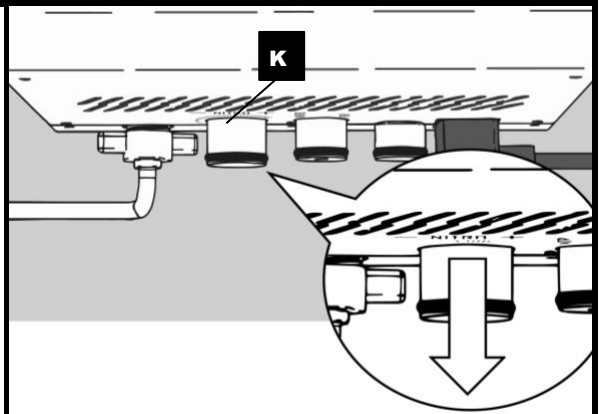
5.1.3 Adjusting the foam formation by using NITRO EASY CONTROL NEC

1

Set the nitrogen supply via the left "NITRO" control knob [K]. To make the adjustment, the "NITRO" control knob [K] must be pulled out.



Note: The pump loses power if the valve is opened too wide and therefore too much air is delivered.



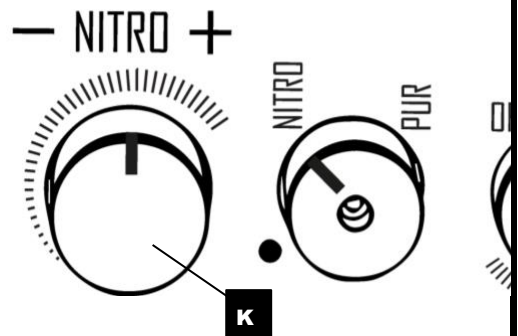
2

Turn rotary switch "NITRO" [K] for more air clockwise (+).

Turn rotary switch "NITRO" for less air counterclockwise (-).

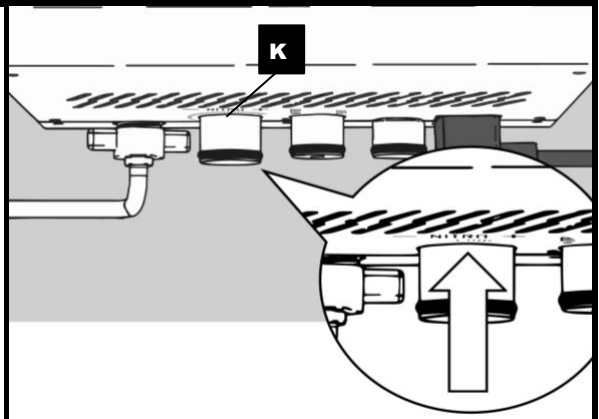


Note: The fine adjustment is very sensitive and should therefore only be carried out in steps of 5 - 10° between tapping from time to time and checking the result.



3

Once the perfect setting has been found, the "NITRO" [K] control knob can be pushed back in and locked.



Note:
Always close the tap while making the NITRO settings so that the system can build up the pressure!

If the system only emits air, proceed as follows:

1. Close tap [D] (fold tap handle [D1] upwards again).
2. Turn rotary switch "NITRO" [K] at least half a turn (180°) counterclockwise.
3. Place a glass underneath and pull the tap handle forward by 90°.
4. If the result still does not meet your requirements, repeat step 2-3.

A total of about eight rotations are possible. As soon as liquid flows out of the tap, fine adjustment (1-2° steps) can be made during tapping.



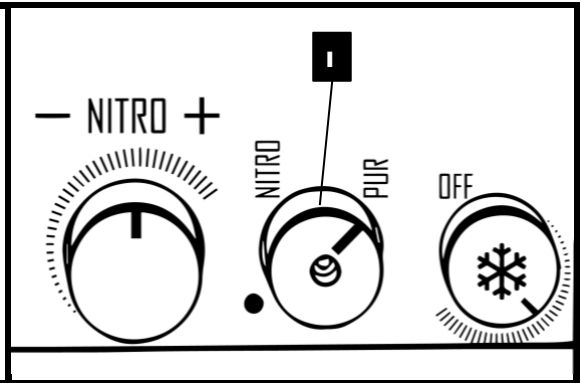
5.1.4 NITRO oder PUR-Modus

1

Turn the **middle rotary knob [I]** 90° clockwise to "PUR".



Note: After the changeover, the unit continues to output approx. one glass with foam formation until the PUR setting has been completely adopted.



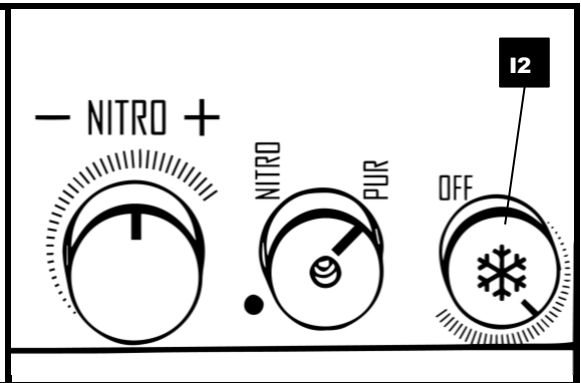
5.1.5 Switch cooling on / off

1

Turn the right-hand **Thermostat [I2]** on the back of the unit counterclockwise for less cooling and clockwise for more cooling.



Note: Do not set the thermostat to **MAX**, as the unit may freeze. To switch off the cooling completely, turn the rotary switch all the way counterclockwise until a "click" is heard.



6 HYGIENE AND CLEANING



6.1 Hygienic handling

Observe the respective national regulations for cleaning dispensing systems valid at the installation site. Since the TONE Nitro is basically a beverage dispensing system, we recommend that you clean the beverage lines in accordance with the applicable cleaning regulations in accordance with TRSK 501 "Cleaning of beverage dispensing systems". We also refer to DIN 6650-6 ("Requirements for cleaning and disinfection of beverage dispensing systems")

- Before every connection and every change of beverage type, pipes and connecting parts and tap fittings must be cleaned.
- Parts that come into contact with air and drink must be cleaned daily (especially tap outlets).

Follow the instructions of the detergent manufacturer. Only use cleaning agents that also meet the requirements of ASI 6.84 and DIN 6650-6 for cleaning.



There is a risk of severe burns when handling cleaning fluids! Always observe the safety data sheets during cleaning work, wear protective goggles, gloves and appropriate clothing!



6.2 Cleaning schedule

Please note that different cleaning intervals apply depending on the beverage and that the device must be rinsed regularly with water.

The national legal requirements and regulations apply!

	Description	How?	When?	Description
1	Cold Brew Coffee (pasteurized)	Cold Brew (without additives), pasteurised, in Bag-in-Box with CMB / NC closure	every 14 days	chemical
2	Cold Brew Coffee (fresh)	Cold Brew (with/without additives) freshly prepared	daily	chemical
3	Tea (pasteurized)	Tea (without additives), pasteurized, in Bag-in-Box with CMB / NC closure	every 7 days	chemical
4	Tea (fresh)	Tea (with/without additives), freshly prepared	daily	chemical
5	Fruit juice concentrates (without fruit pulp)	Fruit juice concentrates (without fruit pulp) with/without additives freshly prepared	daily	chemical
6	Wine, other alcoholic beverages	Wine, other alcoholic beverages	daily	chemical

In general, the appliance must always be cleaned after use with freshly prepared drinks, i.e. with a chemical cleaner and subsequent water rinse. This prevents the appliance from being contaminated and the beverage lines from taking on a different taste.




