HARDTANK

INSTRUCTION MANUAL



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I.1 APPLICATION OF THE DEVICE

I.1

The HARDTANK device is designed to produce coffee, tea and cascara using water at room temperature. After developing the recipe, it is possible to programme the production time, after which the ready beverage is automatically poured into the keg. The device is used in catering facilities with systems for pouring drinks from kegs or other pressurised containers. It can be used to produce a drink in transport containers and distributed to many placesof distribution. HARD TANK ALL-IN-ONE has the same application as HARDTANK but additionally serves to pour directly from the device a nitro cold brew or other beverage.

I.2 DESIGN OF THE DEVICE

I.2

The device is available in three versions.

I.2.1 HARDTANK

The device is made in a basic version for cold brew production. The device is adapted to filling of kegs with a capacity of 18l.

I.2.2 HARDTANK ALL-IN-ONE

A basic version of the device, enhanced with a system for distributing cold brew or nitro cold brew from the tap.The system is equipped with a column with a tap, a cooler and a system for saturating kegs with nitrogen.

I.2.3 HARDTANK ALL-IN-ONE DOUBLE TAP

A basic version of the device, enhanced with a system for distributing cold brew andnitro cold brew from double tap. The system is equipped with a column with two taps, a cooler and a system for saturating kegs with nitrogen.

I.3 TECHNICAL CHARACTERISTICS OF THE DEVICE

I.3

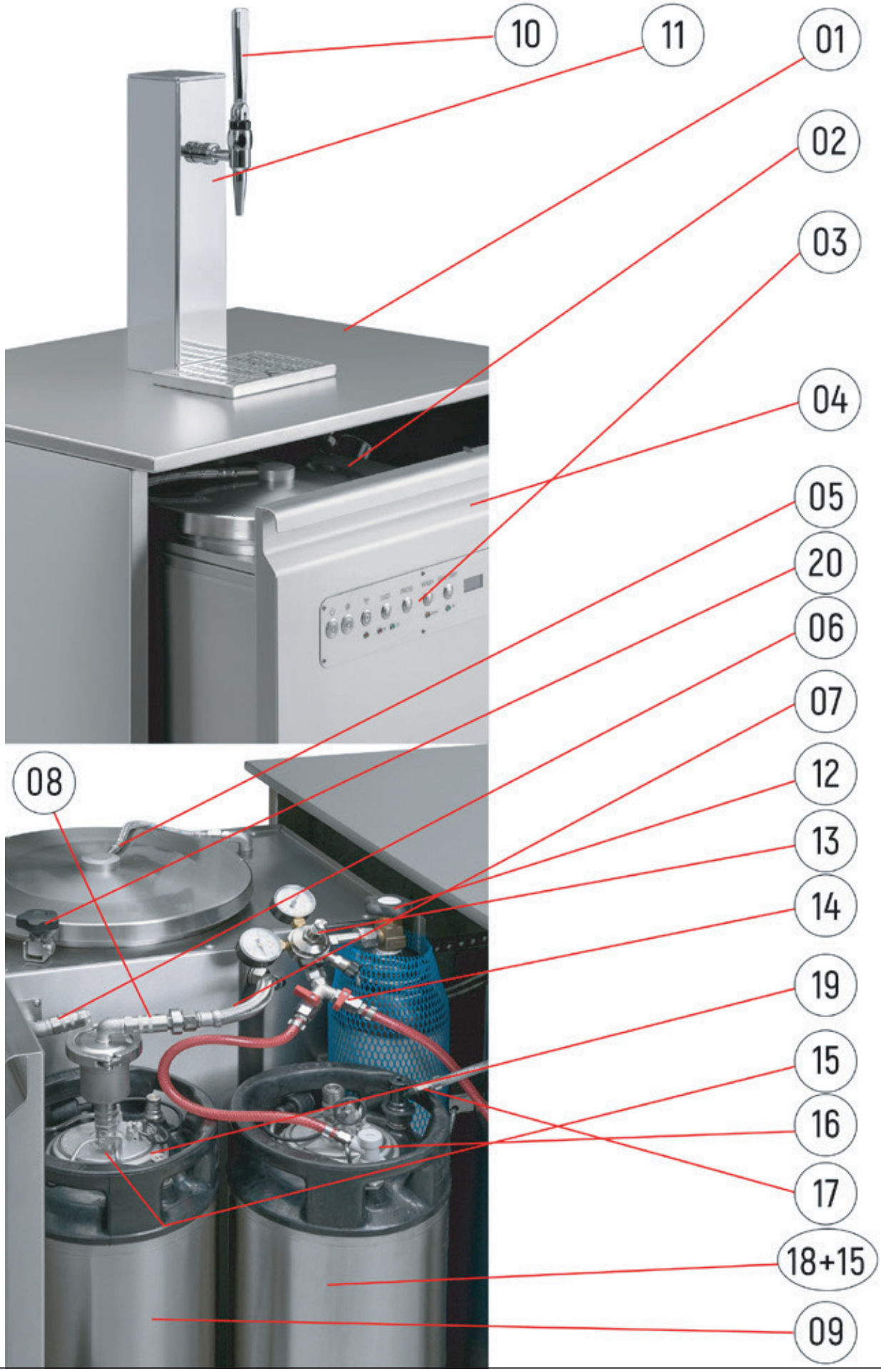
TABLE 1

PARAMETERS		HARDTANK (HT)	HARDTANK ALL-IN-ONE (HT1)	HARDTANK ALL-IN-ONE DOUBLE TAP (HT2)
ELECTRIC POWER				
Power consumption	kW	0.12	0.35	0.35
Power supply - 2.5 m cable with plug		1N ~ 230 V 50Hz	1N ~ 230 V 50Hz	1N ~ 230 V 50Hz
Rated current	A			
Required safeguards for the electrical installation	A	8	16	16
Overcurrent protection		8 A min. class C	16 A min. class C	16 A min. class C
Degree of protection for housing		IP X4	IP X4	IP X4
WATER SUPPLY				
Supply water pressure	MPa	0.2 - 0.6	0.2 - 0.6	0.2 - 0.6
Two water connections		Treated \Water supply	Treated \Water supply	Treated \Water supply
Water connetion		Male thread..3/8 Male thread..3\8	Male thread..3/8 Male thread..3\8	Male thread..3/8 Male thread..3\8
Required water treatment		Filter set or reverse osmosis system with mineralisation or bypass	Filter set or reverse osmosis system with mineralisation or bypass	Filter set or reverse osmosis system with mineralisation or bypass

PARAMETERS		HARDTANK (HT)	HARDTANK ALL-IN-ONE (HT1)	HARDTANK ALL-IN-ONE DOUBLE TAP (HT2)
WATER DRAIN				
Type of drainage		Water drain pump	Water drain pump	Water drain pump
Outlet connection		Outside diameter of the coupling ø 21 mm for hoses with inner ø 21 mm	Outside diameter of the coupling ø 21 mm for hoses with inner ø 21 mm	Outside diameter of the coupling ø 21 mm for hoses with inner ø 21 mm
DIMENSIONS				
Depth of closed device **C**	mm	635	635	635
Width **A**	mm	830	830	830
Height **B**	mm	900	900 + **D=400**	900 + **D=400**
Dimensions of the pulled-out drawer **W**	mm	530	530	530
PRODUCTION PARAMETERS				
Water consumption +/- 2%	litres	20 / 10 / 17	20 / 10 / 17	20 / 10 / 17
Quantity of beverage obtained	litres	16.5-17 / 7.5- 8 / 16	16.5-17 / 7.5- 8 / 16	16.5-17 / 7.5- 8 / 16
Wash water consumption	litres	13	13	13
Washing time	minutes	5	5	5
Water consumption for sanitation + washing	litres	5 + 2 x 13	5 + 2 x 13	5 + 2 x 13
Sanitation time with washing	minutes	60	60	60
Keg Cornelius / Capacity	pcs / l	1 / 18	1 / 18	1 / 18
POURING THE DRINK				
Coller capacity	l / h	–	40	2 x 20
Minimum fluid temperature degrees	C	–	7	7
Time to cool down	minutes	–	2 - 4	2 - 4
Column with STOUT tap + tray	pcs / pcs	–	1 / 1	2 / 2
Water volume of the cooling system	l	–	1.4	2 x 0.7
Refrigerant		–	R290	R290
Keg Cornelius / Capacity	pcs / l	2	2 / 18	2 / 18
Nitrogen filler regulator 200 at with cables	pcs	–	1	1
Ball lock grey / black	pcs / pcs	1 / 0	2 / 1	3 / 2
Type of cylinder to be fitted	pcs	–	Gas cylinder 8l / 1.8 m3 – nitrogen 200 at. Height 820 mm, ø 140	Gas cylinder 8l / 1.8 m3 – nitrogen 200 at. Height 820 mm, ø 140
Unit weight	kg	80	120	125

