

# CoHoRS

COLLECTION, HOMOGENIZATION  
& RECORDING SYSTEM

COLLECTION HO MOGENIZATION AND RECORDING SYSTEM  
FOR LABORATORY USE



INSTRUCTIONS MANUAL

 ARGiP  
TECHNOLOGIES

Printed in January 2015

manufactured by:  
CTSV Srl  
Via Marco Polo, 28 10090 Bruino (TO) ITALY

on exclusive behalf of:

**ARGiP Technologies LTD**  
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You can download the manual in Italian, French, Spanish, Dutch, German  
on the website [www.argip.co.uk](http://www.argip.co.uk)

Reproduce, store or alter, even in part, the contents of this manual is prohibited.

Machine pick-up date:

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## Description of the appliance scheme:



## **Topics**

1. *Addresses*
2. *Index sections*
3. *Index topics*

### **SECTION A - General Information**

- General information
- Identification of the appliance
- User Information
- Duties and responsibilities
- Transport and storage

### **SECTION B - Specifications and technical data**

- Permitted use
- Technical data

### **SECTION C - Rules and safety devices**

- General safety

### **SECTION D - Operator**

- Requirements
- Duties and responsibilities

### **SECTION E - Description of commands and tools**

- Description of the appliance
- Expcted utilization of the appliance
- Technical data
- Accessories

### **SECTION F - Recommendation for use**

- Recommendation for use
- Settings and customization

### **SECTION G - Maintenance**

- Fuses replacement
- Label roll replacement
- SD Card replacement
- Final disposal



## **SECTION A** **General Information** **A.01**

### **Section A - General Information**

In this manual you will encounter symbols accompanied by text. These symbols are intended to anticipate warnings or suggestions about to a given situation.



### **WARNING**

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It is used when you want to provide operator guidance on methods or prohibited or recommended procedures.



### **Caution**

It is used to alert the operator about conditions or situations that could be dangerous for the structure or load.



### **Danger**

It is used to alert the operator about conditions or situations that could be dangerous for the operator or people in the proximity of the appliance.

### **Identification of Appliance**

Identification label is placed on the device shell containing at least the following items:

1. Model
2. Serial number
3. Manufacturer (CTSV)
4. CE mark





## **SECTION A** **General Information** **A.02**

### **Information for users**

In the following pages, the word "Manufacturer" refers to CTSV srl as manufacturer of the appliance.

The instructions in this manual are those provided by the manufacturer.



### **WARNING**

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**The user must be aware of the following areas of responsibility:**

#### **Manufacturer of the appliance**

Responsible for the marketing of the product as well as it is originated from factory, as part of the intended use in the specific section B.



### **WARNING**

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At the withdrawal of the appliance check the following points:

- the presence of the identification label of the appliance with CE Mark (applied by the manufacturer).
- labels on the machine in the required language (country).
- the presence of the user manual in the required language.



### **Caution**

The technical standards contained in this manual refer to the appliance as it comes from the factory.

*It is forbidden any welding, tampering with electrical equipment, replacement of parts with non-original parts, removal of cover and protection devices.*

*Maintenance must be carried out according to the requirements and periodicity described in section G of this manual.*



## **SECTION A**

### **General Information**

#### **A.03**

#### **Duties and responsibilities**

##### **Duties**

In this context reference is made only to the tasks of the operator and inherent to the use of the appliance, ranging from activation of the power circuit to maintenance.

The operator must therefore know the safety rules and the related devices and the use of controls.

##### **Responsibility**

The operator is directly responsible for the use and proper functioning of the appliance, its maintenance and any action it plays in the context of the tasks listed above.

##### **Transport and storage**

Temperature (T): + 10 to +40° C.

Maximum relative humidity (% RH): 70%.

Atmospheric pressure (P): 50 to 106 Kpa.



## **SECTION B**

### **Performance and technical data**

#### **B.01**

#### **Permitted Use**

Only Foodcons described in this manual can be used in the appliance.

