

CitoPress-15/-30

Instruction Manual

Original instructions.

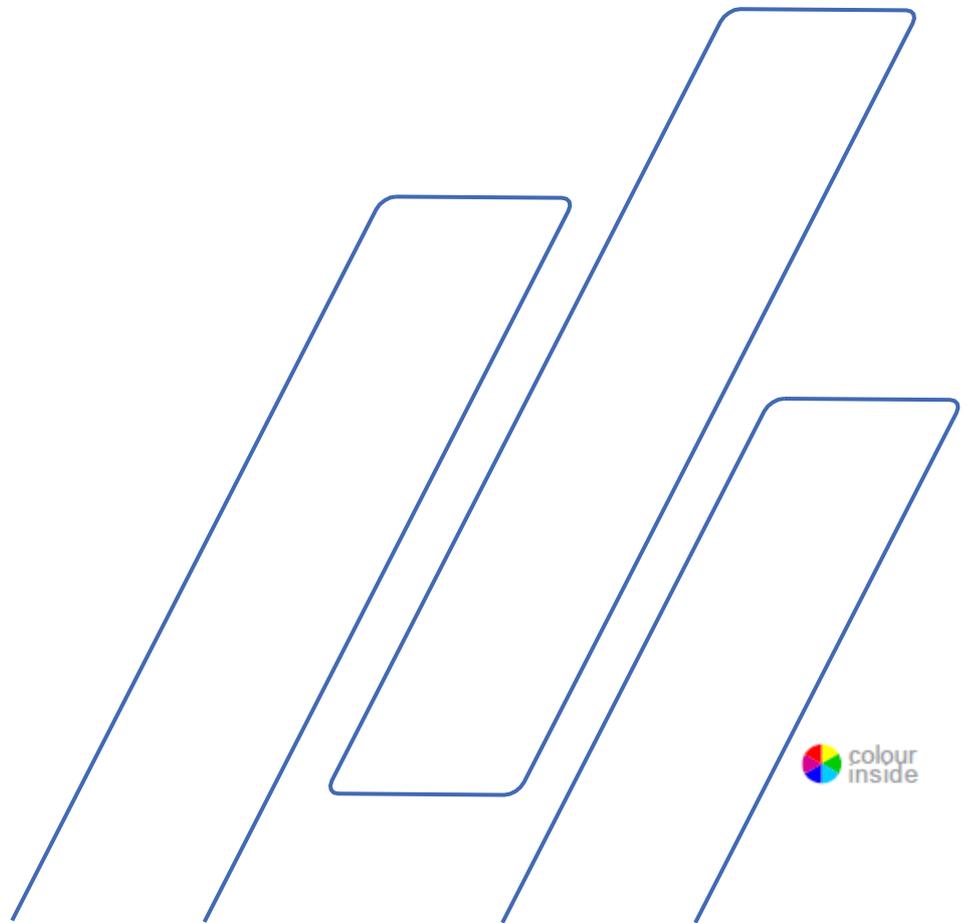


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Intended use

For professional materialographic hot mounting of materials for further materialographic inspection and only to be operated by skilled/trained personnel. The machine is only designed to be used with Struers consumables specially designed for this purpose and this type of machine.

The machine is for use in a professional working environment (e.g. a materialographic laboratory)

Do not use the machine for:

Hot mounting of material other than solid materials suitable for materialographic studies. The machine must not be used for any type of explosive and/or flammable material, or materials which are not stable during heating or pressure.

Models:

CitoPress-15/-30

**NOTE:**

READ the instruction manual carefully before use.
Keep a copy of the manual in an easy-to-access place for future reference.

Always state *Serial No* and *Voltage/frequency* if you have technical questions or when ordering spare parts. You will find the *Serial No.* and *Voltage* on the type plate of the machine itself. We may also need the *Date* and *Article No* of the manual. This information is found on the front cover.

The following restrictions should be observed, as violation of the restrictions may cause cancellation of Struers legal obligations:
Instruction Manuals: Struers Instruction Manual may only be used in connection with Struers equipment covered by the Instruction Manual.

Struers assumes no responsibility for errors in the manual text/illustrations. The information in this manual is subject to changes without notice. The manual may mention accessories or parts not included in the present version of the equipment.