I.4 GENERAL DESCRIPTION OF THE DEVICE

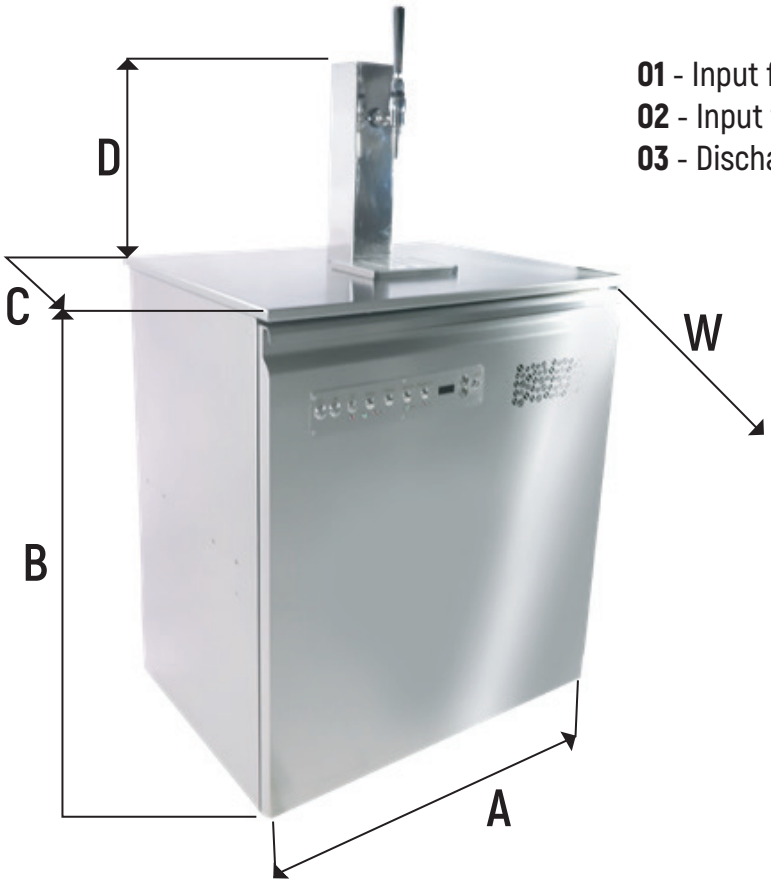
PHOTO 1



DESCRIPTION OF PHOTO 1
UNDERLINED DETAILS DO NOT APPEAR IN HARDTANK VERSION

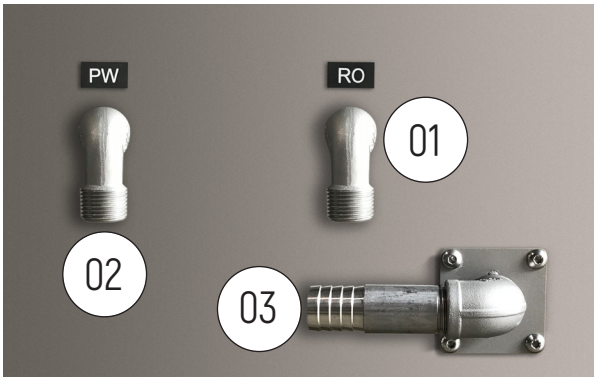
01 - Stainless steel housing.
02 - Production tank lid.
03 - Control panel.
04 - Pull-out drawer of the device.
05 - Water supply cable to the tank.
06 - Cable cleaning connector.
07- A cable for pumping the drink into the keg.
08 - Beverage filter.
09 - Transport container Cornelius keg 18 l.
10 - Tap handle.
11 - Stainless steel column under the pouring tap.
12 -Nitrogen gas cylinder valve.
13 - Nitrogen filler regulator.
14 - Nitrogen cylinder 8l / 1.8 m3.
15 - Dedicated cover with coupler.
16 - Grey ball lock coupler, gas supply.
17 - Black ball lock coupler, pouring the drink.
18 - Transport container Cornelius keg 18 l.
19 - Grey ball lock coupler, deaeration.
20 - Tank lid latch.

Photo 2



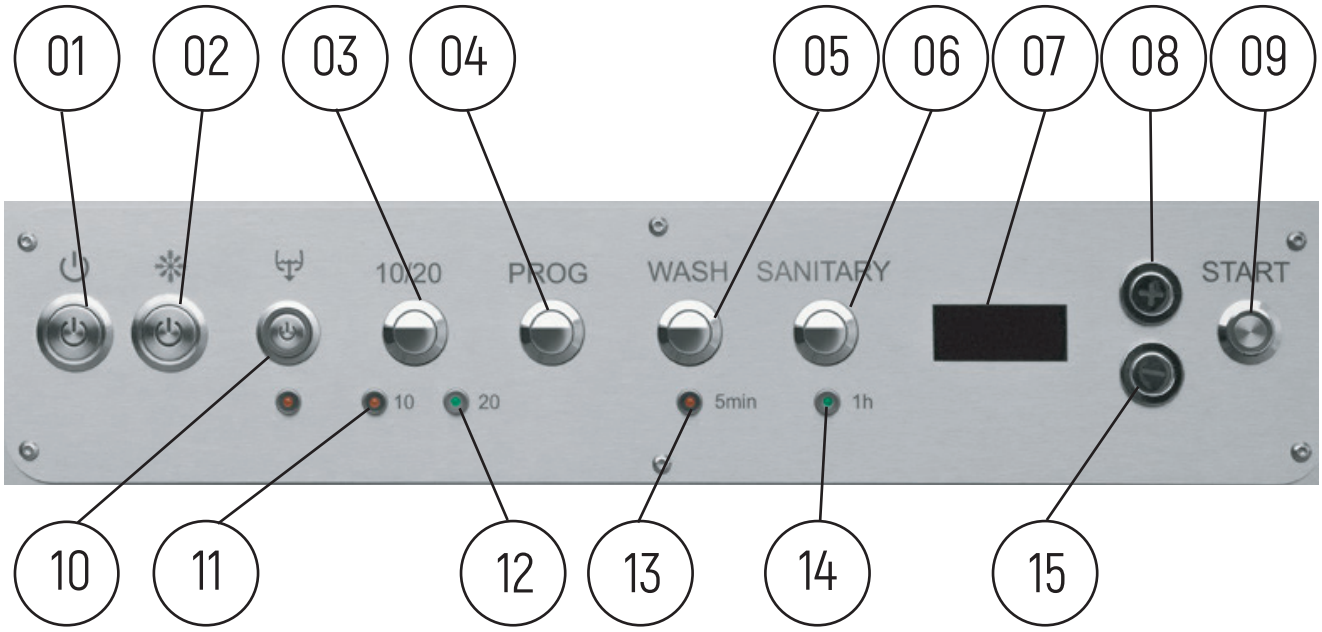
01 - Input for treated water, external, 3/8" thread
02 - Input for tap water, 3/8 male thread
03 - Discharge to sewage system outer diameter 21 mm

Photo 2a



I.5 DEVICE CONTROL PANEL

PHOTO 3



01 - Main switch (OFF/ON) – illuminated in red when the machine is switched on.
02 - Cooler on/off button (OFF/ON) – illuminated in red when cooler is switched on.
03 - Water intake selection button.
- 10 litres LED (11) lights up red.
- 20 litres LED (12) lights up green.
- 17 litres - both LEDs (11 and 12) will light up at the same time.

04 - Production time program selection button – selected programme indicated on the display (07).

P1=40	– production time of 40 minutes, with the possibility of varying the time, with a +/- 1 minute time-shift, with the buttons (08), (15) without pumping the drink into the keg.
P2=1	– extension of the production time by 1 minute, with the possibility of varying the time from 1 to 45 minutes, with the buttons (08), (15) without pumping the drink into the keg.
P3=40	– production time of 40 minutes, with the possibility of varying the time +/- 1 minute, with buttons (08), (15) with pumping the drink into the keg.
P4=1	– production time of 11 minutes, with the possibility of varying the time +/- 1 minute, with buttons (08), and (15), with pumping the drink into the keg.

05 - The WASH button activates the program for washing the production tank, the LED (13) is illuminated, washing time 5 minutes
06 - The button activating the production tank sanitation program - the LED (14) is illuminated, sanitation time 60 minutes
07 - OLED digital display
08 - Button to increase production time in program settings P1, P2, P3, P4 change indicated on the display (07)
09 - START button activating programs P1, P2, P3, P4 – illuminated in green when the program is on.
10 - OFF/ON button for pumping the drink into the keg - highlighted in red when the program is on.
11 - Indicator light to show when 10 litres of water have been selected for intake - red colour.
12 - Indicator light to show when 20 litres of water have been selected for intake - green colour.
13 - Indicator light, indicating the operation of the washing program - red colour.
14 - Indicator light, indicating the operation of the sanitation program - red colour.
15 - Button to reduce production time in program settings P1, P2, P3, P4 change indicated on the display (07)

DISPLAY MESSAGES (07)

HELLO	Device switched on, the following message appears for 4 sec: **HELLO HBCR NITRO COLD BREW READY**.
20 L	A filling of 20 litres of water was set.
10 L	A filling of 10 litres of water was set.
TEA	A filling of 17 litres of water was set.
P1=45	Production program of 45 min, without pumping out the drink. Time-shift every 1 min.
P2=1	Production program of 1 to 45 min., without pumping out the drink. Time-shift every 1 min.
P3=40	Production program of 1 to 40min, with pumping the drink into the keg. Time-shift every 1 min
P4=1	Production program of 1 to 160min, with pumping the drink into the keg. Time-shift every 1 min.
46 MIN	Time to completion of the production process, updated every 1 minute.
FINISH	End of operation of the set program.
WASH	WASH rinsing programme.
KEG	Pumping the drink into the keg.
SANIT	Sanitation program.
START	Start of the program.

II ASSEMBLY INSTRUCTIONS

HARDTANK should be stored and installed in rooms with a temperatureabove +5°C.

II.1 POSITIONING THE DEVICE IN THE ROOM

The device should be placed in a room which should be equipped with:

- supply water installation with water filtration system,
- sewage system,
- single phase electrical installation 1N ~230V 50Hz,
- an effective electric shock protection installation,
- effective ventilation,
- lighting,
- flat and level floor.

Installation and connection of the HARDTANK device to the supply and drainagemedia required on site must be carried out by authorised installers in accordance with national, localregulations.

II.2 UNPACKING THE DEVICE

Unpack the device before installation.
1. Cut the straps binding the device to the pallet, remove the cardboard box and the stretch hood.
2. Remove from pallet.
3. Pull out the drawer, open the tank lid, remove the packed beverage basket, unpack.
4. Remove kegs from drawer, unpack.
5. Remove the column and the tap and the nitrogen filler regulator from the drawer, unpack.

II.3 CONNECTION TO ELECTRICAL INSTALLATION, WATER AND SEWAGE SYSTEMS

II.3.1 CONNECTION TO ELECTRICAL INSTALLATION.

This manual is addressed to qualified personnel authorised to inspect the installation and carry out technical repairs. The manufacturer shall not be liable in the event thatunqualified personnel take action or use spare parts other than those supplied by the manufacturer.

The following applicable regulations must be observed when installing the device:
– Standards, laws, building and fire regulations.
– Occupational health and safety regulations.
– Standards, laws, regulations for electrical installations and devices.

Connection to the HARDTANK electrical installation adapted for single-phase supply ~230V, 50Hz.
The device is equipped with a 2.5 m long flexible connection cable type H07RN-F 3G2.5 mm2 with a 2P+E 32A plug. The power cable should be connected to a suitable socketinstalled in the room. The electrical installation to which the device will be connected should be equipped with individualphase protection In 16 A at the direct connection to the device.

Connection to the equipotential system.
The device is equipped with a terminal for the connection of external equipotential conductors, marked

with the V symbol, located at the bottom of the rear housing. Before connecting the device it is necessary tocheck if the equipotential bonding has been made properly and if it is effective in accordance with PN-HD-60364-4-41.



Wall switch and electrical equipment for individual phase protection are not included with the device.



The electrical installation to which the appliance is to be connected must be fitted with means of disconnection at all poles in accordance with EN 60335-1 and electrical equipment for individual phase protection.



Commissioning of the equipment may take place after confirmation of the effectiveness of the protection against electric shock by results
of measurements.

II.3.2 CONNECTION TO WATER SYSTEM (SEE "CONNECTION TO WATER SYSTEM" VIDEO)

The device is equipped with two water connections **(photo 2 A)**.
1. connection for tap water - male thread 3/8 for washing the installation.
2. Connection for treated water - male thread 3/8 for beverage production.



For washing to be effective, the pressure in the tap water and treated feed water system should be at least 0.2 MPa and no higher than 0.6 MPa.

II.3.3 CONNECTION TO SEWAGE SYSTEM

The Hardtank has a drain pump with an outlet for connecting a drain hose with an external diameter of fi 21 **(photo 2 A)**. The water drain hose must be connected to the sewage system in the room through an air trap system so that unpleasant odours from the sewage system do not get into the device. The drain pipe must not be placed higher than 50cm from the floor.