**It is forbidden to use other than as intended by the manufacturer.**

#### **Specifications**

Power supply: 110/220 Vac  $\pm$  10% 60/50Hz

Temperature: +10 to +40 ° C

Maximum relative humidity: 65%

Power consumption: 1kW



#### **Caution**

The conditions of electrical safety are guaranteed even in conditions of use with relative humidity up to 85%.





## **SECTION C**

### **Safety rules**

#### **C.01**

It is responsibility of the operator to know the appliance and keep it in efficiency.

If in doubt, refer to the user 's manual.

The use of appliance is restricted to staff specially trained.



## **SECTION D**

### **Operator**

#### **D.01**

#### **Requirements**

The staff who use or run the appliance must be competent and trained.

The term "training" refers to the following:

This manual should be read, studied and understood, and also the graphics and the attached patterns, labels and indication of danger.

Before starting any operation, the staff must be familiar with the use of controls and of their movements, having idling tests carried out.

#### **Duties and Responsibilities**

##### **Duties**

In this context reference is made only to the tasks of the operator and inherent to use of appliance, ranging from activation of the power circuit, to maintenance.

The operator must, therefore, be fully familiar with the rules of safety and the use of controls.

##### **Responsibility**

The operator is directly responsible for the use and proper functioning of the appliance, its maintenance and any action it plays in the context of the tasks listed above.



## SECTION E

### Description of commands and tools

- E1. Description of commands and tools
  - General security warnings
  - Information concerning air - noise
  - Information concerning electromagnetic radiation
- E2. Expected utilization of the appliance
- E3. Technical data
- E4. Accessories
  - Recommendation for use
  - Settings and customization
  - Fuses replacement
  - Label roll replacement
  - SD card substitution

## E1. Description of the appliance

**Important: Read the instruction for use while carefully observing the illustrations.**

1) Switch On/Off

On: Turn the switch to the I symbol

Off: Turn the switch to the 0 symbol

2) Connector

### **WARNING**

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Before plugging the power cable into the socket make sure that the voltage matches the one indicated on the summary data plate. (4)

3) Fuses

N. 2 fuses 5 X 20 F 2,5 A

4) Summary data plate

5) Touchscreen monitor

6) Printer

7) Sliding door

## Description of the appliance

The new **COHORS® system** is a universal, **fully automated homogenizing and grinding system for homogenization and extraction in one step**. Unique designed vessels for disposable use complete the safe operation to avoid or even exclude cross-contamination and contacts with hazardous material.

Typical applications are in the area of (residue) analysis in food, feed or other areas. Molecules or micro-organisms of interest in matrices that are typical for research, development or QC in foodstuffs, biology, biochemistry, chemistry, pharmacy, diagnostics, etc. can be effectively prepared and obtained for further sensitive analysis using LC-MS, HPLC, UPLC, GC, ELISA, etc.

Disposable sample tubes with different volumes and grinding discs enable efficient homogenizations and extractions in the presence of a wide variety of aqueous and organic solvents.

All tubes are chemically resistant and can be centrifuged.

All tubes can be obtained in a non-sterile and a sterile (beta rays) version.

Easy to use software completes a safe and reliable operation.

## Here are some typical parameters:

Size:	cm 94x40x48
Weight:	Kg 50
Power supply:	110/220 Vac ± 10% 60/50Hz
Automatic operation:	up to 12 samples
Temperature control:	from 0° to 40°C
Running time:	customizable running time
Running speed:	from 1000 rpm up to 5000 rpm
Cod.:	83013

Available colors:

	Orange (RAL 2008)
	Black
	Blue (RAL 5015)
	Grey (RAL 7024)

## GENERAL SECURITY WARNINGS



**Carefully read the instruction before installation or utilization of the appliance.**



**Use the appliance only for its purpose, described in the instructions.**

Use the appliance following the instruction of this manual.

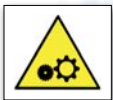
Improper use can cause serious physical injuries.



**Do not modify the appliance.** Technical intervention must be made by authorized personnel only. Improper use or manomission can cause serious physical injuries.



**Do not touch moving parts.** Contact with limb, arms, toes or other parts of the body can cause serious physical injuries. Do not insert any object inside the breaks, in order to avoid physical injuries and damages to the appliance.