6.3 Equipment areas to be cleaned

	Description	How?	When?
1	Tap [D], Outlet nozzle [D2] (inside and outside)	Warm water, cleaning brush	daily, after closing time and before starting operation
2	Mixer housing [C]	Warm water	when using: -fresh drinks: daily; -pasteurized drinks: weekly
3	Tap [D] (outside)	cleaning brush	daily
4	Connector [D] (inside and outside)	Disinfection spray	Whenever the bag-in-box is reconnected and reconnected, especially after pipe cleaning
5	Perlator-unit [D]	Warm water	when using: -fresh drinks: daily; -pasteurized drinks: weekly
6	Device opening [G] (inside and outside)	Disinfection spray	Whenever the bag-in-box is reconnected and reconnected, especially after pipe cleaning
7	Complete system [A]	chemical cleaning agent	At least every 14 days



6.4 Approved cleaning agents

	Picture	Article-Nr.	Name	Manufacturer	Information
1		107010	TM Desana Max fp	Thonhauser GmbH (AT)	Chlorine- free disinfectant cleaner with "color indicator" in powder form

Other cleaning agents may only be used after consultation with and with the express permission of the manufacturer, otherwise the guarantee may be invalidated.



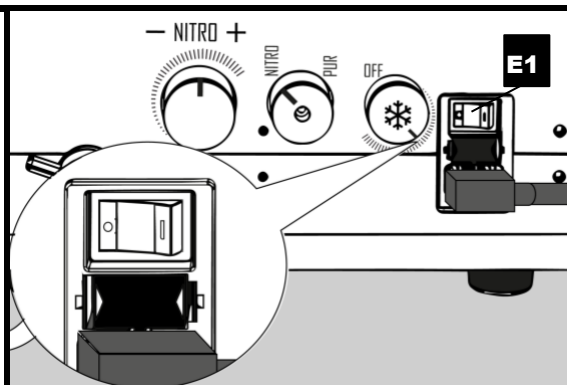
6.5 Preparation / Switch off machine and remove tap

1

Set the **unit switch [E1]** on the rear panel to "0 OFF".

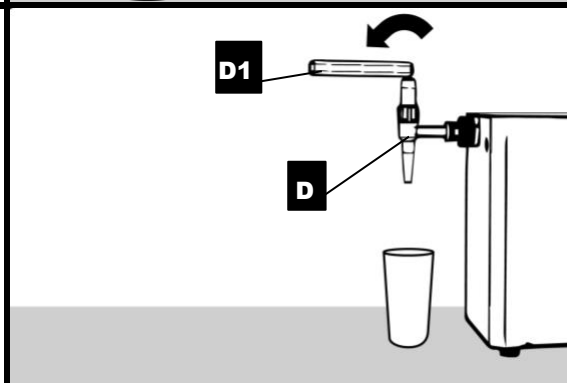


Note: The system is still under pressure even after the power is turned off. It is essential to continue with step (2)!



2

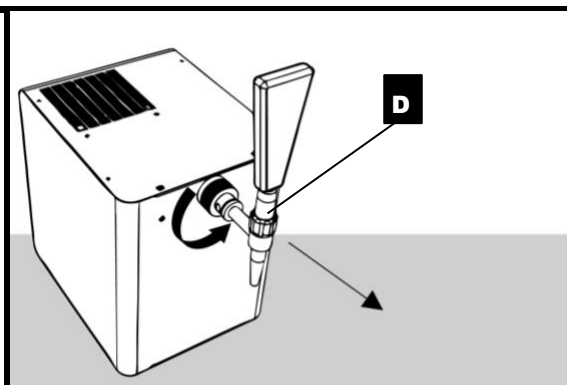
Place the glass under the **tap [D]** and pull the **handle [D1]** forward by 90°: Continue tapping until only air escapes from the tap.



6.6 Cleaning the tap

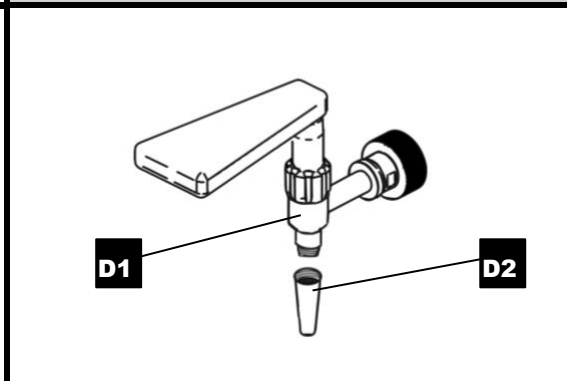
1

Unscrew **tap unit [D]** from the external thread of the **mixer housing [C]**.



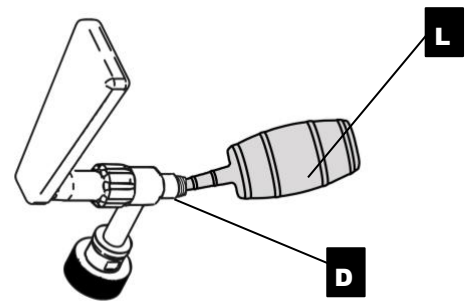
2

Unscrew **outlet nozzle [D2]** from tap [D].



3

Rinse the **tap [D]** with water. To do this, place the tap handle at 90° to the front and then rinse with warm water using the **cleaning bottle [L]** provided.



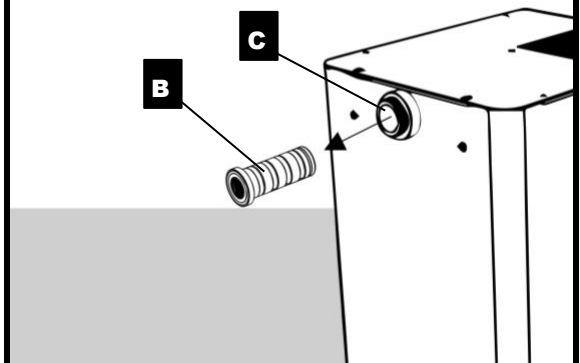
6.7 Cleaning the Perlator unit and the mixer housing

1

Take out the **perlator-unit [B]** from the **mixer housing [C]**.



Note: We recommend keeping a cleaning towel underneath in order to catch any leaking liquid.

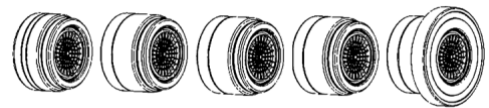


2

Unscrew individual **perlator rings [B]** and place them in a suitable cleaning solution.



Note: With some chemical cleaners, the stainless-steel rings may become slightly discolored.



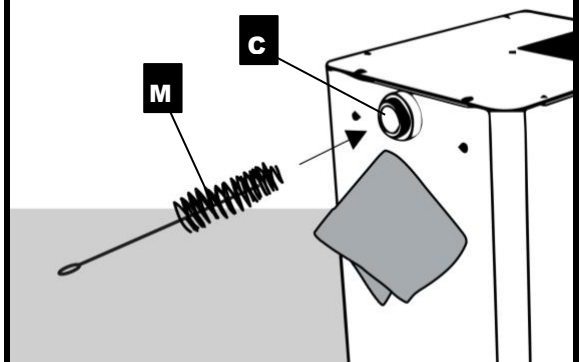
Note:
Make sure that the O-rings (red and black at the front-perlator) are firmly seated!

3

Clean **mixer housing [C]** mechanically using the **cleaning brush [M]** supplied and then rinse with **cleaning bottle [L]**.



Note: We recommend keeping a cleaning towel underneath in order to catch any leaking liquid.