II.4 ASSEMBLING THE NITRO COLD BREW SERVING MODULE (SEE "ASSEMBLING THE COLUMN" VIDEO)

II.4

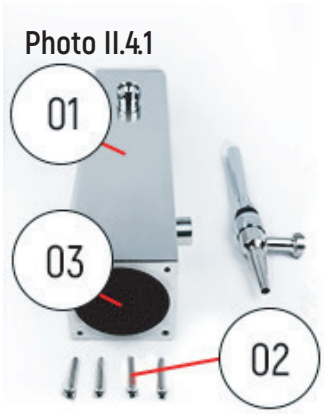
II.4.1 INSTALLING A SINGLE TAP COLUMN FOR HT 1

The HARDTANK ALL-IN-ONE version features 4 holes in the top of the housing forfastening the column and one hole for taps.

Actions to be taken.
a) Prepare the column (photo II.4.1 item 01) and mounting screws (photo II.4.1 item 02)
b) Pull out the drawer from the housing (photo 1 item 04)
c) Position the column vertically over the holes, inserting the cables supplying the tap with nitrogen and liquid into the large (photo II.4.1A poz. 05) hole (photo II.4.1A item 06)

d) From the underside of the top, successively insert the screws with washers into the holes and screw loosely into the threaded holes, columns (photo II.4.2)
e) Position the column so that the back wall is parallel to the back edge of the tabletop. Tighten the four screws firmly.

Photo II.4.1



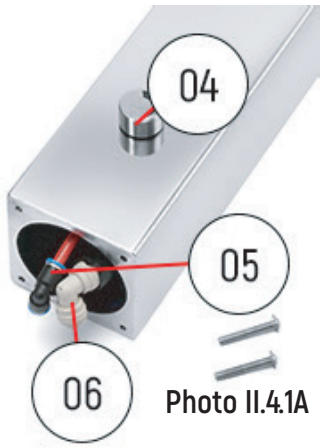


Photo II.4.1A

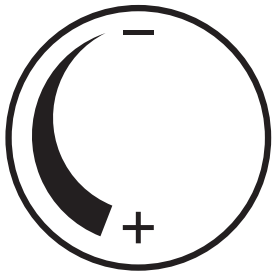
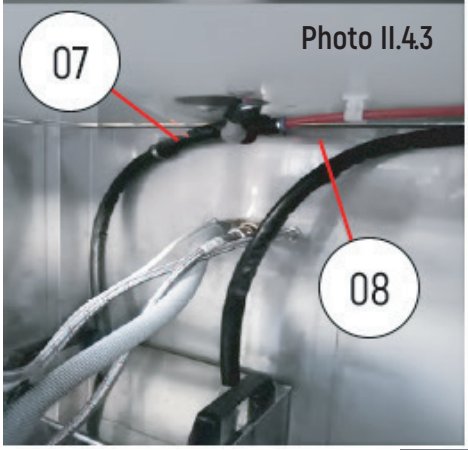


Photo II.4.2



Photo II.4.3

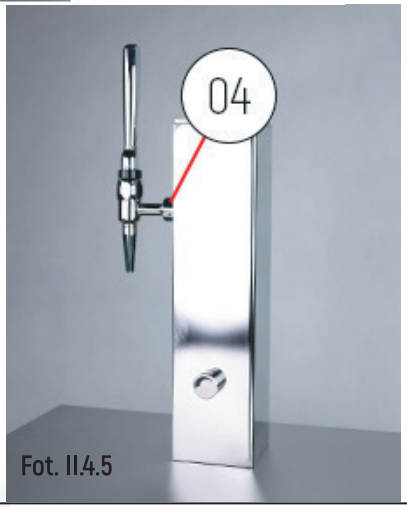


NOTE
A knob is fitted in the column to adjust the amount of nitrogen saturation of the beverage **(photo II.4.1A item 04)**. Turning the knob clockwise in the direction of the arrow blade reduces the gassupply. Turning in the opposite direction increases the gas supply.The gas supply is closed completely by closing the right--handball valve on the nitrogen regulator. **(photo I item 12)**.

f) From the underside of the tabletop, connect the protruding cables passing through the tabletop to the cables mounted inside the housing **(photo II.4.3)**.
g) Insert the white insulated cable **(photo II.4.3 item 07)** from the cooler firmly into the white column JG elbow until it stops **(photo II.4.1A item 06)**.
h) Secure the cable to the coupler with a red JG clip.
i) Insert the red cable in the housing **(photo II.4.3 item 08)** firmly into the black JG elbow, column, until it stops **(photo II.4.1A item 05)**.
j) Secure the cable to the coupler with a black clip.

Fot. II.4.4





Fot. II.4.5

k) Prepare a tap **(photo II.4.4 item 02)** and a hook spanner **(photo II.4.4 item 03)**.
l) Attach the tap to the connector protruding from the column **(photo II.4.2 item 01)**. Place the tap in an upright position **(photo II.4.5)**.
ł) Manually tighten the nut **(photo II.4.5 item 04)** on the tap thread. Use a hook spanner to tighten the nut to the stop.

II.4.2 INSTALLING A DOUBLE TAP COLUMN TO THE HT2

The HARDTANK ALL-IN-ONE DOUBLE TAP version features holes in the tabletop for mounting a column and for routing power cables for two taps.

Actions to be taken.
a) Prepare the column, **(photo II.4.1 item 01)**, mounting screws **(photo II.4.1 item 02)** and trim ring **(photo II.4.1 item 03)**
b) Pull out the drawer from the housing **(photo 1 item 04)**
c) Place a trim ring over the mounting holes
d) Position the column vertically over the holes, inserting the cables supplying the tap with nitrogen **(photo II.4.1A poz. 05)** and two cables supplying the liquid. **(photo II.4.1A item 06)**
e) From the underside of the top, successively insert the screws with washers into the holes and screw loosely into the threaded holes, columns **(photo II.4.2)**
f) The column should be positioned with two taps towards the drawer.

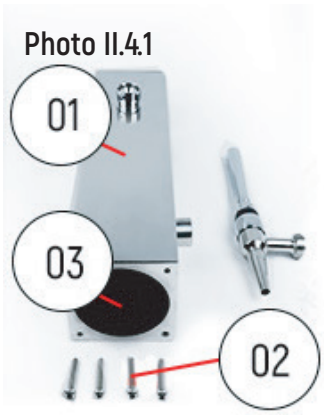


Photo II.4.1

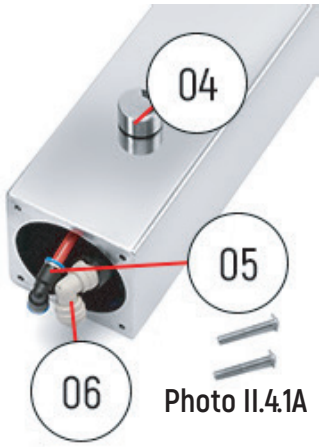


Photo II.4.1A

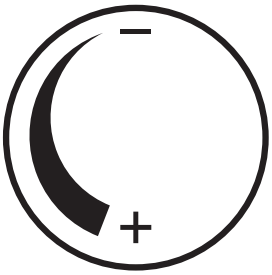




Photo II.4.2

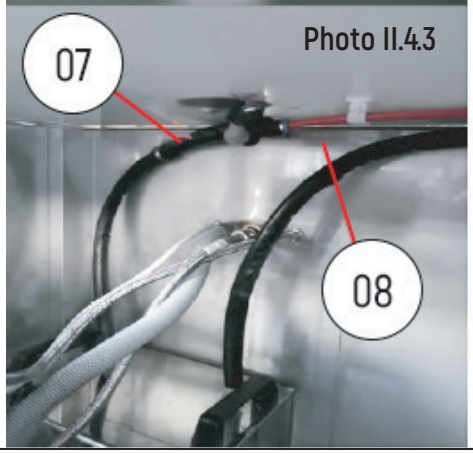
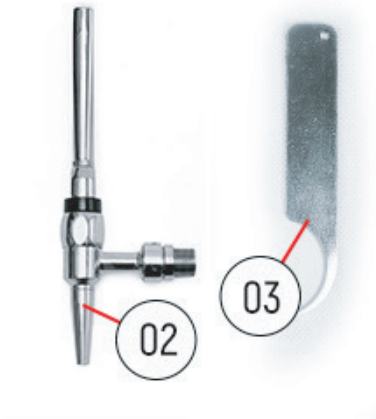


Photo II.4.3

NOTE
Two knobs are fitted in the column to adjust the amount of nitrogen saturation of the beverage **(photo II.4.1A item 04)**. Turning the knob clockwise in the direction of the arrow blade reduces the gas supply. Turning in the opposite direction increases the gas supply. The gas supply is closed completely by closing the right-handball valve on the nitrogen regulator. **(photo I item 12)**.

f) From the underside of the tabletop, connect the protruding cables passing through the tabletop to the cable mounted inside the housing. **(photo II.4.3)**
g) Insert the insulated cable marked with red tape running from the cooler **(photo II.4.3 item 08)**, firmly until it stops into the white JG elbow of the column, also marked with red tape **(photo II.4.1A item 06/1)**.
h) Insert the insulated cable marked with green tape running from the cooler **(photo II.4.3 item 07/2)**, firmly until it stops into the white JG elbow of the column, also marked with green tape **(photo II.4.1A item 06/1)**.

Fot. II.4.4





Fot. II.4.5

k) Prepare the taps **(photo II.4.4 item 02)** and a hook spanner **(photo II.4.4 item 03)**
l) Attach the taps to the connectors protruding from the column **(photo II.4.2 item 01)** Place the taps in an upright position **(photo II.4.5)**
ł) Manually tighten the nut **(photo II.4.5 item 04)** on the tap thread. Use a hook spanner to tighten the nut to the stop.

II.4.3 ASSEMBLING THE NITROGEN CYLINDER, REGULATOR AND CONNECTING THE CABLES TO THE KEG CONTAINER. (SEE "ASSEMBLING THE NITROGEN CYLINDER" VIDEO)

The HT1 and HT2 versions are suitable for mounting an 8l / 1.8m3 nitrogen 200 at gascylinder. Height 820 mm, diameter 140 mm, connecting thread for EU W24.32 x 1/14" The set includes a nitrogen filler regulator 200 at.