**Do not use the appliance without its correctly installed protection apparatus.**

It is strictly forbidden to inhibit pre-installed security apparatus. After servicing, please make sure that all the protection apparatus have been installed in their original position, and correctly activated.



**Accidental start of the apparatus.** Make sure that the switch is in the "O" position before connecting the apparatus to an electric source.



**Working clothes.** Do not wear clothes that may get caught on the apparatus on some of its parts.



**Electrical shock.** Do not ever use the appliance in humid locations or next to water/liquid substances/streams. Do not insert any object into the breaks. Keep the power cable away from heat sources or sharp surfaces. Do not crush or oppress the power cable. Do not disconnect the appliance pulling the power cable but gently remove the connector from the socket.





**Working area.** The working area must be dedicated to the appliance utilization.

Do not use the appliance in humid locations or next to water/liquid substances/streams.

Do not use the appliance next to flammable substances or explosive material.



**Stocking preventative measures.** When not in use, please make sure the appliance is put in a dry ambience, far from atmospheric agents.



**Unauthorized personnel use.** Personnel that is not adequately trained should not use or have access to this appliance.



**Malfunctioning/damages.** Do not use the appliance in case of damages or malfunctioning.

Do not repair the appliance by yourself but call your supplier as soon as possible.

Do not remove the paint seal and do not open the cover. Reparation intervention must be made only by the supplier.



**Servicing.** For every servicing intervention please call your supplier.

Do not remove the paint seal and do not open the cover.



**Cleaning.** Carefully follow the cleaning instruction in this handbook while cleaning the appliance.



**Transportation and installation.** The appliance must be moved with mechanical

instruments only or by at least two people. It must be installed on a surface with adequate payload for 65 kg.

## INFORMATION CONCERNING AIR - NOISE

The noise emitted by the appliance is inferior to the values indicated in the Italian D.Lgs.81/2008, art. 189.

*Unique scripture regarding working security and health.*

No individual noise protection device use is expected.

## INFORMATION CONCERNING ELECTROMAGNETICAL RADIATION

Electric and magnetic field values emitted by this appliance are really poor if compared with the values

given in the Attachment XXXVI. *Unique scripture regarding working security and health, Attachment XXXVI.*



## E2. Expected utilization of the appliance

CoHoRS is used in order to activate the **FOODcons disposable**, necessary to the production of biological samples in laboratory analysis.

## E3. Technical data

### OPERATION

Main switch voltage:	110/220 Vac $\pm$ 10% 60/50 Hz
Temperature:	from +10° C to +40° C
Max relative humidity:	70%
Power consumption:	1kW

**Note:** Electrical safety conditions are also guaranteed with relative humidity up to 85%.

### Transport and storage

Temperature	da +10° C a +40° C
Max relative humidity	70%
Atmosphere pressure	from 50 to 106 Kpa
Temperature and pressure (see above)	

### WARNING

The appliance must be connected to an electrical socket with protection conductor (ground). DO NOT use adapters, multiple sockets or reducers.

Do not put any part of the body in any split; the only possible access is the sliding door, only for charging and taking the samples. Avoid use of liquids near the appliance especially when a group of electrical wires is nearby; do not use the appliance if soaking into liquid substances; do not try to sterilize in any way that consider use of liquid substances, rays or heat.

### WARNING

Do not place the appliance in order to make it difficult to handle the power supply.

Note: ARGiP declines any responsibilities for damages caused by repairs, modifications or use in conjunction with other equipment without the consent of authorized technical personnel.

Note: any circuit diagrams or list of components will be provided at the request from our technical personnel.

## E4. Accessories

- FOODcons disposables adaptor
- Label rolls
- FOODcons, FOODcons MGM, FOODcons MAX, FOODcons MGMax

### FOODcons disposables description:

**FOODcons** are homogenizing disposables working exclusively with **CoHoRS** and **MiniMAHFIA** appliances. The sample which must be homogenized has to be put in the tank, in the lower part of the disposable, the one with the smaller diameter.