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CitoPress-15/-30 Safety Precautions¹

Read carefully before use

1. Ignoring this information and mishandling of the equipment can lead to severe bodily injuries and material damage.
2. The machine must be installed in compliance with local safety regulations. All functions on the machine and any connected equipment must be in working order.
3. The operator(s) must read the Safety and User's Guide sections of this manual and the relevant sections of the manuals for any connected equipment and accessories. The operator(s) must read the Instructions for Use and, where applicable, Safety Data Sheets for the applied consumables.
4. This machine is to be operated and maintained by skilled/trained personnel only.
5. The machine must be placed on a working table that is strong enough to support its weight, level and at an appropriate working height.
6. Ensure that the actual voltage corresponds to the voltage stated on the back of the machine and on the heating/cooling unit. The machine must be earthed.
7. Disconnect the machine from the mains electricity supply prior to any service.
8. Disconnect the machine from the mains electricity and water supply whilst installing or removing the mounting unit.
9. Ensure that the water connections are mounted correctly and without leaks. The main water supply should be turned on when the machine is in use. Turn the water supply off if no work is to be done for a longer period.
10. During operation cooling water from the water outlet tube will be **very hot**. Ensure that it is not possible to come into contact with the cooling water.
11. Ensure that the outlet hose is securely attached to the water outlet system.
12. Only use water (or water with Struers additives) as a cooling medium.

¹ From Safety Precaution Sheet, Revision B.

- 13.** Ensure that the Mounting unit is installed correctly:
 - Ensure that the arrows are aligned to lock the mounting unit into position.
 - Ensure that the retaining screw is tightened.
 - Close the cover, fasten the cover screw and replace the top plate.
- 14.** Ensure that the top closure with upper ram is correctly mounted on the mounting cylinder before starting the press.
- 15.** Take care when handling chamfered rams (option) as the metal edges may be sharp.
- 16.** Do not operate the mounting press with a higher force/pressure than recommended for the actual cylinder diameter and mounting material in Struers Application Guide for Hot Mounting.
- 17.** Following a heating cycle, ensure the mounting cylinder is cooled actively for a minimum of two minutes before opening.
- 18.** During operation, always ensure that the top closure is tightly fastened.
- 19.** Do not leave the machine unattended while a mounting process is running.
- 20.** In the event of a hydraulic leak or any other form of failure, the machine must be serviced immediately.
- 21.** In case of fire, alert bystanders, the fire brigade and cut power. Use a powder fire extinguisher. Do not use water.

The equipment should only be used for its intended purpose and as detailed in the Instruction Manual.

The equipment is designed for use with consumables supplied by Struers. If subjected to misuse, improper installation, alteration, neglect, accident or improper repair, Struers will accept no responsibility for damage(s) to the user or the equipment.

Dismantling of any part of the equipment, during service or repair, should always be performed by a qualified technician (electromechanical, electronic, mechanical, pneumatic, etc.).

Icons and typography

Struers uses the following icons and typographical conventions. A list of the Safety Messages used in this manual can be found in the chapter on [Cautionary Statements](#).

Always consult the Instruction Manual for information on the potential hazards marked by the icons fixed to the machine.

Icons and Safety Messages



ELECTRICAL HAZARD

indicates an electrical hazard which, if not avoided, will result in death or serious injury.



DANGER

indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.



WARNING

indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



CAUTION

indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.



CAUTION

indicates a hazard involving hot surface or liquid, with a low level of risk which, if not avoided, could result in minor or moderate injury.



CRUSHING HAZARD

indicates a crushing hazard which, if not avoided, could result in minor, moderate or serious injury.

General Messages



NOTE

indicates a risk of damage to property, or the need to proceed with special care.



HINT

indicates additional information and tips.

Colour Inside Logo



The 'colour inside' logo on the cover page of this Instruction Manual indicates that it contains colours which are considered to be useful for the correct understanding of its contents.

Users should therefore print this document using a colour printer.

Typographic conventions

Bold type	indicates button labels or menu options in software programs
<i>Italic type</i>	indicates product names, items in software programs or figure titles
<u>Blue text</u>	indicates a link to another section or webpage
■ Bullets	indicates a necessary work step

User's Guide

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1. Getting Started

Device Description

CitoPress-15/-30 are electro-hydraulic units for hot mounting materialographic specimens with Struers hot mounting materials. Each mounting unit can be equipped with the different cylinder sizes. Cylinders can easily be exchanged if a different diameter is needed. The required cylinder size will depend on the size of the sample to be mounted.

CitoPress-15/-30 have a built-in Hot Mounting Application Guide that contains all Struers resins.

CitoPress-15/-30 automatically adapts the selected method according to cylinder size and the resin selected.

Option - customer specific methods can be added and stored in the CitoPress-15/-30.

To operate CitoPress-15/-30, the operator raises the ram. The sample is placed onto the ram which is then lowered to its lowest limit. The required mounting material is filled into the cylinder. The top closure is closed, and the mounting process can be started.