Actions to be taken.
a) Prepare a Cornelius keg with approx. 4 l of water
b) Before installing the cylinder and regulator, read the manual for the regulator included in this documentation.
c) Pull out the drawer **(photo 1 item 04)**
d) Place the nitrogen cylinder **(photo 1. item 14)** into the cylinder holder and secure with a chain.
e) Turn the nitrogen cylinder so that the connection thread for the regulator is positioned towards the front of the drawer.
f) Prepare a 28 spanner.
g) Place the regulator nut on the connecting thread of the cylinder and tighten by hand until it stops. Position the regulator so that it does not catch on the top of the macerator housing when closing the drawer.
h) Tighten the nut with a spanner until it stops.
i) Check the tightness of the filler regulator **(photo 1 item 13)** connection by unscrewing the cylinder valve **(photo 1. item 12)** and closing the valves on the manifold screwed into the regulator.If you hear gas escaping, retighten the regulator nut to the cylinder.
j) Using the adjusting knob on the regulator, set the pressure reduction to 3-3.8 bar. The set point and the cylinder pressure are indicated by pressure gauges.
k) Close the gas cylinder valve **(photo 1 item 12)**
k1) If you own a Hardtank model HT1 go to point l1)
k2) If you own a Hardtank model HT2 go to point l2)
l1) Continuation of point (K1) Place a Cornelius keg in the drawer next to the gas cylinder **(photo 1 item 18+15)**
Connect the flexible red cable, which ends with the grey ball lock coupler, to the keg [GAS] coupler. **(photo 1 item 16)**
To the fiting keg coupler, connect a clear flexible cable, which ends in a black ball lock coupler. **(photo 1.item 17)**
Follow the steps from **point (o)**
l2) Continuation of point (K2) Place two kegs in the drawer next to the gas cylinder **(photo 1. item 18+15,**

item 09)
Connect the flexible red cables, which end in grey ball lock couplers from Jolly, to the couplers of the two kegs [GAS]. **(photo 1 item 16)**
To the fiting keg couplers, connect flexible transparent cables that end in black ball lock couplers.
(photo 1. item 17)
Connect the first keg to the right-hand cable from the gas cylinder that supplies the right-handtap, and the second keg to the left-hand cable that supplies the left-hand tap. Follow the steps from **point (o)**
o) Open the cylinder valve and the valves on the regulator manifold, check the connections for leaks.
p) Slide the device drawer into the housing, making sure that the cables are properly aligned and do not block the closure.
r) Put a container under the tap, open the tap **(photo 1. item 10)** and check whether water is running from the tap(s).
s) On the control panel, press the cooler OFF/ON button **(photo 3 item 02)** - the button will illuminate red.
t) Wait about 4 minutes, check if the water running from the tap(s) is cooled.
u) Empty the connected keg(s) until gas is flowing from the tap. Disconnect the empty keg(s) from the serving system.
w) Before connecting the beverage keg for the first time, sanitise the serving installation as described in **point III.1.2.3.4**

III. OPERATION MANUAL
III.1 SETTING UP THE DEVICE FOR OPERATION

III.1

III.1.1 GENERAL OVERVIEW OF THE DEVICE

Once the device is unpacked and connected to the installation, follow the following steps:
a) Pull out the drawer of the device **(photo 1. item 04)** and check if there are any packaging residues inside that could block the closing of the drawer.
b) Open the lid of the tank **(photo 1. item 02)**
c) Check for any remaining packaging residue in the tank.
d) Disconnect the beverage filter **(photo 1. item 08)** from the beverage outlet cable **(photo 1. item 07)**
e) Open fithe filter.**(photo 5. 1 and photo 5.2)**
f) Check if there are any remains of packaging inside the filter.
g) Wash and scald the whole housing and filter cartridge with water at 90°C.
h) Reassemble the filter and put it aside.
i) Check that the nitrogen cylinder is secured by a chain **(photo 1. item 14)**
j) Check the tightness of the filler regulator **(photo 1 item 13)** connection by unscrewing the cylinder valve **(photo 1. item 12)**. If you hear gas escaping, retighten the regulator nut to the cylinder.
k) Insert the device drawer, checking if the regulator attached to the cylinder does not catch on the top of the device housing. If so, turn the regulator.
l) Activate the test to check the correct energy connection: cooler ON/OFF button.

III.1.2 CHECKING THE OPERATION OF PROGRAMS, TEST START-UP
III.1.2.1 WASHING. WASH

a) Close the tank lid **(photo 1. item 02)**
b) Cable for pumping the drink into the keg **(photo 1. item 07)** connect to the cable wash connector **(photo 1. item 06)**.
c) Open the tap water and treated water valves supplying the device, if they are closed.

d) Make sure that the drain pipe is connected to the sewer.
e) Press the button **(photo 3. item 01)** that starts the device. The button is illuminated in red. On the display **(photo 3. item 07)** appears the following text HELLO HBCR NITRO COLD BREW READY. Wait until the display is off.
f) Press the WASH button **(photo 3. item 05)**, the LED **(photo 3. item 13)** will illuminate in red. [WASH] message appears on the display.
Solenoid valve opens, pouring 10 l of water into the tank. The circulation pump will start,washing the tank and cables. At the end of the program, the sewage pump will start, discharging the dirty waterinto the sewage system.
g) When the program is completed, the display shows [FINISH] and the button **(photo 3. item 09)** is illuminated in green flashing. When the display is off, the washing process is complete.
h) Open the lid and check the tank. Remove any remaining dirt with a paper towel.
i) If you want to switch off the device, press the on/off button, **(photo 3. item 01)** the red illumination will go out.

III.1.2.2 TRANSFER OF THE DRINK TO THE KEG

a) Pull out the drawer.
b) Place the keg **(photo 1 item 09)** closed with the special lid **(photo 1. item 15)** in the right part of the drawer.
c) Open the safety valve in the keg lid (photo 1. item 15)
d) In the keg fitting marked [GAS], [IN] **(photo 1. item 19)**, connect the gray ball lock coupler hanging on the chain.
e) Connect the beverage filter **(photo 1. item 08)** connected to the drink drain cable, **(photo 1. item 07)** to the connector mounted on the keg lid.
f) Close the lid **(photo 1. item 02)**
g) Open the tap water and treated water valves supplying the device.
h) Make sure that the drain pipe is connected to the sewer.
i) If the device is switched off, press the on/off button on the control panel, **(photo 3. item 01)** the button will illuminate red. Arrows will **(photo 3. item 07)** appear on the display. Wait until the display will go out.
j) Press the 10/20 button (photo 3. item 03), to select the amount of water to be poured, example: 10 l: The selected quantity will be indicated by the LED **(photo 3. item 11)** illuminating green. The text [10L] appears on the display.
k) Press the PROG button **(photo 3. item 04)**, setting the program [P2=1] on the display.
l) Press the upper button **(photo 3. item 08)** increasing the pump operation time to 4 min. [P2 = 4](m) Press the START button **(photo 3. item 09)**. The display will show [START], and after a short while [4 min], indicating 4 minutes of pump operation. Solenoid valve opens, pouring 10 l of water into the tank. After pouring in the water, the circulation pump will start. After 4 minutes of operation, the pump switches off and the display shows [FINISH] indicating the end of the program, after a while the text goes out.
m) Press the button **(photo 3 item 10)** pumping the drink into the keg. The button remains in the rear position, will illuminate red and the display will show [Keg --->]. Pumping out the contents of the tank continues until it is pressed again to return to its original position and goes out. You will know that the entire contents of the tank have been pumped into the keg:
- when you hear the characteristic sound of the pump running dry;
- by opening the tank lid.
n) Press the button **(photo 3. item 10)**, if the tank is empty, the button will return to its original position, the illumination will go out and the display will show [Keg -->] and then [FINISH]. When the program is completed, the display will go out.
o) If you want to switch off the device, press the on/off button, **(photo 3. item 03)** the red illumination will

go out.
p) Open the tank lid, check that there is water left in the tank. If so, contact the service centre.
r) Disconnect the beverage filter **(photo 1. item 08)** from the connector on the keg lid and disconnect it from the cable. Disassemble and empty the filter, then clean it under running water. Reassemble and set aside.
s) Unhook the grey ball lock coupler and set aside. Take the keg out of the drawer.
t) Open and remove the keg lid, pour out the water in the keg.
u) Close the keg lid for re-use.

III.1.2.3 SANITATION OF CHEMICAL AND BIOLOGICAL POLLUTION
III.1.2.3.1 SANITATION OF THE DEVICE INSTALLATION (SEE "DEVICE SANITATION" VIDEO)

SANITARY program – see page 18

It is necessary to sanitise the device:
– before the first production;
– at the end of the work day;
– before a planned downtime in production;
– after a production downtime.
Prepare a cold or hot sanitising chemical for cleaning foodproduction equipment.
Recommended chemicals are listed in **Table 2.**



Use personal protective equipment when handling chemicals.

Order of operations
a) Pull out the drawer.
b) Cable for pumping the drink into the keg **(photo 1. item 07)** connect to the cable wash connector **(photo 1. item 06)**.
c) Open the tap water and treated water valves supplying the device, if they are closed.
d) Make sure that the drain pipe is connected to the sewer.
e) Pour the prepared chemical into the production tank, see point III.2.5.1 Preparation of the sanitation solution.
f) Close the tank lid **(photo 1. item 02)**
g) If the device is switched off, press the on/off button on the control panel, **(photo 3. item 01)** the button will illuminate red. Display **(photo 3. item 07)** will show the text. Wait until the display goes out.
h) Press the SANITARY button **(photo 3. item 06)**, the LED **(photo 3. item 14)** will illuminate in yellow. The display **(photo 3. item 07)** will show the following text [SANIT]. 10l of water will be poured in. The circulation pump will start, washing the tank and pipes with the prepared chemical solution. After 40 minutes , the sewage pump will start, discharging the solution into the sewage system. After emptying, 10 l of clean water is poured in again.
The pump will start, washing out the residual solution from the tank and the conduits. After 5 minutes of washing, the sewage pump will start, emptying the dirty water into the sewage system and a stream of water will rinse the tank walls from the nozzle in the lid.
The washing cycle with clean water will be repeated for a second time.
i) When the program [SANIT] is completed, [FINISH] appears on the display and goes out after a short while. Program is completed.
j) Open the tank lid, check the quality of the washing. Remove any dirt with a clean paper towel.

k) The production process can begin.
l) If you want to switch off the device, press the on/off button, **(photo 3. item 03)**, the red illumination will go out.

III.1.2.3.2 SANITATION OF THE FILTER AND COFFEE BASKET

The basket **(photo 4)** and filter **(photo 5.2)** must be disassembled before sanitation.
Rinse off any drink residue.
The basket and filter can be sanitised in two ways:
1 - **Boil in water at 90 C for at least 10 minutes and rinse.** The dimensions allow it to be placed in dishwashers or sterilizers commonly used in gastronomy or placed in a pot with boiling water.
2 - **Soak in chemical solution, see [Table 2], for 30 minutes and rinse.** Put the parts in a container with a volume of at least 10 l, pour the chemical solution over them. After 30 minutes, remove the parts and rinse under running water. Dilute the solution from the container with water, pour it down the drain, wash the container.

III.1.2.3.3 SANITATION OF CABLES AND BEVERAGE SERVING SYSTEM (SEE "SANITATION OF CONDUITS AND BEVERAGE SERVING SYSTEM" VIDEO)

The capacity of the cooling system and beverage serving cables for the HT1 is 1.4 litres and for the HT2 is 2 x 0.7 litres.