After putting the sample inside the tank, close the disposable with preassembled cover composed of lid, shaft and grid. It is very important to follow the lid – tank alignment as shown in [Picture C](#).

Add the proper solvent related to the sample/analysis as shown in [Picture C1](#), respecting the necessary suitable quantity of dilution.

Close the lid completely and homogeneously starting from the sides, as shown in [Picture C2](#).

If the FOODcons disposables are used in combination with CoHoRS, put the QRCode label (printed by the CoHoRS itself) as shown in [Pictures C3 – C4 – C5](#).

**1) FOODcons:** il FOODcons standard can contain up to 40ml sample and up to 240ml total (sample + solvent). Is characterized by a Nylon-glass homogenizing disk.

**2) FOODcons MGM:** il FOODcons MGM can contain up to 40ml sample and up to 240ml total (sample + solvent). Is characterized by an INOX steel homogenizing disk.



Picture C0



Picture C



Picture C1



Picture C2



Picture C3



Picture C4

**3) FOODcons MAX:** il FOODcons MAX can contain up to 80ml sample and up to 260ml total (sample+ solvent). Is characterized by a Nylon-glass homogenizing disk.

**4) FOODcons MGMax:** can contain up to 80ml sample and up to 260ml total (sample+ solvent). Is characterized by an INOX steel homogenizing disk.



Picture C5

## SECTION F

### F1. Recommendation for use

**M1)** Plug in the power cable.

**M2)** Turn On the appliance putting the switch into the position "I" as shown in [Picture A1](#)



Picture A1

**M3)** When the appliance will be turned on the monitor will be as shown in [Picture M3](#) and CoHoRS will start its auto-diagnosis operation at the end of which a complete list of the possible function will be shown ([Picture M3a](#)).

**M4)** After preparing the sample as shown in the sequence C0 – C – C1 – C2, press the LABEL button ([Picture M4](#))



Picture M3



Picture M3a



**M5)** Labels preparation:

**M5a)** Choose the sample from the list, insert a customized sample or modify the already loaded parameters (**Picture M5a**)

**M5b)** Select the operator

**M5c)** Insert sample code and description as shown in the sequence M5c – M5c1 and press PRINT button after choosing the number of the label that you need to print.

**M6)** Labeling and insertion of the FOODcons into CoHoRS:

**M6a)** Put the label on the FOODcons in the position shown in the sequence C3 – C4 – C5 – C6 – C7 paying attention to the alignment. The alignment is guaranteed by putting correctly the disposable into the holder with drive, as shown in **Picture C7**.

**M6b)** Close the sliding door until the lock, making the closing door micro click, as shown in **Pictures M6b1 e M6b2**.

**M7)** Samples loading and starting of the cycle:  
It is possible to select the sample loading operative mode choosing between program A, B or C as shown in **Picture M7**.



Picture M4



Picture M5a



Figura M5c1



Picture M5b





Picture M5c



Picture C6



Picture C7



Picture M6b1



Picture M6b2

**A Function** makes it possible to homogenize and bring back to position 0 the first loaded sample, after loading all the 12 samples;

**B Function** (for a quicker use) gives the user the possibility to load and homogenize in every moment;

**C Function** gives the user the possibility to load and homogenize in every moment, while printing new labels.

We suggest to use B Function by default.

**M7a)** Press the LOAD button as shown in [Picture M7a](#).

**M7b)** After selecting LOAD, the monitor will look like [Picture M7b](#).

**M7c)** After loading the first 4 samples and after closing the sliding door, press the first button as shown in [Picture M7c](#) in order to make the holder slide 4 position forward.

Repeat the operations until loading is completed, or in case of samples number equal or lower 4, proceed directly to run the appliance as shown in [Picture M7c1](#).