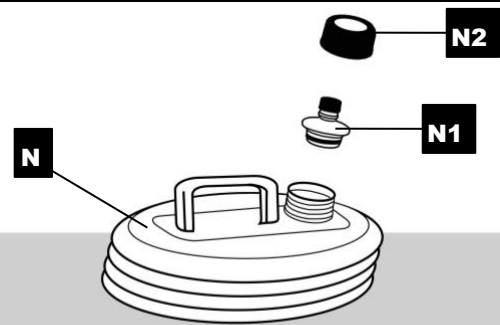




6.8 Preparation of the cleaning liquid

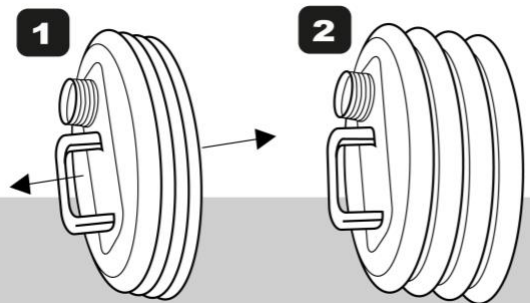
1

Unscrew the **plastic union nut [N2]** from the **cleaning canister [N]** and remove the **NC connection [N1]**.



2

Take the **cleaning canister [N]** by the handle and pull it slightly apart to increase its volume.



3

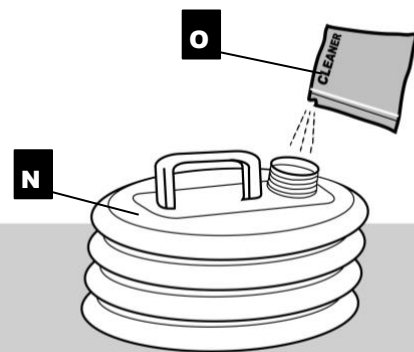
Fill **cleaning powder [O]** into the **cleaning canister [N]**.



Always wear gloves when working with cleaning agents!

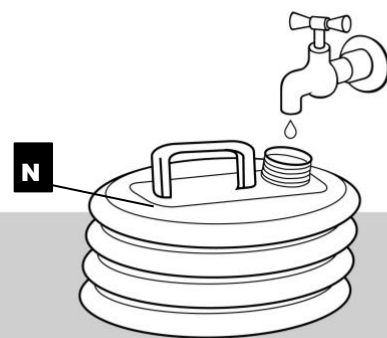


Note: Prepare the cleaning liquid with lukewarm water according to the manufacturer's instructions on the packaging.



4

Fill lukewarm water into the **cleaning canister [N]**.

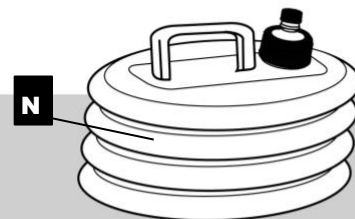


5

Carefully release the remaining air from the canister. Put the **NC connection [N1]** back into the opening provided for it and screw it tight using the plastic **union nut [N2]**.



Note: The less air in the container, the better the system can be cleaned.





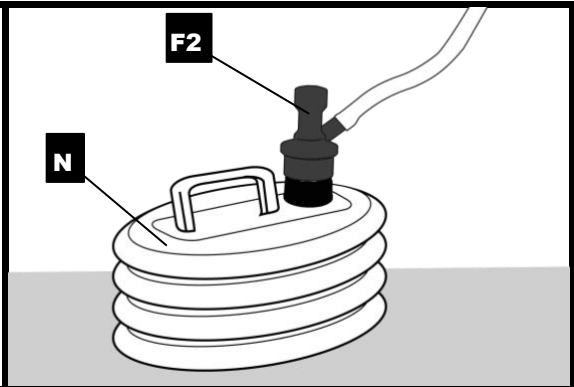
6.9 Dry cleaning

1

Remove red cap from cleaning canister [N]. Connect **Connector [F2]** to the **cleaning canister [N]** as shown in "6.8 Preparing the cleaning liquid".

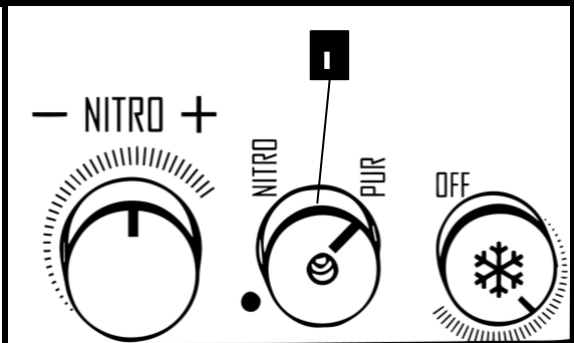


Always wear gloves when working with cleaning agents!



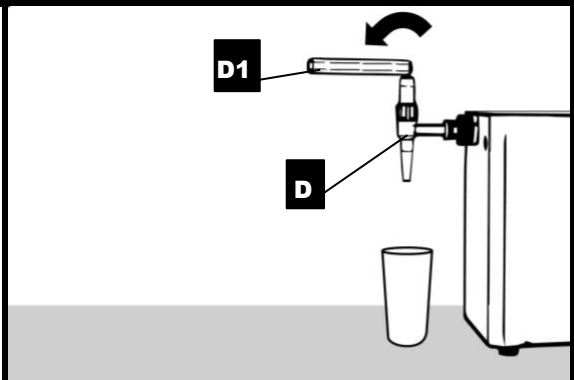
2

Turn the **middle rotary knob [I]** 90° clockwise to "PUR".



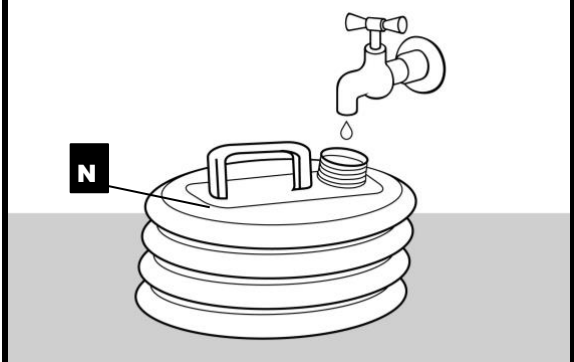
3

Place a glass under the **tap [D]** and pull the **handle [D1]** forward by 90°: The cleaning liquid is sucked in. As soon as the cleaning solution comes out of the tap, stop tapping and allow the cleaning **liquid to soak in for five to ten minutes**. Repeat the procedure until the cleaning fluid has the desired color.



4

Then fill lukewarm water into the **cleaning canister [N]** and connect it to the machine again.

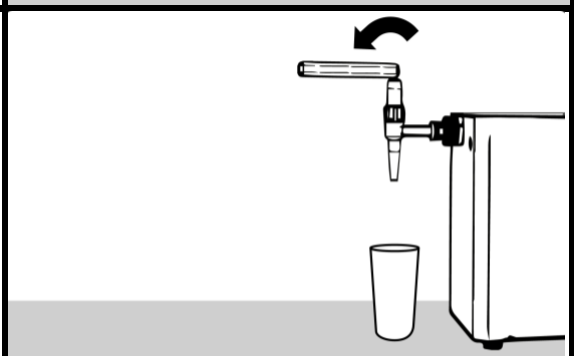


5

Rinse the system with at least five liters of **clear water** until the cleaning agent has been completely removed.