The kegs used to make the chemical solution should be specially marked, in yellow, to avoid confusion in application.



During the sanitation process with the chemical solution personal protective equipment, safety goggles, latex gloves, waterproof apron must be used.

Order of operations:
a) Switch off the cooler **(photo 3. item 02)** with the button if it is running.
b) Switch off the device using the button **(photo 3 item 01)**.
c) Prepare one keg with 4 l of chemical solution. Concentration as shown in Table 2.
d) Prepare a second keg with 3 litres of warm water.
e) Prepare a container for pouring out the contents of the filling system.
f) Close the gas cylinder valve **(photo 1 item 12)**
g) Disconnect the gas **(photo 1, item 16)** and water **(photo 1 item 16)** cables from the beverage keg if they are not disconnected.
h) Take the beverage keg out of the drawer if it has not been taken out.
i) Put a keg of chemical solution in the drawer.
j) Connect the gas **(photo 1, item 16)** and water **(photo 1 item 17)** cables to the chemical solution keg.
k) Close the gas cylinder valve **(photo 1 item 12)**
l) Open the pouring tap **(photo 1, item 10)**. Fill the system with the contents of the keg until the chemical solution runs from the tap. Close the tap. You can be sure that the entire installation is topped up with the solution.(m) Wait 30 minutes for the chemical solution to work properly.
n) Disconnect the gas cable and water cable after 30 min.
o) Follow steps f and g and remove the keg.
p) Put a keg with hot water in a drawer.

q) Connect the gas **(photo 1, item 16)** and water **(photo 1 item 17)** cables to the keg with hot water.
r) Open the gas cylinder valve.
s) Open the serving tap **(photo 1, item 10)**. Pour off the contents of the system approximately 3 litres until you have fully emptied the connected hot water keg.
t) Close the gas valve of the cylinder.
u) Remove the keg with the chemical solution from the drawer and put it in the place designated for it.
v) Prepare one keg with 4 litres of warm water again.
w) Follow the steps described in points: p) q) r)
x) Open the pouring tap **(photo 1, item 10)**, pour the contents of the system until you have fully emptied the connected keg. You can be sure that the entire installation is flushed with clean water and is empty.
y) Follow the steps described in points: f) g) h)

For the HT2 version, sanitation must be carried out separately for each tap.
The installation is cleaned and the keg can be connected to serve the drink.



Apply every 4 days

III.2 STARTING THE UTILITY PROGRAMS OF THE DEVICE. (SEE "PROGRAMS" VIDEO)

III.2

III.2.1 BEFORE DRINKS PRODUCTION

The HARDTANK device features:

- 4 beverage process programs.
- 1 program for washing the tank and cables of the device,
- 1 program for sanitizing the tank and cables of the device,
- a function for setting the water quantity for beverage production
- a function for pumping the beverage into the keg.

P1 program – is a program for determining the production recipe.

Determining the production time for a given type of coffee and its grind. Allows production time to be set from 1 to 180 minutes in +/- 1 minute time-shifts.Initial setting from 45 minutes. When the set time has elapsed, production is completed.

P2 program – auxiliary program for determining the production recipe.

Allows you to set the production time from 1 to 45 minutes with a possible variation of +/- 1 minute. It is used additionally with the **P1** program in the case when in the **P1** program the production time needs to be prolonged by a few minutes, e.g. 3 min. After closing the lid,start the **P2** program with the **P2 setting = 3 min**. Start the programme and after 3 minutes open the lid and check the quality of the drink. If it is wrong the P2 program can be restarted. If the drink is right, turn on the pumping of the drink into the keg.

P3 program – automatic production process without operator intervention. Used for the repeated production of a drink in accordance with a developed recipe.

Allows the production time to be set between 1 and 180 minutes with +/-1 minute time-shift.Initial setting, 45 minutes. After the set time, the finished beverage is automatically pumped into the keg.

P4 program – automatic tea production process without operator intervention. Used to make a tea drink based on a ready-made recipe.

Allows production time to be set from 1 to 180 minutes in +/- 1 minute time-shifts. Initial setting: 15

minutes. After the set time, the finished drink is automatically pumped into.

WASH program – automatic washing of the installation.

Washing time is 5 minutes. Water consumption of 13 litres.

Apply after each production process.

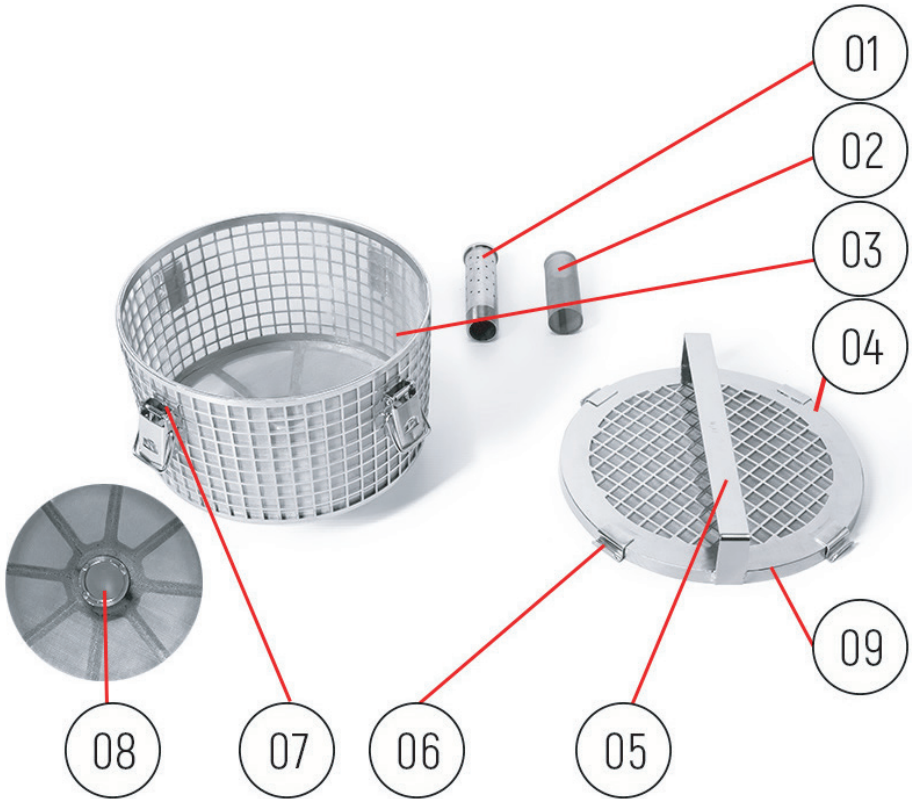
SANITARY program – automatic process of sanitation of the installation, tank, with antibacterial and antifungal chemical solution, rinsing twice with clean water with drainage to the sewage system.

Sanitation time 40 minutes. Water consumption 10 l. + Drain the solution to the sewage system.Washing time is 5 minutes. Water consumption 13 l. + Drain the dirty water to the sewage system. Washing time is 5 minutes. sewage system. Water consumption 13 l. + Drain the dirty water to the sewage system.Total time of 60 minutes. Before the sanitation process, carry out a washing process if one has not been carried out.

Apply daily at the end of the day.

CONSTRUCTION OF A BASKET FOR THE PRODUCTION OF COLD BREW.

Photo 4



Description of photo 4

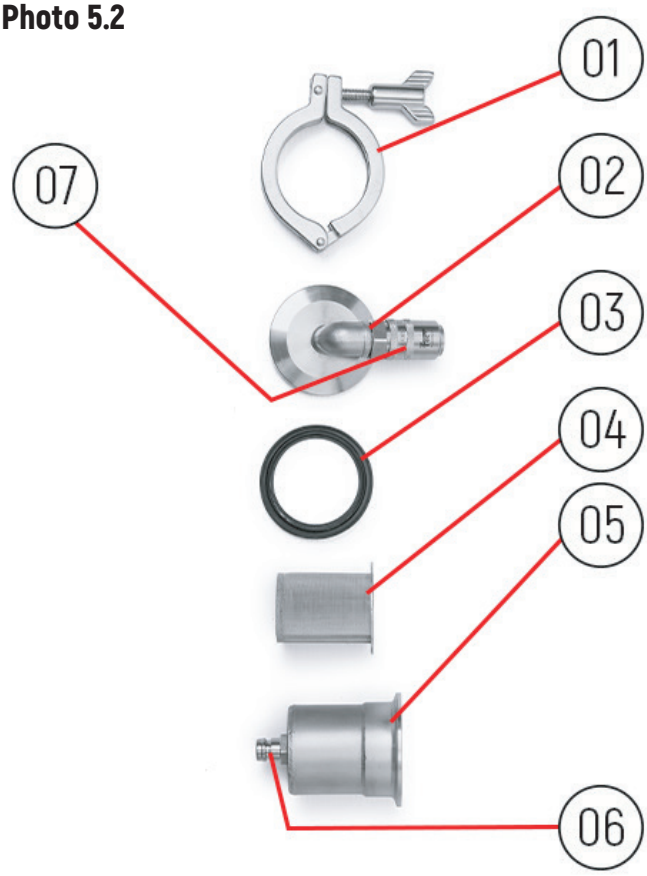
01 – Nozzle head, stainless steel.
02 – Mesh sleeve, stainless steel.
03 – Stainless steel basket.
04 – Basket lid, stainless steel.
05 – Basket lid handle.
06 – Hook the clamp on the basket lid.
07 – Basket fastening clip.
08 – Bayonet fitting with threaded sleeve in the basket.
09 – Basket seal in the lid.

CONSTRUCTION OF THE BEVERAGE FILTER

Photo 5.1 (Filter assembled)



Photo 5.2



Description of photo 5.2

01 – Fastening clamp.
02 – Lid.
03 – Seal.
04 – Filter cartridge.
05 – Housing.
06 – Connector coupling.
07 – Connector socket.

III.2.2 COLD BREW PRODUCTION

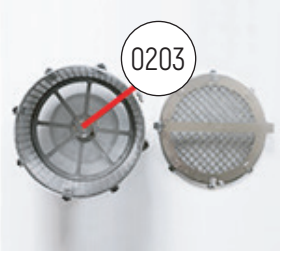
Step 1. Open the water system valve supplying the device.
Step 2. Clean and sanitise the installation, the production tank, the basket and the beverage filter if this has not already been done, see **point III.1.2.3.1, point III.1.2.3.2.**
Step 3. Prepare a clean keg for connection in the drawer of the device.
Step 4. Connect the keg as indicated, see **point III.1.2.2 a, b, c, d, e.**



Step 5.A Prepare an unfolded production basket **(photo 4.)**



Step 5.B Insert nozzle head **(photo 4. Item 02)** into the mesh sleeve **(photo 4 Item 03)** in set **(0203)**



Step 5.C Screw the assembled set **(0203)** into the threaded sleeve of the bayonet basket holder **(Photo 4 item 09)**

III.2.2.1 COLD BREW COFFEE PRODUCTION
SEE "COLD BREW PRODUCTION" VIDEO



Step 6. Prepare the ground coffee for production **(1.2 kg or 0.6 kg)**

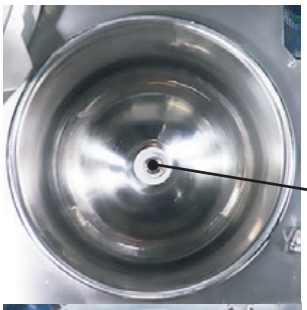


Step 6.A Fill the basket with ground coffee.
Do not tamper the coffee, but shake the basket or spread itevenly with a spoon so that it does not stick out over the edge of the basket.