When the mounting process is complete, the machine stops automatically. After the cooling period ends the top closure can be opened. The ram is raised to its top limit and the mounted specimen removed. The specimen is ready for grinding/polishing.

The machine can be stopped at any time during the mounting process by pressing STOP.

For automatic dosing of resin, a CitoDoser (optional accessory) can be mounted on CitoPress-15 and -30.

Struers recommend setting up a local exhaust system to remove dust and fumes from the working area.

Terms used for the purpose of this manual,

Sample	This is used to refer to the piece of material which is to be mounted.
Specimen	This is used to refer to the piece of material which has been mounted and is ready for further preparation.

Checking the Contents of Packing

CitoPress-15/-30

The packing box contains the following items:

- 1 CitoPress-15/-30 machine
- 1 Swivel arm
- 3 Power cables
- 1 Pressure hose (water inlet)
- 1 Filter gasket
- 1 Filter gasket reduction ring
- 1 Gasket
- 1 Gasket for reduction ring
- 3 Measuring spoons for mounting material
- 1 Funnel
- 1 Allen key (2.5 mm)
- 1 Hot Mounting Guide CitoPress
- 1 Instruction Manual Set

Mounting Unit

- 1 Mounting unit
- 1 Top closure with upper ram
- 1 Lower ram
- 1 Piston pin
- 1 Mount release agent, Struers AntiStick
- 1 Scraper

Unpacking CitoPress



NOTE

Store the packing box, foam blocks, bolts and fittings for future use.

Failure to use the original packaging and fittings could cause severe damage to the machine and will void the warranty.

- Remove the crate.
- Remove the coach bolts from the transport brackets that secure CitoPress to its transport pallet.

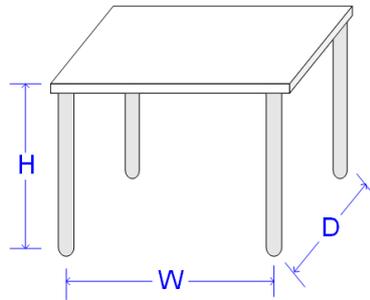
Placing CitoPress

CitoPress should be placed on a sturdy table or work bench at an appropriate working height.

- Lift CitoPress by holding underneath the base of the machine, on the left side and on the right side. Two persons are required to lift the machine.
- Place the machine on the working table.
- Place the machine close to connections for mains power, water (inlet) and hand operated water (outlet).
- If the machine is to be connected to a recirculation cooling unit, make sure that there is room for it underneath the table.

Recommended Workbench Dimensions

To facilitate easy access for servicing, allow sufficient space around the machine.



Height (H): Local preference
Width (W): 92cm / 36.2"
Depth (D): 90 cm / 35.4"

Recommended workbench dimensions. Height of table (X) follows local preferences.



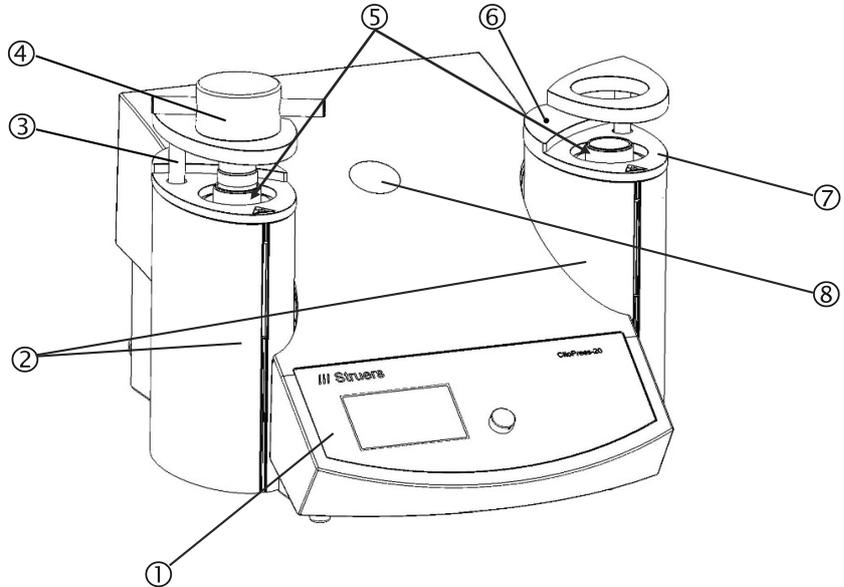
HINT

Ensure that the work station has adequate lighting. Avoid direct glare (dazzling light sources within the operator's line of vision) and reflected glare (reflections of light sources).