Note: Before serving to guests: **Check the taste!**



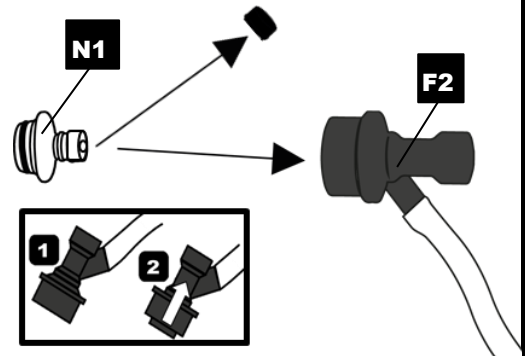


6.10 Drain the system

1

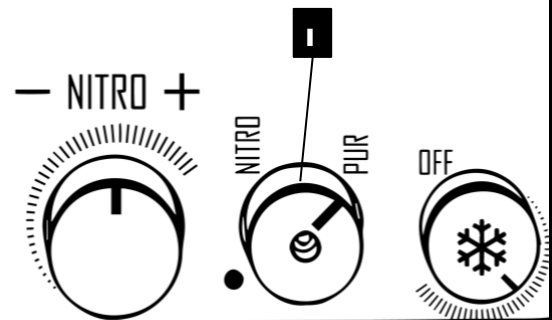
Remove the red cap from **NC connection [N1]**. Insert **NC connection [N1]** into **connector [F2]** and connect the suction hose to **TONE Nitro**.

Note: Insert **NC connection [N1]** flush into **connector [F2]**, otherwise the valve inside the **connector [F2]** will not open and the system will not suck in liquid.



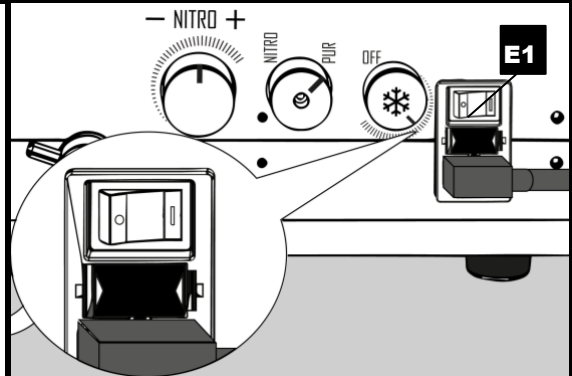
2

Turn the **middle rotary knob [I]** 90° clockwise to "PUR".



3

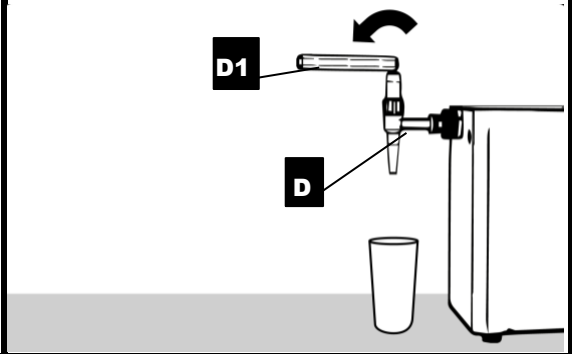
Set the **unit switch [E1]** on the rear panel to "1 ON". The system starts automatically.



4

Place the glass under the **tap [D]** and pull the **handle [D1]** forward by 90°: Continue tapping until only air escapes from the tap.

Then switch the **appliance switch [E1]** on the back to "0 OFF" and release the remaining pressure.



7 MAINTENANCE








7.1 Cleaning

A **TONE Nitro** has been designed to have a very long life when used and cleaned properly. The compressor inside is oil and maintenance-free.



7.2 O-rings, Perlators und tap unit

Description	Picture	Information
1 108012 O-ring set "red", compatible with Perlator-B and C		The O-rings of the perlator-unit should be replaced depending on how it is used, but after 18 months at the latest.
2 108013 O-ring set "black", O-rings of the Perlator unit (red)		The O-rings of the perlator-unit should be replaced depending on how it is used, but after 18 months at the latest.
3 108011 O-ring set (hose) / O-ring set silicone for suction hoses		The transparent O-ring/gasket should be replaced if it becomes too hard over time and thus a sufficient seal can no longer be guaranteed, but after 12 months at the latest.
4 102011 Outlet Nozzle		Nozzle et of the tap (or its inner rubber seals) should be replaced depending on how it is used, but after 18 months at the latest.
5 103019 Perlator-spare part „green“		The inserts of the perlator-unit should be replaced depending on how it is used, but after 12 months at the latest.



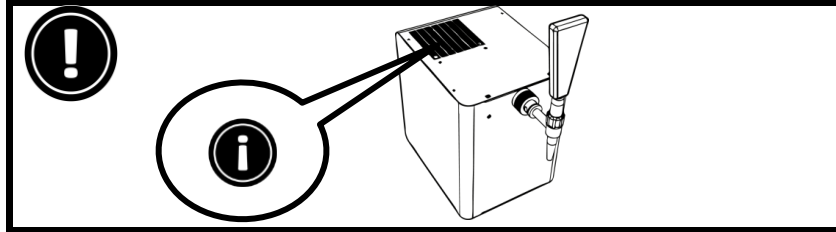
7.3 Air filter

Description	Information
1 106010 Air filter	An air filter is installed on the bottom of the machine, this should be replaced after 18 months at the latest. This procedure can be carried out very easily, as the filter only has to be removed. Then fit a new filter.



7.4 Condenser fins

Description	Information
1 Condenser fins	The fins of the condenser should be vacuumed every 3 months with a vacuum cleaner, as any dust that may be deposited will considerably reduce the performance of the system. Do not use liquid!