Never fill the basket with ground coffee directly from the grinder outlet. The basket becomes electrified, which has a negative effect on the production process.



Step 6.B Close the basket with the lid by fastening the clips on the lid hooks, alternately.



Step 6.C Open the lid of the tank.

Bayonet holder pin for positioning the coffee production basket.



Step 6.D Position the coffee basket on the tank pin. Holding the lid handle **(photo 4 item 06)**, slowly turn it clockwise until the pin of the bayonet handle encounters the cut-out in the basket sleeve. The basket will drop lower. Slowly turn in the same direction until it stops. The basket will drop down again.Hold the lid handle and gently lift the basket upwards. If it cannot be removed, the basket is properly positioned and secured against falling out of the bayonet handle. If you have removed the basket, repeat positioning the basket from the beginning.
Step 6.E Close the tank lid **(photo 1 item 02).**

The basket must be secured against slipping out of the bayonet handle.

Step 7. If the device is switched off, press the on/off button on the control panel, **(photo 3 item 01)**. The button is illuminated in red. Display **(photo 3. item 07)** will show the text. Wait until the display is off.
Step 8. If you are using a 1.2 kg coffee basket, follow **Step 8 A**. If you are using a 0.6 kg coffee basket, follow **Step 8 B.**
Step 8 A. Press the 10/20 button **(photo 3. item 03)**, selecting 20 l of water to be poured. The selected water amount is indicated by the led **(photo 3 item 12)**, illuminating red. 20L will appear on the display **(photo 3. item 07)**. Proceed to **Step 9**.

Step 8 B. Press the 10/20 button **(photo 3. item 03)**, selecting 10 l of water to be poured. The selected water amount is indicated by the led **(photo 3. item 11)** illuminating green. 10L will appear on the display **(photo 3. item 07).** Proceed to **Step 9**.
Step 9. Press the PROG button **(photo 3. item 04)**, setting the program P1=40 or P3=40 on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07).**
Step 10. Set the desired production time. Press the upper button **(photo 3. item 08)** to increase the production time or press the bottom button **(photo 3 item 15)** to reduce the production time. The display will show the time changes. e.g. P3=55.
Step 11. Press the START button **(photo 3. item 09)**. The button will illuminate green. The display screen will show [START] and then the production time will appear, [55 min]. After 55 minutes, the production process will be completed. As time passes, the display will show the current time to complete the process in 1 minute time-shifts.
Step 12 A. For P3 program, go to Step 13.
After the set production time has elapsed, e.g. 55 min, the beverage is pumped out of the tank into the keg. The display will show [FINISH] and the display will go out.Step 12B. For P1 program, go to Step 24.cAfter the set production time has elapsed, e.g. 55 min, the process is completed,cold brew remains in the tank. The display will show [FINISH] and the display will go out.
Step 13. Continuation of step 12 A. Open the tank lid.



Step 14. Remove the basket from the tank. Holding the lid handle **(photo 4 item 06)**, gently lift the basket, slowly turn it anticlockwise until you feel resistance to rotation. Gently lift the basket up and set aside for cleaning.
Step 15. Close the tank lid.
Step 16. Disconnect the beverage filter **(photo 1 item 08)** from the connector on the keg lid and disconnect it from the beverage outlet cable **(photo 1. item 07)** Set the filter aside for cleaning.
Step 17. Connect the cable for pumping out the beverage to the cable wash connector **(photo 1. item 07).**
Step 18. Close the safety valve in the keg lid.
Step 19. Unhook the grey ball lock coupler from the keg **(photo 1. item 19)** and set aside.
Step 20 A. If you own an HT1 model go to Step 21. Step 20 B. If you own an HT model go to Step 22.
Step 21. Continuation of step 20 A. Move the beverage keg towards the nitrogen cylinder and connect it to the filling installation according to **II.4.2.** or remove the keg from the drawer and set it aside for further use. **Proceed to Step 23.**
Step 22. Continuation of step 20 B. Remove the keg from the drawer and set it aside for further use.
Step 23. Perform the washing process according to III.1.2.1 Washing. WASH. You have completed the production of the beverage.
Step 24. Continuation of step 12 B. Open the tank lid.
Step 25. Mix the contents of the tank, take a sample for inspection, evaluate.
A. If cold brew tastes right go to **Step 26.**
B. If a production time extension is required go to **Step 30.**
Step 26. Continuation of Step 25 A and Step 36 A. Close the tank lid.
Step 27. On the control panel, press the button for pumping out the beverage **(photo 3 item 10)** the button will illuminate red and the display will show [Keg --->].
Step 28. After the beverage has been pumped out, press the button again **(photo 3. item 10)**, the button returns to its original position, the illumination goes out, the display shows [Keg --->] and then [FINISH] . Wait until the display goes out. Program is completed.
Step 29. Open the lid of the tank. Follow the steps from **Step 14** to **Step 23** in sequence.

Step 30. Continuation of step 25 B and Step 36 B. Close the tank lid.
Step 31. Press the 10/20 button **(photo 3. item 03)**, selecting 20 l of water to be poured, as earlier.
Step 32. Press the PROG button **(photo 3. item 04)**, setting the program [P2=1] on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07)**
Step 33. Set the desired production time by pressing the upper button **(photo 3. item 08)** to increase the production time or the lower button **(photo s item 15)** to reduce the production time. The display will show the information about the set production time, e.g. P1=3.
Step 34. Press the START button **(photo 3. item 09)** the button will be illuminated in green. The display screenwill show [START] and after a moment, when the device has acquired the designated amount of water, the set production time of 3 min will appear. After 3 minutes, the production process will be completed. The display will show [FINISH] and the display will go out.
Step 35. Open the lid of the tank.
Step 36. Mix the contents of the tank, take a sample for inspection, evaluate.

A. If the beverage tastes right go to **Step 26.**
B. If a production time extension is required go to Step 30 again.

III.2.2.2 COLD BREW TEA PRODUCTION.



Follow the steps in Step 1 to Step 5. C
Step 6/H. Prepare the tea.



Step 6/H.A Fill the basket with tea leafs. Do not tamper the tea, but shake the basket or spread it evenly with a spoon so that it does not stick out over the edge of the basket.



Step 6/H.B Close the basket with the lid by fastening the clips on the lid hooks, alternately.



Step 6/H.C Open the lid of the tank.

Bayonet holder pin for positioning the coffee production basket.



Step 6/H.D Position the tea basket on the tank pin. Holding the lid handle **(photo 4 item 06)**, slowly turn it clockwise until the pin of the bayonet handle encounters the cut-out in the basket sleeve. The basket will drop lower. Slowly turn in the same direction until it stops. The basket will drop down again.Hold the lid handle and gently lift the basket upwards. If it cannot be removed, the basket is properly positioned and secured against falling out of the bayonet handle. If you have removed the basket, repeat positioning the basket from the beginning.
Step 6.E Close the tank lid **(photo 1 item 02).**

The basket must be secured against slipping out of the bayonet handle.

Step 7/H If the device is switched off, press the on/off button on the control panel, **(photo 3 item 01)** the button is illuminated in red. 10L will appear on the display **(photo 3. item 07)** will show the text. Wait until the display goes out.
Step 8/H If you are using a large basket, follow **Step 8/H.A** If you are using a small basket, follow **Step 8/H.B.**
Step 8/H.A Press the 10/20 button **(photo 3. item 03)**, selecting 17 l of water to be poured. The selected quantity will be indicated **(photo 3. item 11 and 12)** by LEDs lighting up both at the same time. The display **(photo 3. item 07)** will show the following text: TEA Proceed to **Step 9/H**.
Step 8/H.B Press the 10/20 button **(photo 3. item 03)**, selecting 10 l of water to be poured. The selected water amount is indicated by the led **(photo 3. item 11)** illuminating green. 10L will appear on the display **(photo 3. item 07)** Proceed to **Step 9/H**.
Step 9/H Press the PROG button **(photo 3. item 04)**, setting the program P2=1 or P4=1 on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07)**
Step 10/H Set the desired production time. Press the upper button **(photo 3. item 08)** to increase the production time or press the bottom button **(photo 3 item 15)** to reduce the production time. The display will show the time changes. e.g. P2=5
Step 11/H Press the START button **(photo 3. item 09)**. The button will illuminate green. The display screen will show [START] and then the production time will appear, [5 min]. After 5 minutes, the production process will be completed. As time passes, the display will show the current time to complete the process in 1 minute time-shifts.
Step 12/HA For P4 program, go to **Step 13/H**. After the set production time has elapsed, e.g. 5 min, the beverage is pumped out of the tank into the keg. The display will show [FINISH] and the display will go out.
Step 12/HB For P2 program, go to **Step 24/H**. After the set production time has elapsed, e.g. 5 min, the process is completed,cold brew remains in the tank. The display will show [FINISH] and the display will go out.
Step 13/H Continuation of step 12/H A. Open the tank lid.



Step 14/H Remove the basket from the tank. Holding the lid handle **(photo 4 item 06)**, gently lift the basket, slowly turn it anticlockwise until you feel resistance to rotation. Gently lift the basket up and set aside for cleaning.
Step 15/H Close the tank lid.
Step 16/H Disconnect the beverage filter **(photo 1 item 08)** from the connector on the keg lid and disconnect it from the beverage outlet cable **(photo 1. item 07)** Set the filter aside for cleaning.
Step 17/H Connect the cable for pumping out the beverage to the cable wash connector **(photo 1. item 07) Step 18/H** Close the safety valve in the keg lid.
Step 19/H Unhook the grey ball lock coupler from the keg **(photo 1. item 19)** and set aside.