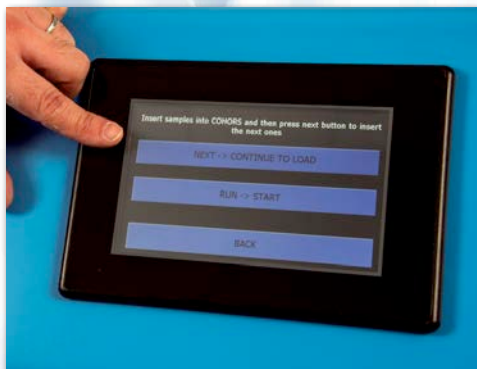
Picture M7a



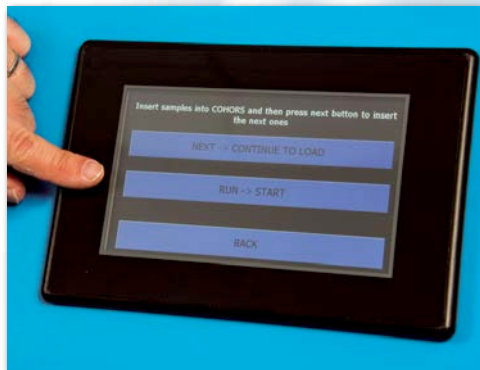
Picture M7b



Picture M7



Picture M7c



Picture M7c1



Picture M7d



Picture M7d1



Picture M7d2



Picture M7d3



Picture M7d4

**M7d)** After pressing the start button (**Picture M7c1**) the rotation of the carousel starts until reaching the homogenizing position where the sample is well lighted, the label is read and the cycle starts according to the selected program. See **Pictures M7d – M7d1 – M7d2 – M7d3 – M7d4**.

**M7e)** At the end of the cycle, or in every moment the sample is near the sliding door, the door can be opened and the homogenized samples can be collected (**Picture M7e**).



Picture M7e

## F2. Settings and customization

To enter the SETTING AND CUSTOMIZATION mode press SETTING button as shown in **Picture E**.

### Samples setting:

Select the mode pressing the button shown in **Picture E1**.

Select the program you need to customize (**Picture e2**) or give name to a new program (**Picture E3**) After entering in the customization mode you will see the the frame shown in **Picture E4**.

In this frame you can customize max sample alarm temperature, speed of the engine drop, speed of the homogenizing disk rotation, time of the durability of the rotation at the bottom of the disposable, waiting time for a complete round of homogenization, max timing of the cycle and standard or floating mode (**Picture E4**).



Picture E



Picture E1



## Operators:

In order to add a new operator start from frame shown in Picture E1, press the third button (Picture E5). You will then see the frame shown in Picture E6.

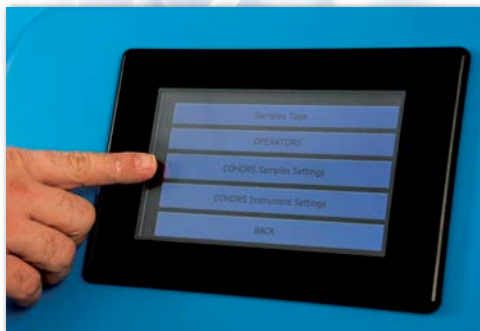
Insert the name of the operator needed (Picture E6) and confirm with the left/right arrows button. The end of the operation (Pictures E7 – E8).