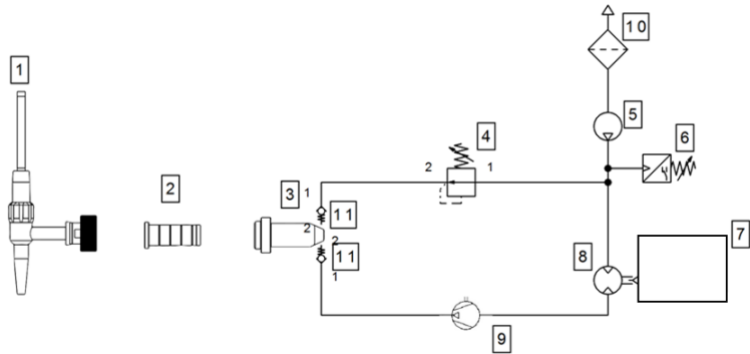


8 FLOW CHART AND CIRCUIT DIAGRAM

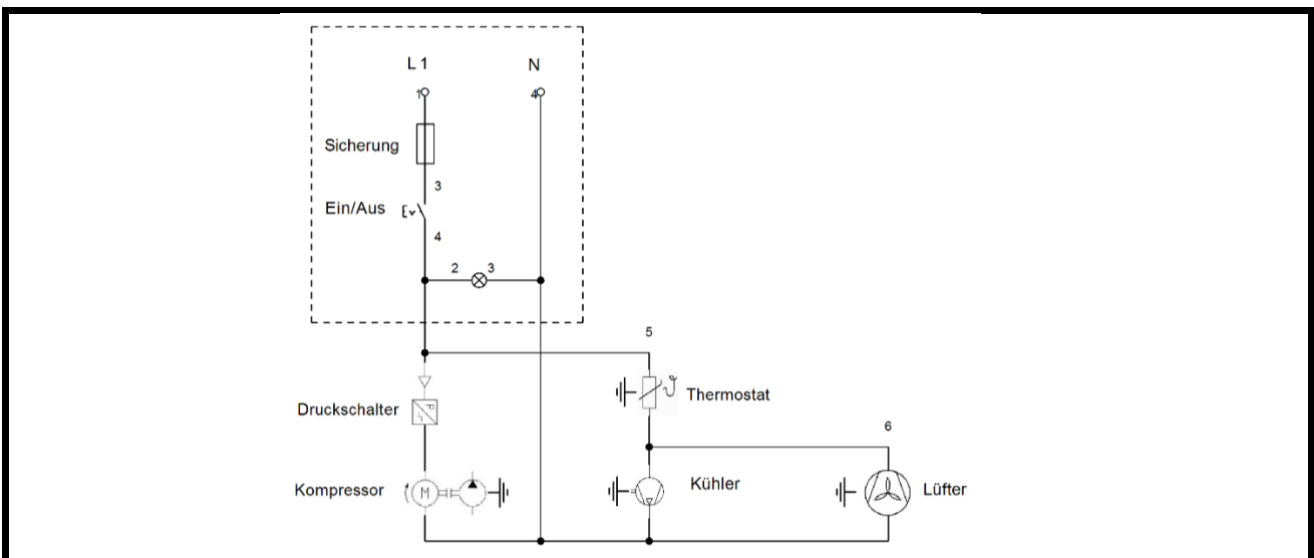


8.1 Flow chart

1. Tap unit
2. Perlator unit
3. Mixer housing
4. Pressure regulating valve
5. Compressor
6. Pressure switch
7. Bag-in-box
8. Pump
9. Cooling unit
10. Air filter
11. Throttle check valve



8.2 Circuit diagram



9 TROUBLESHOOTING, FAQ, TIPPS AND TRICKS



9.1 Troubleshooting

You have problems with your system? No problem, often it is only "little things" that have to be changed and your system is running again. In the following you will find our Troubleshooting with possible problems, which you can easily solve yourself with the questions and the suggested solutions.

System drips from tap.	
Are the O-rings inserted in the front of the Perlator-unit (A)?	Is the tap damaged?
↓ ↓ No!	↓ ↓ Yes!
Insert the O-rings. There are two pieces as replacement in the scope of delivery.	Replace the tap.

System does not suck in liquid.					
Is the system switched on?	Is the connector plugged in flush?	Is the Perlator-unit blocked, the system clogged?	Is the setting for cooling turned up too far, the system frozen?	Is the suction hose damaged?	Is the O-ring in the screw connection of the suction hose present / OK?
↓ ↓ No!	↓ ↓ No!	↓ ↓ Yes!	↓ ↓ Yes!	↓ ↓ Yes!	↓ ↓ No!
Switch on the system.	Attach the connector flush.	Remove the Perlator unit and clean it thoroughly.	Switch off cooling and wait for approx. 10 min. If necessary, remove Perlator- unit and rinse individual rings with warm water.	Replace suction hose.	Insert or replace the transparent O-ring / seal. There is one piece as replacement in the scope of delivery.

System sucks in air.				
Is the connector plugged in flush?	Is the canister / bag-in-box empty?	Is the suction hose damaged?	Is the O-ring in the screw connection of the suction hose present / OK?	Are there air bubbles in the folding canister?
↓ ↓ No!	↓ ↓ Yes!	↓ ↓ Yes!	↓ ↓ No!	↓ ↓ Yes!
Attach the connector flush.	Fill canister / exchange bag-in-box.	Replace suction hose.	Insert or replace the transparent O-ring / seal. There is one piece as replacement in the scope of delivery.	Remove air bubbles. i Tipp: The valve in the NC coupling can be opened by means of pure pressure and the air can be transported out of the canister by exerting pressure

System only emits air.				
Are there air bubbles in the suction hose?				
↓ Yes! ↓			↓ No! ↓	
System sucks in air.			Check NITRO setting.	
Is the connector plugged in flush?	Is the canister / bag-in-box empty?	Is the suction hose damaged?	Is the O-ring in the screw connection of the suction hose present / OK?	Is the NITRO setting too high ?
↓ No! ↓	↓ Yes! ↓	↓ Yes! ↓	↓ No! ↓	↓ Yes! ↓
Attach the connector flush.	Fill canister / exchange bag-in-box.	Replace suction hose.	Insert or replace the transparent O-ring / seal. There is one piece as replacement in the scope of delivery.	Turn the left-hand dial NITRO settings back (to the left/ counter-clockwise). See "Adjusting the foaming with NITRO EASY CONTROL".

System dispenses drink only without foaming.		
Is the system set to PUR?	Is the NITRO setting not turned up enough ?	Is the beverage liquid able to foam?
↓ Yes! ↓	↓ Yes! ↓	↓ No! ↓
Set system to NITRO. See "Adjusting the foaming with NITRO EASY CONTROL".	Turn the left-hand dial NITRO settings back (to the right/ clockwise). See "Adjusting the foaming with NITRO EASY CONTROL".	Dry clean the system and use other beverage liquid. Too little protein or sugar, or too much alcohol can prevent proper foaming.

System dispenses drink too warm.			
Is the cooling switched on?	Does the system have enough space? Are all ventilation slots free and the condenser not covered?	Does the outside temperature or the temperature of the beverage to be drawn in the bag-in-box/ Nitro DP® canister exceed 22 °C?	Is the system exposed to direct sunlight?
↓ No! ↓	↓ No! ↓	↓ Yes! ↓	↓ Yes! ↓
Switch on cooling. To do this, turn the right-hand knob to the right.	It is essential that all ventilation slots are kept clear. And switch off the system for 10 minutes. The condenser fins must never be covered, otherwise there is a risk of overheating and fire and/or the unit could be destroyed!	It's too hot. The system must "fight" against the outside temperatures or cool down the too warm beverage liquid first. Have patience, the filling system just needs a little more time.	Always remove the system from the sun and place it in a shady place. The system must "fight" against the high outside temperatures or cool down the too warm drink first. Have patience, the filling system just needs a little more time.

System "spits" during the tapping process.				
Is the connector plugged in flush?	Is the canister / bag-in-box empty?	Is the suction hose damaged?	Is the O-ring in the screw connection of the suction hose present / OK?	Are there air bubbles in the folding canister?
↓ No! ↓	↓ Yes! ↓	↓ Yes! ↓	↓ No! ↓	↓ Yes! ↓
Attach the connector flush.	Fill canister / exchange bag-in-box.	Replace suction hose.	Insert or replace the transparent O-ring / seal. There is one piece as replacement in the scope of delivery.	Remove air bubbles. i Tip: The valve in the NC coupling can be opened by means of pure pressure and the air can be transported out of the canister by exerting pressure



9.2 FAQ, Tipps and Tricks

**I need new accessories for my TONE Nitro.
Where can I get new accessories?**

TONE NITRO

At contact@tone-swiss.com you can send us an email with your order or contact your key account manager / local dealer.

What beverages can I tap with a TONE Nitro?

TONE NITRO

The TONE Nitro was designed exclusively for dispensing clear and/or filtered liquids that are drawn from a pressureless container (= bag-in-box / nitro canister). For example: Cold Brew Coffee, tea, etc.

Where are TONE Nitro systems manufactured?

TONE NITRO

We are an owner-managed, medium-sized family business and manufacture exclusively in Germany in Bessenbach and Goldbach near Aschaffenburg. Made in Germany is not an empty phrase for us but an attitude. We try to cover as much as possible with our own production, we try to purchase purchased parts completely within a radius of max. 200km. They want to continue the tradition of their grandfather and believe firmly in Germany as a location.

Can I use other or less perlators for the operation?

TONE NITRO

Yes, in addition to the green perlators we also have others with more or less strong ventilation in our portfolio. Also, the plant can be operated with only one perlator, but the tapping result or the NITRO effect is then a completely different one. However, it is important that the front piece (Perlator A) is always used, otherwise the tap will not seal properly and the system will drip.

Can I obtain other spare parts and cleaning agents from third parties?