Step 20/H A. If you own an HT model go to **Step 22/H.**
Step 20/H B. If you own an HT1/HT2 model go to **Step 21/H.**
Step 21/H Continuation of **Step 20/HB**. Move the beverage keg towards the nitrogen cylinder and connect it to the filling installation in accordance with point. II.4.2. or remove the keg from the drawer and set it aside for further use. Proceed to **Step 23/H**.
Step 22/H. Continuation of **Step 20/H A**. Remove the keg from the drawer and set it aside for further use.
Step 23/H Perform the washing process according to III.1.2.1 Washing. WASH. You have completed the production of the beverage.
Step 24/H Continuation of step **12/H.B**. Open the tank lid.
Step 25/H Mix the contents of the tank, take a sample for inspection, evaluate.
A. If cold brew tastes right go to **Step 26/H**.
B. If a production time extension is required go to Step 30/H.
Step 26/H Continuation of **Step 25/H A** and **Step 36/H A**. Close the tank lid.
Step 27/H On the control panel, press the button for pumping out the beverage **(photo 3 item 10)** the button will illuminate red and the display will show [Keg --->].
Step 28/H After the beverage has been pumped out, press the button again **(photo 3. item 10)**, the button returns to its original position, the illumination goes out, the display shows [Keg --->] and then [FINISH] . Wait until the display goes out. Program is completed.
Step 29/H Open the lid of the tank. Follow the steps from **Step 14/H** to **Step 23** in sequence.
Step 30/H Continuation of **Step 25/H B** and **Step 36/H B**. Close the tank lid.
Step 31/H Press the 10/20 button **(photo 3. item 03)**, selecting 10 l or 17l of water to be poured.
Step 32/H Press the PROG button **(photo 3. item 04)**, setting the program P2=1 on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07)**
Step 33/H Set the desired production time by pressing the upper button (photo 3. item 08) to increase the production time or the lower button **(photo 3 item 15)** to reduce the production time.The display will show the set time changes. e.g. P2=3
Step 34/H Press the START button **(photo 3. item 09)**. The button will illuminate green. The display screen will show [START] and after a moment the set production time, 3min, will appear. After 3 minutes, the production process will be completed. The display will show FINISH and the display will go out.
Step 35/H Open the lid of the tank.
Step 36/H Mix the contents of the tank, take a sample for inspection, evaluate.
A. If cold brew tastes right go to **Step 26/H**.
B. If a production time extension is required go to **Step 30/H** again.

III.2.2.3 COLD BREW CASCARA PRODUCTION.



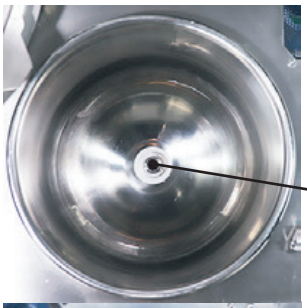
Follow the steps in Step 1 to Step 5. C
Step 6/C. Prepare the tea.



Step 6/C.A Fill the prepared basket with cascara. Do not tamper the cascara, but shake the basket or spread it evenly with a spoon so that it does not stick out over the edge of the basket.



Step 6/C.B Close the basket with the lid by fastening the clips on the lid hooks, alternately.



Step 6/C.C Open the lid of the tank.

Bayonet holder pin for positioning the coffee production basket.



Step 6/C.D Position the cascara basket on the tank pin. Holding the lid handle **(photo 4 item 06)**, slowly turn it clockwise until the pin of the bayonet handle encounters the cut-out in the basket sleeve. The basket will drop lower. Slowly turn in the same direction until it stops. The basket will drop down again.Hold the lid handle and gently lift the basket upwards. If it cannot be removed, the basket is properly positioned and secured against falling out of the bayonet handle. If you have removed the basket, repeat positioning the basket from the beginning.
Step 6/C.E Close the tank lid and tighten the locking knob **(photo 1 item 20).**

The basket must be secured against slipping out of the bayonet handle.

Step 7/C If the device is switched off, press the on/off button on the control panel, **(photo 3 item 01)** the button is illuminated in red. 10L will appear on the display **(photo 3. item 07)** will show the text. Wait until the display goes out.
Step 8/C If you are using a large basket, use **Step 8/C.A** If you are using a small basket, follow **Step 8/C.B**
Step 8/C.A Press the 10/20 button **(photo 3. item 03)**, selecting 17 l of water to be poured. The selected quantity will be indicated **(photo 3. item 11 and 12)** by LEDs lighting up both at the same time. 10L will appear on the display **(photo 3.item 07)** will show the following text: TEA Proceed to **Step 9/C**.
Step 8/C.B Press the 10/20 button (photo 3. item 03), selecting 10 l of water to be poured. The selected water amount is indicated by the led **(photo 3. item 11)** illuminating green. 10L will appear on the display **(photo 3. item07)**.
Step 9/C Press the PROG button **(photo 3. item 04)**, setting the program P1=40 or P3=40 on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07)**
Step 10/C Set the desired production time. Press the upper button **(photo 3. item 08)** to increase the production time or press the bottom button **(photo 3 item 15)** to reduce the production time. The display will show the time changes. e.g. P1=55
Step 11/C Press the START button **(photo 3. item 09)**. The button will illuminate green. The display screen will show [START] and then the set production time will appear, [55 min]. After 55 minutes, the production process will be completed. As time passes, the display will show the current time to complete the process in 1 minute time-shifts.

Step 12/C.A For P4 program, go to **Step 13/C**. After the set production time has elapsed, e.g. 55 min, the beverage is pumped out of the tankinto the keg. The display will show [FINISH] and the display will go out.
Step 12/C.B For P1 program, go to **Step 24/C.** After the set production time has elapsed, e.g. 55 min, the process is completed, cold brew remains in the tank. The display will show [FINISH] and the display will go out.
Step 13/C Continuation of step 12/C.A. Open the tank lid.
Step 14/C Remove the basket from the tank. Holding the lid handle **(photo 4 item 06)**, gently lift the basket, slowly turn itanticlockwise until you feel resistance to rotation. Gently lift the basket up and set aside for cleaning.
Step 15/C Close the tank lid by tightening the safety knob.
Step 16/C Disconnect the beverage filter **(photo 1 item 08)** from the connector on the keg lid and disconnect it from the beverage outlet cable **(photo 1. item 07)** Set the filter aside for cleaning.
Step 17/C Connect the cable for pumping out the beverage to the cable wash connector **(photo 1. item 07)**
Step 18/C Close the safety valve in the keg lid.
Step 19/C Unhook the grey ball lock coupler from the keg **(photo 1. item 19)** and set aside.
Step 20/C.A If you own a HT1 or HT2 go to **Step 21/C**.
Step 20/C.B If you have an HT model go to **Step 22/C**.
Step 21/C Continuation of **Step 20/C.A**. Move the beverage keg towards the nitrogen cylinder and connect it to the filling installation in accordance with point. II.4.2. or remove the keg from the drawer and set it aside for further use. Proceed to **Step 23/C.**
Step 22/C Continuation of Step 20/C.B. Remove the keg from the drawer and set it aside for further use.
Step 23/C Perform the washing process according to **III.1.2.1 Washing. WASH.** You have completed the production of the beverage.
Step 24/C Continuation of step 12/C.B. Open the tank lid.
Step 25/C Mix the contents of the tank, take a sample for inspection, evaluate.
A. If cold brew tastes right go to **Step 26/C**.
B. If a production time extension is required go to Step 30/C
Step 26/C Continuation of step 25/C.A and step 36/C.A. Close the tank lid.
Step 27/C On the control panel, press the button for pumping out the beverage **(photo 3 item 10)** the button will illuminate red and the display will show [Keg --->].
Step 28/C After the beverage has been pumped out, press the button again (photo 3. item 10), the button returns to its original
position, the illumination goes out, the display shows [Keg --->] and then [FINISH] . Wait until the display goes out. Program is completed.
Step 29/C Open the lid of the tank. Follow the steps from **Step 14/H to Step 23** in sequence.
Step 30/C Continuation of Step 25/C.B and Step 36/C.B. Close the tank lid.
Step 31/C Press the 10/20 button **(photo 3. item 03)**, selecting 10 l or 17l of water to be poured.
Step 32/C Press the PROG button **(photo 3. item 04)**, setting the program [P2=1] on the display. Switching between programs is done by holding down the PROG button. The selected program will be shown on the display **(photo 3. item 07)**
Step 33/C Set the desired production time by pressing the upper button **(photo 3. item 08)** to increase the production time or the lower button **(photo 3 item 15)** to reduce the production time. The display will show the set time changes.e.g. P2=3min.
Step 34/C Press START **(photo. 3. item 09)**. The button will illuminate green. The display screen will show [START] and after a moment the set production time,3min, will appear. After 3 minutes, the production process will be completed. The display will show FINISH and the display will go out.
Step 35/C Open the lid of the tank.
Step 36/C Mix the contents of the tank, take a sample for inspection, evaluate.
A. If cold brew tastes right go to **Step 26/C.**
B. If a production time extension is required go to **Step 30/C** again.

III.2.3 AFTER PRODUCTION. SEE "AFTER PRODUCTION" VIDEO.



It is forbidden to use metal or wooden elements for cleaning the basket and its lid, which may damage the basket mesh.

Step 37. A Cleaning the production basket. Detach the buckles from the production basket.
Step 37. B Remove the lid from the basket, set aside.
Step 37. C Turn the basket upside down over the waste bin and shake it vigorously: coffee / tea / cascara should fall out of the basket. Remove the residue with your fingers or a plastic spoon.
Step 37. D Remove the set from the basket and disassemble into its component parts, see **Step 5 B.**
Step 37. E Wash all parts of the basket thoroughly of any coffee, tea, cascara residue. Carefully check the holes in the head **(photo 4. pos. 02)** for blockages.
Step 37. D Set aside the washed basket parts preparing for the next production. At the end of the work day, perform basket sanitation, see III.1.2.3.2
Step 38. A Cleaning the beverage filter **(photo 5.1)**. Unscrew the clamp **(photo 5.2 item 01)**
Step 38. B Disassemble the filter into its component parts **(photo 5.2)**, wash out the filter cartridge **(photo 5.2 item 04)** and the remaining parts.
Step 38. C Put the components together **(photo 5.2)** and **(photo 5.1)** in preparation for the next production. At the end of the work day, sanitise the filter, see **point III.1.2.3.2 Sanitation of the filter and coffee basket**.
Step 39 At the end of the work day, sanitise the device. See **point III.1.2.3.1 Sanitation of the device installation**.

III.2.4 OPERATIONAL NOTES

- To ensure minimal contamination of the beverage with bacteria: use latex gloves when filling the coffee basket, closing the basket lid and placing the basket in the tank.
- Do not put coffee into the basket after grinding directly from the outlet of the coffee grinder. The basket becomes electrified, which negatively affects the production of cold brew.
- During the coffee production process, the coffee increases in volume, swells and presses with great force against the walls of the basket. The coffee basket must be closed tightly and the lid secured against accidental opening,otherwise the basket will unseal and the production process will not take placecorrectly.
- Pay particular attention to inserting the basket sleeve into the bayonet handle in the tank so that the basket does not slip out of the sleeve. If the basket slips out of the sleeve, the water will not flow through the basket and the extraction will not proceed correctly and evenly.