Getting Acquainted with CitoPress

Front View

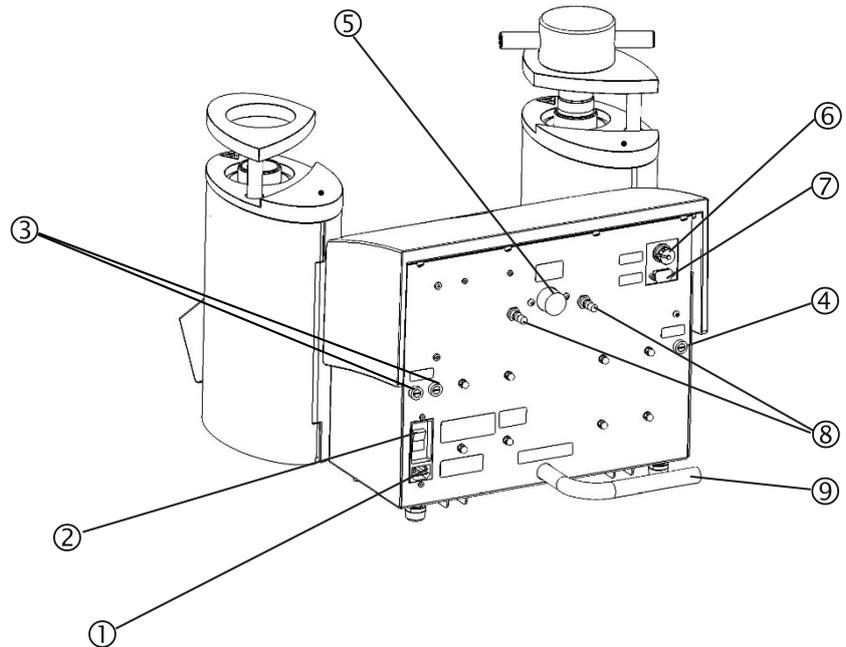
Take a moment to familiarize yourself with the location and names of the CitoPress machine's components.



- ① Control Panel
- ② Mounting unit covers
- ③ Swivel arm for top closure (elevator)
- ④ Top closure
- ⑤ Cylinders
- ⑥ Cover screw*
- ⑦ Mounting unit top plate
- ⑧ Plastic cap (CitoDoser mounting point)

* Cover screw - Only on CitoPress from following serial numbers:
CitoPress-15 s/n: 57310517
CitoPress-30 s/n: 57411456

Rear View



- ① Mains connection socket
- ② Mains switch
- ③ Fuse holders
- ④ Fuse holder: hydraulic pump
- ⑤ Water inlet
- ⑥ Cooli unit 24 V / CAN control cable connection
- ⑦ RS232 service socket
- ⑧ Ventilation valves
- ⑨ Water outlet tube

Noise Level

See [Technical Data](#) in the rear of the Instruction Manual for information on the sound pressure level value.



CAUTION

Prolonged exposure to loud noises may cause permanent damage to the hearing,
Use hearing protection if exposure to noise exceeds levels set by local regulations.

Supplying Power



ELECTRICAL HAZARD

The machine must be earthed (grounded).
Check that the mains voltage corresponds to the voltage stated on the type plate on the side of the machine.
Incorrect voltage may result in damage to the electrical circuit.

See [Technical Data](#) in the rear of the Instruction Manual for information Electrical Supply and consumption.

Power Socket

The mains power socket must be easily accessible and located between 0.6 m - 1.9 m (2½" – 6') above floor level. (An upper limit of 1.7 m (5' 6") is recommended).

CitoPress are shipped with 3 types of Mains cables:

CitoPress-15/-30
Instruction Manual

Connection to the Machine



All cables are equipped with an IEC 320 cable connector that has to be connected to the CitoPress.

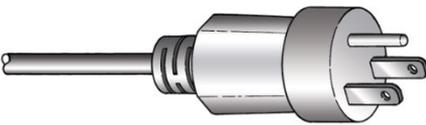
Single-phase Supply



The 2-pin (European Schuko) plug is for use on single-phase connections.

If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug. The leads must be connected as follows:

Yellow/green: earth (ground)
Brown: line (live)
Blue: neutral



The 3-pin (North American NEMA 5-15P) plug is for use on single-phase connections.

If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug. The leads must be connected as follows:

Green: earth (ground)
Black: neutral
White: line (live)

2-phase Supply



The 3-pin (North American NEMA 6-15P) plug is for use on 2-phase power connections. (This cable is recommended for use with CitoPress-30).