TONE NITRO

No! Your **TONE Nitro** warranty is void if you use unauthorized accessories, replacement parts, or cleaning agents.

Can I pump liquids from containers other than TONE Nitro canisters and folding canisters?

TONE NITRO

Yes! insert the NC coupling (supplied with the cleaning canister) into the connector and connect the intake hose to the **TONE Nitro**. Without the NC coupling, the valve in the connector will not open and no fluid can be aspirated.

What is Cold Brew?

COLD BREW

Cold brew is a special method of preparing coffee in which the ground beans are soaked in cold water for a longer period of time. This allows both the water-soluble aromas and the caffeine, which is also water-soluble, to be extracted. Variants: NITRO, Cold Drip;

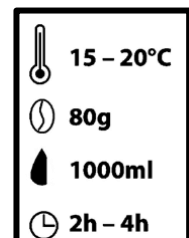
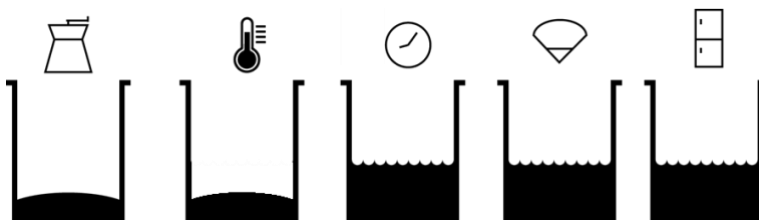
Why Cold Brew?

COLD BREW

Slow extraction at low temperatures results in a shift in flavour profile to lighter, fruity aromas with citrus, berry and stone fruit notes. Coffee becomes a soft drink with lots of caffeine.

How is Cold Brew made?

COLD BREW

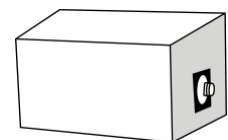


1. Grind the roasted beans (grinding degree as for filter coffee)
2. Put ground beans in water (80g / 1000ml at 15 - 20°C)
3. Slow extraction (2h - 4h)
4. Filter out suspended particles (min. 5 micron)
5. Fill into Nitro DP® wide neck canister, connect to Nitro DP® and serve as NITRO

Why bag-in-box?

COLD BREW

The cold brew from the bag-in-box is mostly pasteurized, i.e. you have shelf lives of up to 12 months. The bag-in-box can also be connected to the **TONE Nitro** for longer periods of time without the cold brew tipping over or going bad.



How long is freshly prepared cold brew edible?

COLD BREW

We recommend consuming the freshly prepared Cold Brew within one day, even with continuous cooling. This is fresh product, which is not preserved by connecting it to a **TONE Nitro**.

If you would like to preserve cold brew, we recommend that you pasteurize it and fill it into a bag-in-box.

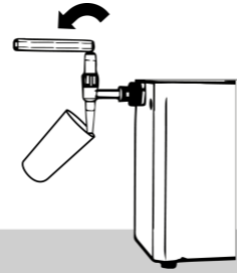
How do I serve NITRO?

NITRO is best served in a craft glass. Here you can admire the waterfall effect especially beautiful and long.

Alternative: Longdrink glasses and Kölsch glasses

How do I tap NITRO? How do I hold the glass?

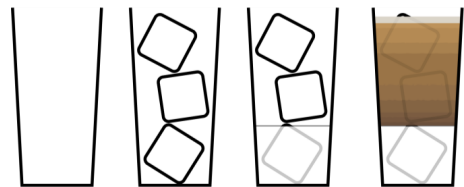
Adjust the **TONE Nitro** to the desired NITRO setting. The clean glass should be rinsed with fresh cold water immediately before tapping. The glass should be held at an angle under the fully open tap so that the liquid can run along the wall to prevent coarse foaming. As soon as approx. half of the filling quantity has been reached, hold the glass at a less inclined angle and fill it up completely with a circular motion.



How do I get layers in the glass?

Adjust the **TONE Nitro** to the desired NITRO setting. The higher the glass is, the easier it is to create layers in the glass.

Add ice cubes to the long drink glass / craft glass. Pour e.g. milk or tonic into the glass. Tap directly onto the ice cube to avoid swirling in the glass and to prevent the liquids from mixing so easily.



Which cocktails / drinks with NITRO Coffee can I serve?

See "9.3 Recipe and menu suggestions".

Can I also mix cocktails before tapping?

Yes, cocktails such as an espresso martini can be mixed together in one of the available wide-neck **TONE Nitro** canisters and then tapped with the **TONE Nitro**. **Note: The wide-neck canister draws in ambient air to compensate for the negative pressure created by the suction of the liquid.**

The wide-neck canister does not guarantee the durability of the liquids and must always be cleaned after daily use. It is also essential to clean the TONE Nitro after each use!



I have premixed a cocktail, but the drink does not foam/ has no NITRO effect

Alcohol dilutes the drink and inhibits foam formation.

For pre-mixed cocktails we recommend a mixing ratio of 1/3 alcoholic beverage to 2/3 cold brew.

Which teas are suitable?

For the preparation of NITRO teas fruit teas are very well suited.

With darker drinks (forest fruit tea blend) the NITRO effect is particularly effective.

Which cocktails can I offer?

For non-alcoholic cocktails a mixture with tonic or lemonade is recommended. Teas can also be combined well with gin or rum.

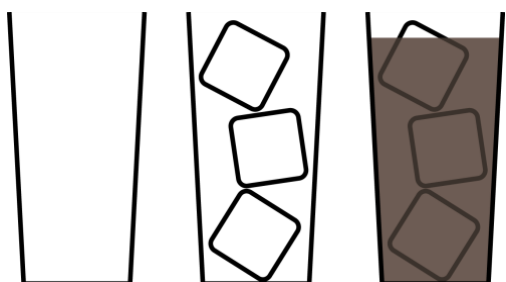
For more information and recipes see 9.3 Recipe and menu suggestions.



9.3 Recipe and menu suggestions

9.3.1 Cold Brew Drinks without alcohol

1. COLD BREW.



1.

Take a glass.

2.

Add ice cubes.

3.



TIPP:

Optional: Step 4

Add some syrup:

COLD BREW + FLAVOR

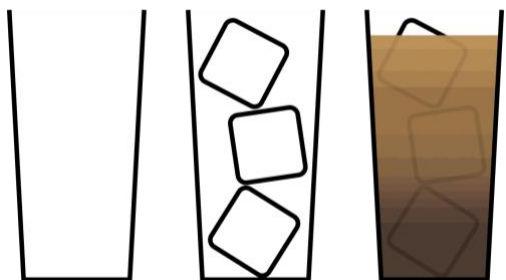
EXAMLE:

COLD BREW + Vanille- syrup

= COLD BREW VANILLA

Use TONE Nitro in PUR mode.

2. NITRO.



1.

Take a glass.

Use TONE Nitro in PUR mode.

3.



TIPP:

Optional: Step 4

Add some syrup:

COLD BREW + FLAVOR

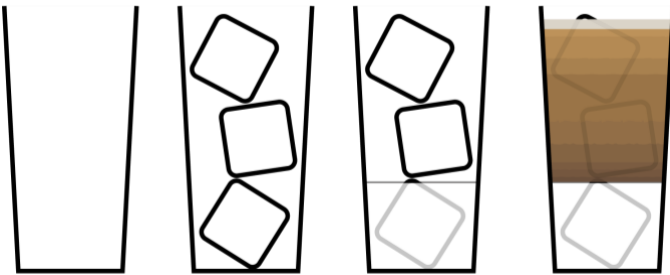
EXAMLE:

COLD BREW + Vanille- syrup

= COLD BREW VANILLA

Use TONE Nitro in NITRO mode.