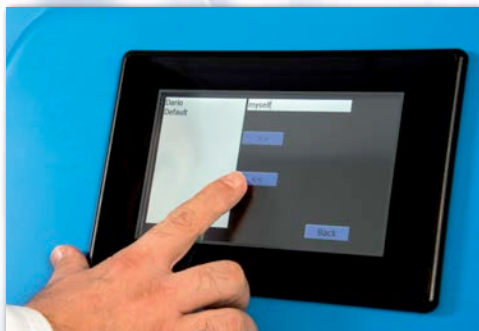
Picture E3



Picture E4

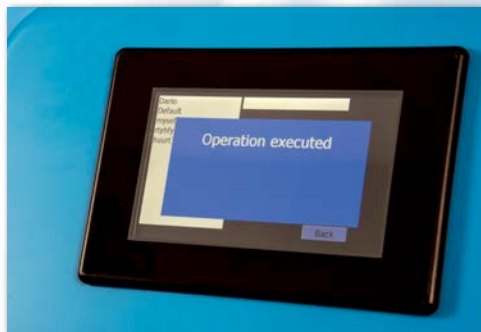


Picture E5

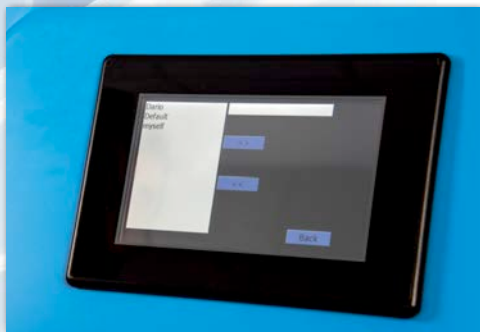


Picture E6





Picture E7



Picture E8

## Instrument settings:

In order to modify instrument settings you will need to press the INSTRUMENT SETTING button as shown in [Picture E9](#).

To enter the setting modification mode you will need to insert the password ([Picture E10](#)), confirm with RETURN and press the big grey button (Technical Area – [Picture E10](#)).

## Note:

The password has to be requested to the local installator/seller.

At this point you will see the frame likewise the one in [Picture E11](#), modifying the parameters in this frame you can also modify the language and the temperature unit of measure.

Once the desired parameter is modified confirm with the save button in the lower – left side of the screen. Other modifications: date, time, technical area and testing.

In order to modify date and time press the DATE AND TIME button ([Picture E11](#)). In order to access to the technical area and testing press the COM SETTINGS button ([Picture E11](#)).



Picture E9



Picture E10



Picture E11

## Note:

Entering the COM SETTING area is strictly reserved to authorized technical personnel, which will enter the various technical and mechanical programming as shown in [Picture E12](#) and [E13](#).



Picture E12



Picture E13

## SECTION G

### G1. Fuses replacement

In order to replace the fuses, please call technical support since the fuses are at the inside of the appliance and this operation will require the opening of the plastic cover, and the consequent break of the seal-paint.



Picture D



Picture D1

## **Cleaning and Decontamination**

In case of proper operation of the device, cleaning is not required.

In case of abnormal operation of the disposables, with possible leakage, is recommended to clean the outside of the appliance (coming in contact with the contamination) using a cloth moisture with sodium hypochlorite.

## **Maintenance and Service**

In case of malfunction, not dependent on the need of fuses replace, the device must be sent to the supplier for repair/replacement.

## G2. Labels roll replacement

Pull out the printer as shown in Picture D1 and unlock the door with the lateral button of the printer.

Replace the roll;

Correctly close the printer door and re-start the printer using the button on the front – upper side of the printer.

Put the printer back into CoHoRS as shown in Picture D, paying attention to the correct position of the CoHoRS little door.

## G3. SD Card Replacement

After turning off the appliance, pull off the PC Panel and press directly onto the SD Card in order to pull it out. Put the new SD Card back into the slot until you hear a click.

### Opening the cover for technical intervention

Disconnect the power cable first, than unscrew the seal-screw in the round part of the base of the appliance removing the seal- paint.

#### **NOTE:**

**this kind of intervention immediately suspend the warranty period and can be done only by ARGiP authorized personnel.**



#### Ground symbol explanation

It indicates that all accessible metal parts connected to a protective ground.



#### RAEE symbol explanation

This products should not be placed in municipal waste but collected separately for recycling ord disposal operations in accordance with the law.

**CTSV s.r.l.**

## **DECLARATION OF CONFORMITY**

The company CTSV S.r.l., with headquarter in Via Marco Polo, 28 - 10090 Bruino (TO) and registered office in Via Cipro, 1 - 20124 Brescia, declares that the machine named below conforms to the essential requirements as provided by the European Directive 2006/95/CE and 2004/108/CE, and subsequent modifications, relating to the in vitro diagnostic (IVD).

Furthermore, it respects the provisions of the following directives:

2006/95/CE (Low Voltage Equipment Directive)

EMC2004/108/CE (Directive on Electromagnetic Scattering)

machine type: Collection Homogenization and Recording System

trading name: CoHoRS

manufacturer: CTSV s.r.l.

Bruino, january 2015

C.E.O.  




# CoHORS

COLLECTION, HOMOGENIZATION  
& RECORDING SYSTEM



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