If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug. The leads must be connected as follows:

Green: earth (ground)
Black: line (live)
White: line (live)



ELECTRICAL HAZARD

DO NOT use this cable to connect equipment that use a 110V power supply. Failure to adhere to this may result in material damage.

***Note for installation in North America and Japan:**

CitoPress-30 must be connected to 200-240V to be able to heat on both cylinders simultaneously (use cable NEMA 6-15P).

If CitoPress-30 is connected to 100-120V (cable NEMA 5-15P), only one cylinder can heat at a time.

Opening the Ventilation Valve

Open the ventilation valve to equalize the pressure in the machine's hydraulic system.

The valve is closed during transport and is protected with the plastic cap.

- Remove the plastic cap from the valve.
- Fully open the valve.
- Secure the valve in the open position using the locking nut.



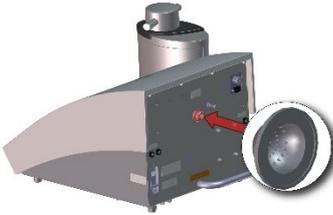
NOTE

CitoPress-30 has two ventilation valves.

Supplying Water

Cooling water can be provided either by the mains water supply or by a recirculation cooling unit. For instructions on how to connect a recirculation cooling unit, see "[Connecting a Cooli Cooling Unit](#)".

Connecting the Water Inlet



To connect to the mains water supply:

- Insert the filter gasket in the water inlet with the flat side facing outwards.
- Mount the pressure hose onto the water inlet tube.
- Tighten the coupling nut completely.
- Mount the other end of the pressure hose on the water mains tap for cold water:
 - Mount the reduction ring with gasket on the water mains tap, if necessary.
 - Tighten the coupling nut completely.



NOTE

Only connect to cold water.

Connecting the Water Outlet

- Place the unconnected end of the water outlet tube in a drain.



CAUTION

Burns or scalding.
Water from the water outlet tube may become very hot.

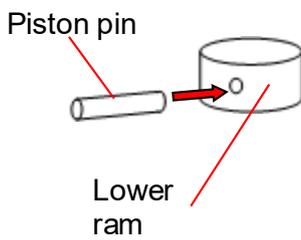
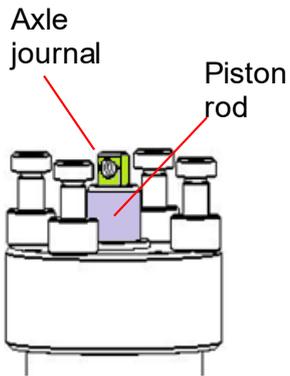


NOTE

Ensure that the tube is not obstructed and that there is sufficient fall (the drain is lower than CitoPress) so that the cooling water drains away through the tube.

Do not connect to a pressurized drain system.

Installing the Lower Ram



To install the lower ram, before installing the mounting unit:

- Remove the top closure and the swivel arm (if already mounted).
 - Unscrew the cover screw and remove the mounting unit top plate.
 - Open the mounting unit cover.
 - Place the lower ram on the top of the piston rod.
 - Align the hole in the lower ram with the hole in the axle journal on top of the rod.
-
- Insert the piston pin.
 - Make sure that the ends of the pin do not protrude.



Installing the Mounting Unit



ELECTRICAL HAZARD

Disconnect the machine from the mains electricity and water supply whilst installing the mounting unit.

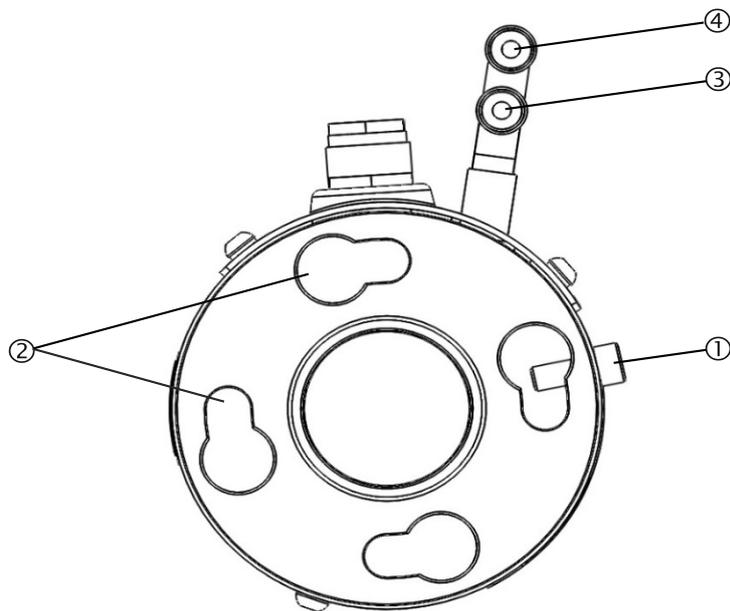
Installation of the mounting unit must be carried out by skilled or instructed persons.