3. NITRO LATTE.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



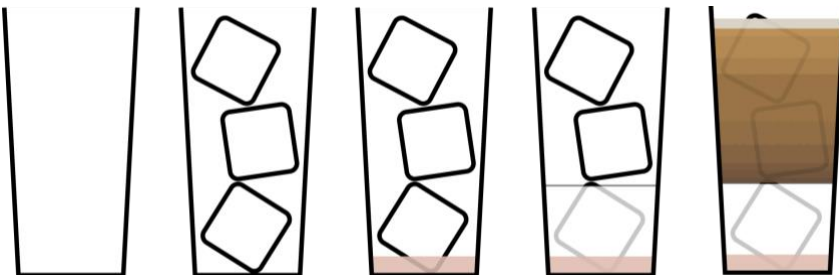
TIPP:

Alternatives to milk:

- Drinking chocolate
- Almond milk
- Soy milk
- Coconut milk
- Rice milk
- Hemp milk
- Oat milk



4. NITRO FLAVORED LATTE.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



5.



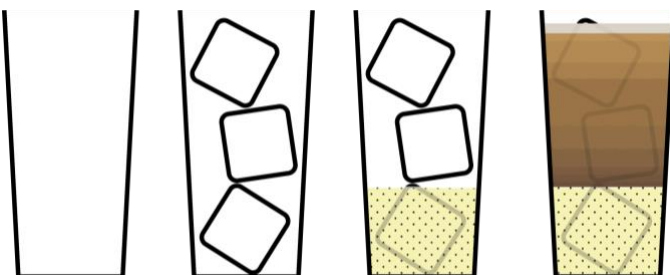
TIPP:

Recommended flavours for syrup:

- Caramel
- Hazelnut
- chocolate
- Vanilla
- Coconut
- Popcorn
- Brownie



5. NITRO TONIC.



1.

2.

3.

4.



TIPP:

Alternative for tonic water::

- Bitter Lemon
- Ginger Spice



Take a glass.

Add ice cubes.



6. NITRO FLAVORED TONIC.



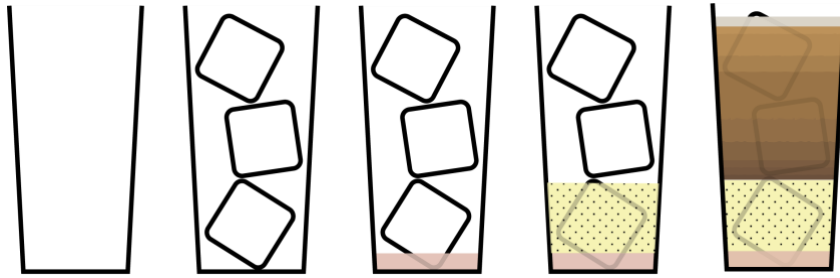
TIPP:

Serve with a slice of lemon.

TIPP:

Recommended flavours for syrup:

- Pink Grapefruit



1.

Take a glass.

2.

Add ice cubes.

3.



4.



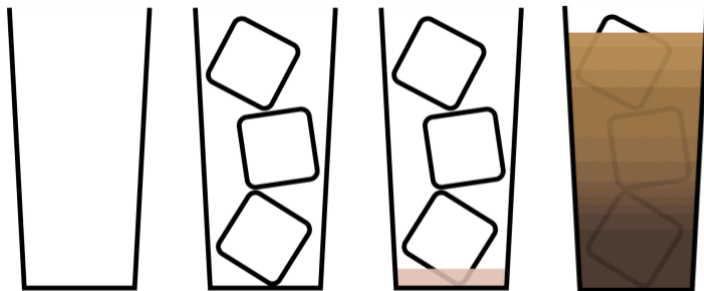
5.





9.3.2 Cold Brew Drinks with alcohol

7. NITRO + LICOR.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



TIPP:

Liqueurs:

- Likör43
- Baileys
- Tia Maria
- Batida de Coco
- Amaretto



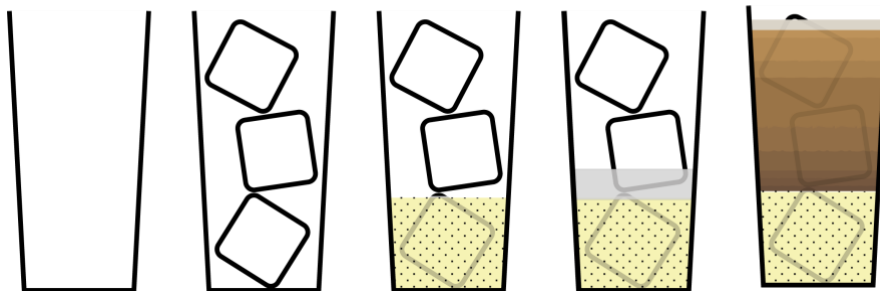
8. NITRO GIN TONIC.



TIPP:

Alternatives to tonic water:

- Bitter Lemon
- Ginger Spice



1.

Take a glass.

2.

Add ice cubes.

3.



4.



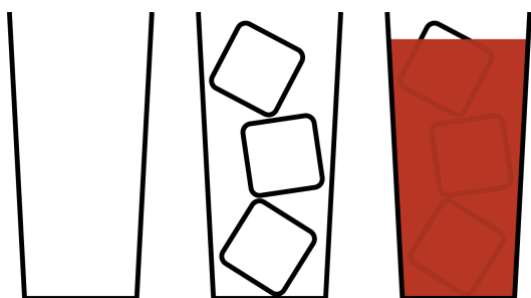
5.





9.3.3 NITRO Tea without alcohol

9. ICE TEA.



1.

Take a glass.

2.

Add ice cubes.

3.

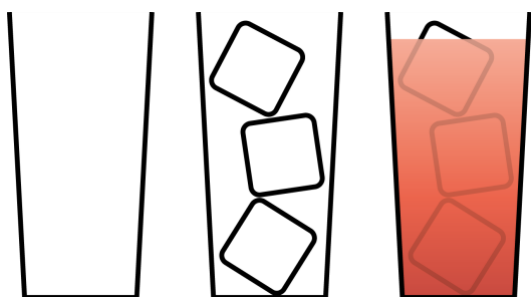


TIPP:

Crushed ice can also be used instead of ice cubes.

Use TONE Nitro in PUR-mode!

10. NITRO TEA.



1.

Take a glass.

2.

Add ice cubes.

3.



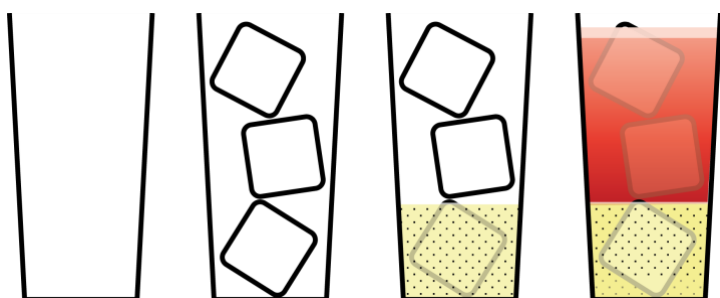
TIPP:

1. Put 35g of coffee leaf tea on 1l of hot water and let it steep for 6 minutes.
2. 3cl sugar syrup
3. 3cl lemon juice
4. Shock-cool over 1.5 l ice cubes.
5. Connect to TONE Nitro

Use TONE Nitro in NITRO-mode!

Shock cooling is very important for the preservation of the aromas!