III.2.5 DETERGENTS AND DISINFECTANTS AND THEIR PREPARATION

Chemicals for sanitation of the device.
Before using the chemical, it is essential to read:

1. Safety data sheet
2. Product data sheet

TABLE 2

TRADE NAME	CHEMICAL FORM	REQUIRED CONCENTRATION OF THE SOLUTION	WATER TEMPERATURE	THE AMOUNT OF PRODUCT NEEDED TO SANITISE THE DEVICE TANK	SANITATION OF THE DEVICE	SANITATION OF THE BEVERAGE SERVING SYSTEM.
Dm Cid Ultra	Liquid	0.5%	40 C	0.05 L	YES	YES
Neomescan Sepa	Liquid	5%	30 - 50 C	0.5 L	YES	YES
DOREX ULTRA	Liquid	2%	30 - 50 C	0.2 L	YES	YES

III.2.5.1 PREPARATION OF THE SANITATION SOLUTION.
SEE "PROGRAMS PREPARATION OF THE SANITATION SOLUTION" VIDEO

I. Pour 1-2 litres of water at a temperature of 30 – 50°C into a tank.
II. Add the chemical in the amount indicated in Table 2. Mix thoroughly.
III. Pour the contents of the container into the device tank.
IV. Follow the steps in point **III.1.2.3.1 Sanitation of the device installation.**

IV. HEALTH AND SAFETY INSTRUCTIONS

IV



Improper handling of the device, non-compliance with the following instructions and non-observance of safety regulations may result in danger of electric shock, burns, cuts or other injuries.

Before starting work, the operator should read and understand the following rules:
- safe operation of electrical equipment,
- working in the food and beverage facilities,
- proper operation and use of the device on the basis of this manual,· first aid in case of emergency.

Before starting work, the operator should read and understand the following rules:
- Before installing the device, remove the packaging, remove the protective film and make sure that the device is intact. If in doubt, do not use it and contact a specialist. Packaging material should be kept out of the reach of children as it poses a potential hazard (plastic bags, boards, nails, etc.).
- Install the device in accordance with the operation manual.
- Check the effectiveness of the protection against electric shock before starting the device for the first time, and then at least once a year.
- When cleaning, washing, repairing and maintaining – always disconnect the unit from the electrical supply.
- Do not put your hands in the sanitation bath
- Take special care when opening the tank lid to avoid getting sprayed with liquid.
- Do not put hands or other body parts between the lid and the tank or the drawer and the housing while closing. Pinching may result in injury.
- Be careful of the edges and corners of the housing and drawer of the device.. Do not lean on the device.
- The Hardtank may only be used and operated by persons who have been trained in its use and who have read the operation manual for the device.
- Do not allow unauthorised persons to repair or adjust the device. If any damage is found to the electrical system or fittings, it is essential that the dishwasher is disconnectedfrom the electrical system and

reported for repair.

- Do not make any modifications that do not comply with the documentation of the device.. Keep attention on children while the device is in operation, as they are not familiar with its operation.. Do not leave the device unattended during operation.
- In case of injury or electric shock, provide first aid immediately.



Washing and pouring water on the device is prohibited.
Failure to do so may result in damage to the device and electric shock.

V. MAINTENANCE AND REPAIR INSTRUCTIONS

V.1 ONGOING MAINTENANCE

V.1

The following maintenance must be performed after prolonged operation of the deviceand on a daily basis:

- Disassemble and wash the components of the basket according to III.2.4. and the beverage filter **(photo 5.2)**
- Clean the appliance installation in accordance with III.1.2.1
- Pull out the drawer disconnect and remove the kegs, clean the inside of the drawer. Reinstall the kegs after cleaning.
- Clean the outer surfaces of the housing from dirt.
- Close the tank lid.
- Leave the drawer open for ventilation.



Do not clean the external and internal surfaces with caustic or chloride containing substances. Do not use sharp metal brushes, scouring pads or similar tools that could scratch the surface of the macerator. It is forbidden to use water with a temperature above 50 °C to wash the internal surfaces of the tank.

V.2 PERIODIC MAINTENANCE

V.2

Every 6 months:

- unscrew the nut of the water supply connection and clean the mesh filter that is installed there.
- dismantle the drain pipe to the sewer and check its flow capacity. Wash the inside of the device with a strong jet of water, removing any sediment.

If the unit is going to be out of service for more than 4 weeks, remove water from the device anddry the components.

In case of a longer downtime during which it can be used at any time, sanitise every 4 days and before start-up.

V.3 REPAIRS AND OVERHAULS

V.3

The equipment manufacturer, through its service department, provides repairs at the customer's premises orat the manufacturer's premises. All adjustment and repair work should be carried out by anauthorised specialist.



The manufacturer is not responsible for improper use of the product or use which does not comply with the recommendations given in this documentation.

The warranty does not cover damage caused by improper use, lack of maintenance or repairs carried out by unauthorised persons.

V.4 LIST OF POSSIBLE FAULTS AND RECOMMENDED REPAIR METHODS

V.4

RESET OF THE DEVICE:

1. Switch off the device, press the on/off button on the control panel (photo 3. item 01), switch the device on again using the same button.
2. Wait until the display goes out.
3. Press the button **(photo 3 item 10)** pumping the drink into the keg. The button remains in the rear position, will illuminate red and the display will show [Keg --->].
4. After 2 min press the button **(photo 3 item 10)** again the illumination will go out and the display will show [Keg -->] and then [FINISH] After the reset of the program is complete, the display will go out.

TABLE 3

INSTALLATION AND MAINTENANCE ERRORS		
TYPE OF DEFECT	POSSIBLE CAUSE	SOLUTION
The machine power cannot be switched on. The button (01) (ON/OFF) is not illuminated when pressed.	No power supply	Plug in the power supply. Plug the plug into the socket.
The device switched off suddenly during operation. The illuminations have gone out.	No power supply.	Check other devices. Check for a mains power failure.
	The external fuse has tripped.	Check the external fuse.
When the WASH program is activated, no water is poured into the tank.	Turned off valve on tap water supply.	Open the valve.
	Clogged mesh filter in the cap of the supply line, water supply.	Unscrew the nut, remove the filter and clean.
When program P1 , P2, P3 or P4 is activated, no water is poured into the tank.	A closed valve does not supply treated water.	Open the valve.
At the end of the WASH program, dirty water remains in the tank.	Clogged drain hose to the sewage system.	Dismantle the drain hose and use a strong jet of water to remove any accumulated deposits. Reassemble the hose. Reset the device.
At the end of the program of pumping out the beverage into the keg, there is still an unfilled liquid in the tank.	No adjustment of the valve for drainage.	Reset the device.
	Closed safety valve in the keg lid or failure to connect the grey ball lock coupler.	Open the safety valve, connect the grey coupler. Reset the device.
At the end of the program of pumping out the beverage into the keg, there is still an unfilled liquid in the tank.	Clogged beverage filter (photo 1 item 08)	Disconnect the filter and dismantle it. Wash the parts and the mesh insert. Assemble the filter, connect to the cables. Reset the device.

At the end of the P3 program, there is still an unfilled liquid in the tank.	No adjustment of the valve for drainage.	Reset the device.
	Closed safety valve in the keg's lid or failure to connect the grey ball lock coupler.	Open the safety valve, connect the grey coupler. Reset the device.
	Clogged beverage filter (photo 1 item 08)	Disconnect the filter and dismantle it. Wash the parts and the mesh insert. Assemble the filter, connect to the cables. Reset the device.
FOR HT 1 AND HT 2 VERSIONS		
After opening the tap to pour the drink the drink does not run.	No connection of the keg to the pouring installation.	Connect the keg to the installation.
	Keg is empty.	Replace the keg with a full one.
	Lack of sufficient gas pressure at regulator outlet.	Check the nitrogen pressure at the regulator {3 to 3.8 bar.} Make an adjustment.
	Empty nitrogen cylinder.	Replace with a full cylinder.
	Closed valve on cylinder or manifold.	Open the valves.
Lack of adequate nitrogen saturation of the drink running from the tap.	Lack of sufficient gas pressure in the cylinder.	Check the nitrogen pressure at the regulator {3 to 3.8 bar.} Make an adjustment. Replace with a full cylinder.
	Incorrectly adjusted nitrogen supply control valve.	Make the correct adjustment with the valve knob (photo II.4.1A item 04)

VI. STANDARD AND ADDITIONAL EQUIPMENT

VI.1 STANDARD EQUIPMENT

VI.1

As a standard the device is equipped with the following:

1. Kit as listed in Table 4.
2. Operation and maintenance manual, device, reducer, cooler.
3. Warranty card

The manufacturer reserves the right to change the equipment of the machineincluding the column, gas pressure regulator and cleaning products.

TABLE 4

ITEM NO.	NAME	TYPE	FIG. NO. PART NO.	HT QUANTITY	HT1 QUANTITY	HT2 QUANTITY
1.	Mesh basket for coffee 1.2 kg	K12		1	1	1
2.	Beverage filter			1	1	1
3.	Cornelius keg 18l with special lid			2	2	2
4.	Nitrogen reducer 200 at.			-	1	1
5.	Tap for pouring beverages	Stout		-	1	2
6.	Pouring column 400 x 100 x 100			-	1	1
7.	Drip tray 160 x 320 x 20			-	1	2
8.	Hook spanner for tap			-	1	1

9.	Spanner 28			-	1	1
10.	Allen key 4 for the column			-	1	1
11.	JG hose wrench			-	1	1
12.	5l canister of santation agent *			1	1	1
13.						
14.						
15.						

*** Only in the EU.**

VI.2 ADDITIONAL EQUIPMENT

VI.2

IT IS SUPPLIED ON ADDITIONAL ORDER.

TABLE 5

ITEM NO.	NAME	TYPE	FIG. NO. PART NO.
1.	Mesh basket for coffee 0.6 kg	K06	
2.	Gas cylinder 8l / 1.8 m3 – nitrogen 200 at.		
3.	Cornelius keg 18l with special lid.		
4.	Special lid for closing the Cornelius keg.		
5.	Cornelius keg 18l standard		
6.	Set for pouring liquids from an 18l keg into smaller kegs.		
7.	Set for pouring liquids from an 18l keg into PET containers. Keg, Flesh A type		

VII. SPARE PARTS

VII

TABLE 6

ITEM NO.	NAME	FIG. NO. / PHOTO NO.	ITEM

VIII APPLICATION OF THE DEVICE

IX DISPOSAL

This device is marked in accordance with European Directive 2012/19/EU and the Polish act on waste electrical and electronic equipment with the symbol of the crossed-out waste container.Such marking informs that this equipment, after its operating life, must not be placed together with other household waste. The user is obliged to hand it over to the company collecting waste electrical and electronic equipment. Proper handling of waste electrical and electronic equipment contributes to avoiding harmful consequences for human health and the environment, resulting from the presence of hazardous substances and improper storage and handling of such equipment.

Grinding: finer grinding increases extraction. There is more surface area of coffee exposed, so extraction occurs more quickly.
Time: increased time increases extraction. The coffee is in contact with the water longer, so it has more opportunity to dissolve.

MADE BY:

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