Connect the water and electrical connections in the order described. Connecting the water connections before the electrical connections could result in water being leaked into the electrical connections and lead to a short.

On CitoPress:

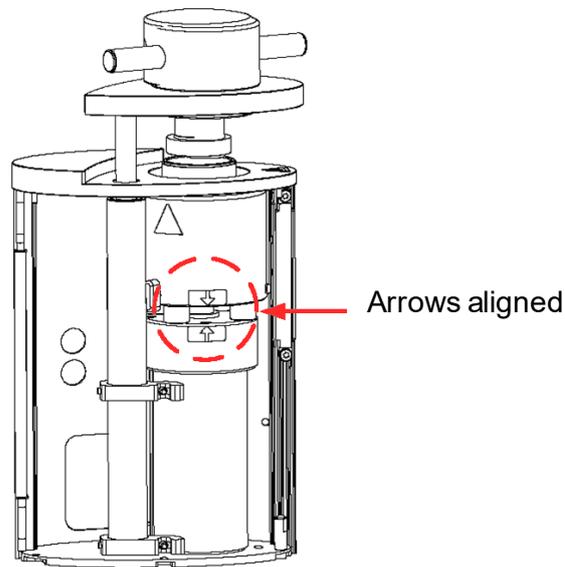
- Place the mounting unit loosely over the hydraulic cylinder.
- Rotate the mounting unit to line up the keyhole locking slots with the 4 studs on the hydraulic cylinder.

Mounting Unit: Bottom View



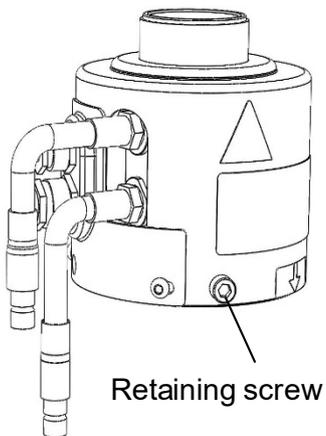
- ① Retaining screw
- ② Keyhole locking slots
- ③ Outlet connection: male fitting (blue)
- ④ Inlet connection: male fitting (red)

- Lower the unit onto the studs of the hydraulic cylinder.
- Move the mounting unit's cables and water couplings to one side to ensure that they do not restrict its movement when locking it into position
- When the mounting unit is located on top of the hydraulic cylinder, turn it clockwise until the two arrows are aligned and it locks into position.



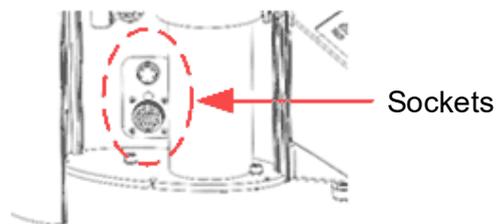
NOTE

Double check that the mounting unit is locked into position. If it is not, CitoPress may be damaged during operation.



- If the mounting unit is to be mounted on the right tower (CitoPress-30 only), move the retaining screw to the hole for retaining screw for unit 2 (see illustration).
- Tighten the retaining screw.
- Connect the mounting unit's two loose cables to the two sockets on CitoPress.

The large plug to the large socket (with the red dot on the plug facing up) and the small plug to the small socket. Tighten the coupling nuts on both plugs to secure the connection.



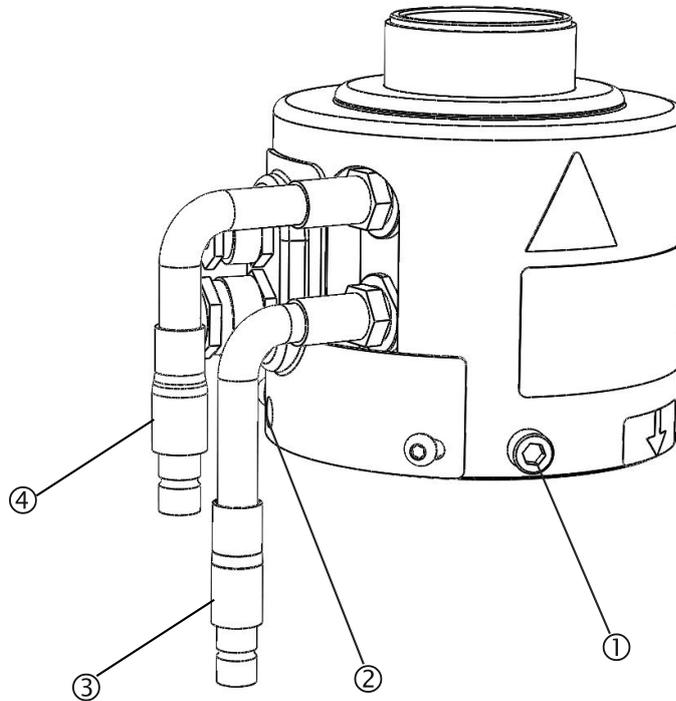
Water Connections

The water connections are colour coded.