11. NITRO TEA & LEMONADE.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



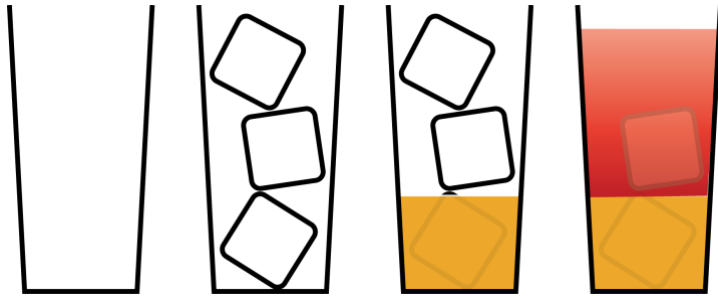
TIPP:

Alternatives to Limonade:

- Bitter Lemon
- Ginger Spice
- Tonic Water



12. NITRO TEA & JUICE.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



TIPP:

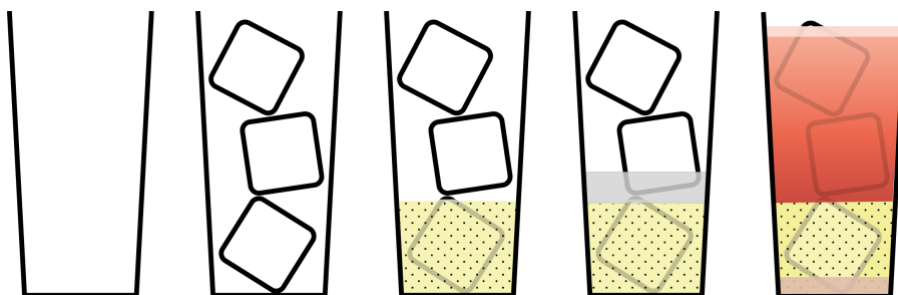
Juice:

- Orange juice
- Mango juice
- apple juice
- cherry juice



9.3.4 NITRO Tea with alcohol

13. NITRO TEA GIN TONIC.



1.

Take a glass.

2.

Add ice cubes.

3.



4.



5.



TIPP:

Alternatives to tonic water:

- Bitter Lemon
- Ginger Spice



EG DECLARATION OF CONFORMITY



Schultes Maschinenbau GmbH
Am Beetacker 5
63856 Bessenbach

declares that the

TONE NITRO

fulfills the following community harmonization legislation:

- EMC directive 2014/30/EU
- LVD directive 2014/35/EU

In accordance with Appendix I No. 1.5.1 of Machinery Directive 2006/42/EG the protection goals meet the Low Voltage Directive 2006/95/EG.

The authorized person for the compilation of technical documents in terms of machinery directive is: **Mr. Bernhard Schultes**

The following national technique standards and specifications have been applied:

- DIN EN ISO 12100-1
Safety of machinery: Basic terminology, methodology
- DIN EN ISO 12100-2
Safety of machinery: Technical principles
- DIN EN ISO 13849-1
Safety-related parts of control systems: General principles for design
- DIN EN ISO 14121-1
Safety of machinery: Principles of risk assessment
- DIN EN 60204-1
Electrical equipment of machines: General requirements
- DIN EN 62079
Preparation of instructions: Structuring, content and presentation
- DIN 6650-1 04/2006
Dispense systems for draught beverages: General requirements
- DIN 6650-5 12/2014
Dispense systems for draught beverages: Safety, hygienic and application-technical requirements and testing of ready-for-use dispense systems for draught beverages
- DIN 6650-6 12/2014
Dispense systems for draught beverages: Requirements for cleaning and disinfection

Bessenbach, 08.01.2016

Bernhard Schultes, Geschäftsführer

Appendix: Cleaning proofs for TONE Nitro

Model

TONE NITRO

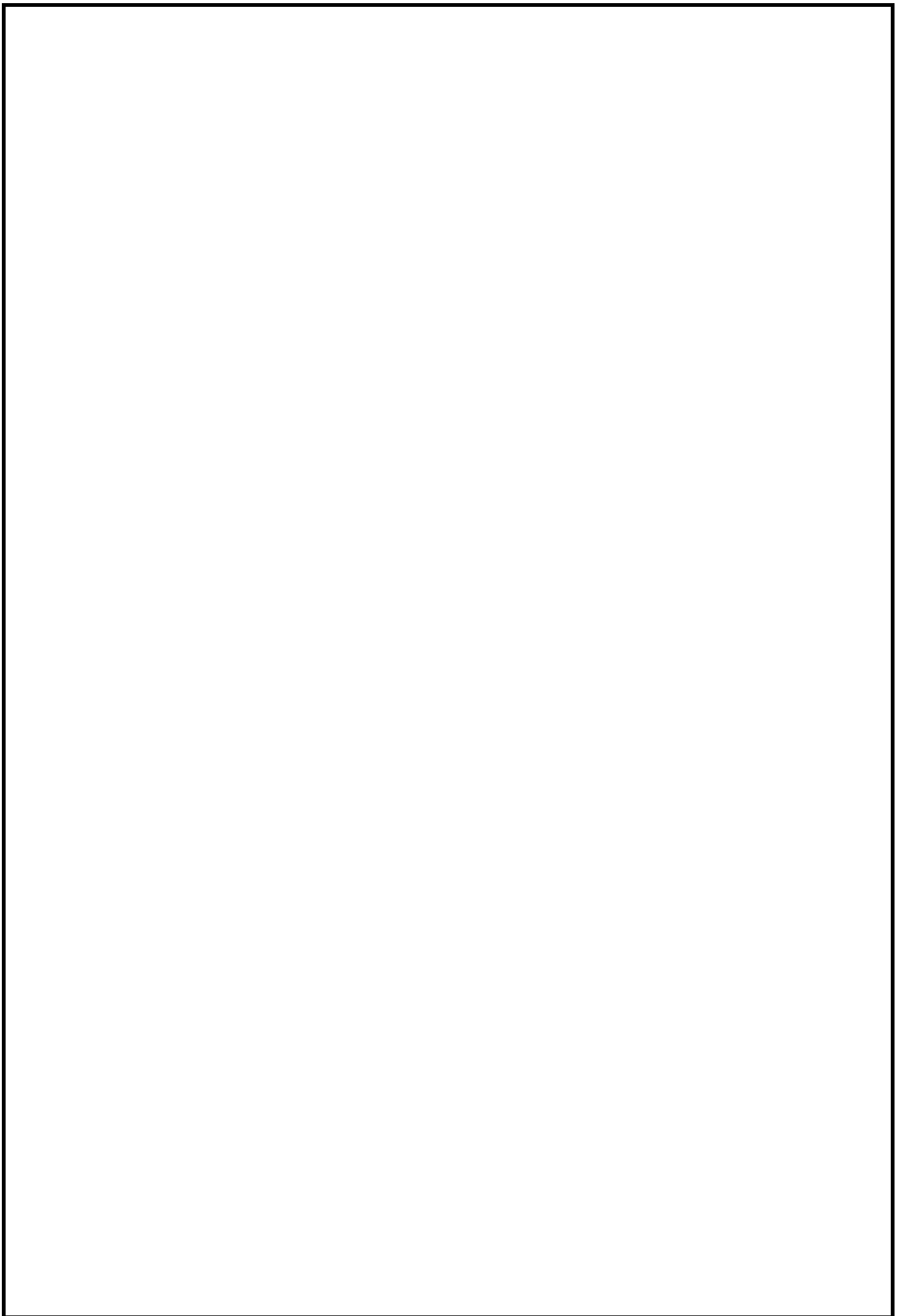
Shop

Postcode / City:

Street:

Type of cleaning / maintenance

Date	Daily	Dry cleaning	Maintenance	Signing



ТОНЕ NITRO