Inlet connection red
Outlet connection blue

- Connect the male inlet and outlet water couplings on the mounting unit to the female fittings on CitoPress.
 - Hold the spring-loaded collar down and connect the water coupling.
 - Release the spring-loaded collar and check the water connection is secure.

Mounting Unit: Side View



- ① Retaining screw
- ② Hole for retaining screw for 2nd unit (right tower, CitoPress-30 only)
- ③ Outlet connection: male fitting (blue)
- ④ Inlet connection: male fitting (red)

- Close the cover.
- Replace the top plate and fasten the cover screw.



NOTE

To ensure optimal performance and operator safety:

- Ensure that the arrows are aligned to lock the mounting unit into position.
- Ensure that the retaining screw is tightened.
- Close the cover and replace the top plate.

Installing the Swivel Arm

- Mount the swivel arm by sliding it through the hole in the top plate and into the sleeve in the mounting unit cover.

Mounting the Top Closure

- Mount the top closure in the hole in the top of the swivel arm.



NOTE:

After changing the mounting unit, change to the appropriate size of top closure.

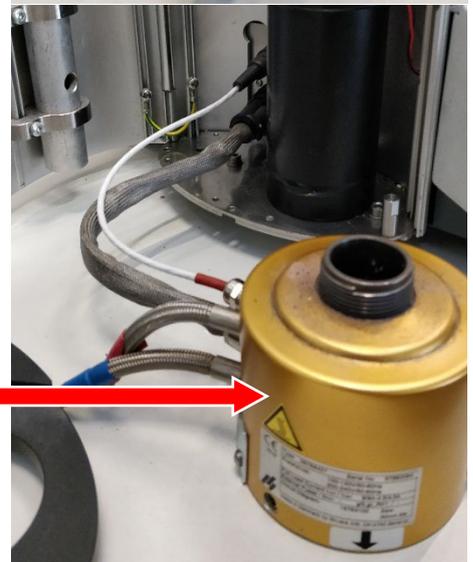
Replace the Lower Ram

To access the lower ram, follow these steps:

- Switch CitoPress on.
- Press RAM DOWN key for a few seconds to lower the ram to its lowest limit.
- Switch CitoPress off.
- Remove the top closure and the swivel arm.
- Remove the cover screw.
- Remove the mounting unit top plate.
- Open the mounting unit cover.



- Disconnect the water hoses – clearly marked blue (inlet) and red (outlet).
- Remove the retaining screw
- Twist the cooling/heating unit counter clock-wise and lift it off.



Mounting unit



- Push the piston pin out from the lower ram and lift it off.
- Place the new lower ram on the top of the piston rod.
- Align the hole in the lower ram with the hole in the axle journal on top of the rod.



- Insert the piston pin.
- Make sure that the ends of the pin do not protrude.



To assemble the mounting unit, follow these steps:

- Mount the mounting unit and turn it clock-wise until the two arrows align.
- Mount the retaining screw – do not use force.
- Connect the water.
- Close the mounting unit cover and mount the mounting unit top plate.
- Fasten the cover screw.
- Mount the top closure and the swivel arm.



HINT

A build-up of mounting material can make it difficult to remove the lower ram from the mounting unit. Please contact Struers Service for advice on how to loosen the lower ram.

Removing the Mounting Unit



ELECTRICAL HAZARD

- Disconnect the machine from the mains electricity and water supply before removing the mounting unit.
- Removal of the mounting unit must be carried out by skilled or instructed persons.



CAUTION

During operation, the mounting unit will become very hot.

- Before removing the mounting unit, ensure that it is cool enough to be handled.

- Remove the top closure.
- Remove the swivel arm by lifting it out of its mounting.
- Remove the cover screw.
- Remove the top plate.
- Open the mounting unit cover.



NOTE

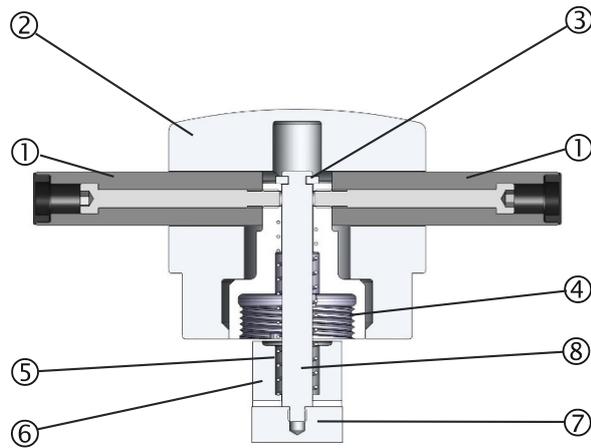
Disconnect the water and electrical connections in the order described. Disconnecting the electrical connections before the water connections could result in water being leaked into them.

- Disconnect the mounting unit's male inlet and outlet water couplings from the machine's female fittings. Wait 5 seconds to allow the water to flow out of the cooling coil.
- Loosen the coupling nuts on both the large and small electrical plugs then pull the plugs out of the sockets.
- Loosen the retaining screw.
- Turn the mounting unit in an anti-clockwise direction until it stops.
- Lift the mounting unit free of the hydraulic cylinder.

Changing the Mounting Unit

Follow the instructions for "[Removing the Mounting Unit](#)" and "[Installing the Mounting Unit](#)".

Removing the Upper Ram



- | | | | |
|---|------------------|---|-----------|
| ① | Handles | ⑤ | Spring |
| ② | Top closure cap | ⑥ | Spacer |
| ③ | Retaining washer | ⑦ | Upper ram |
| ④ | Top nut | ⑧ | Rod |

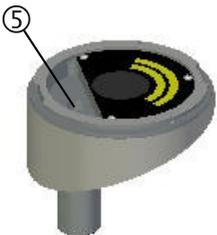
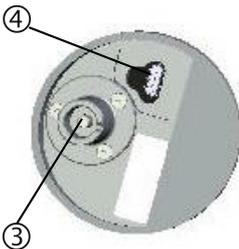
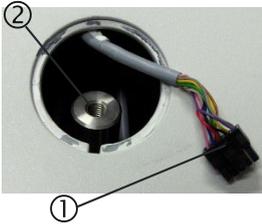
- Unscrew the handles on either side of the top closure cap (①). Remove the handles by turning them counter clockwise.
- Remove the top closure cap (②).
- Remove the retaining washer (③).
- Remove the top nut (④), spring (⑤) and spacer (⑥).
- Pull out the upper ram. Do not remove the rod (⑧) from the upper ram unless absolutely necessary.
- If it is necessary to remove the rod, hold the upper ram (⑦) in a vice or a similar device with soft jaws. The ram surface **must** be protected with plastic or soft metal.

Installing CitoDoser (option)
*Installing the CitoDoser Unit's
Base Plate*

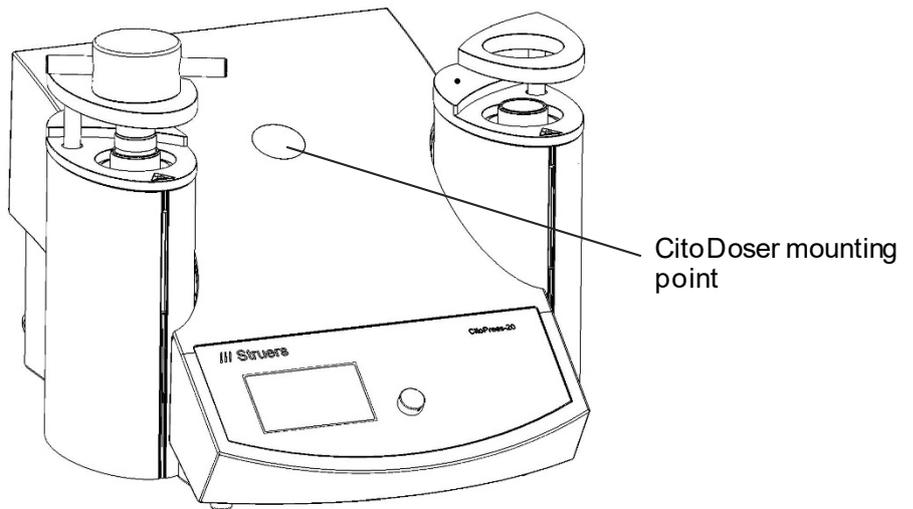


ELECTRICAL HAZARD

- Disconnect the machine from the mains electricity while installing the dosing unit.
- Installation of CitoDoser must be carried out by skilled or instructed persons.

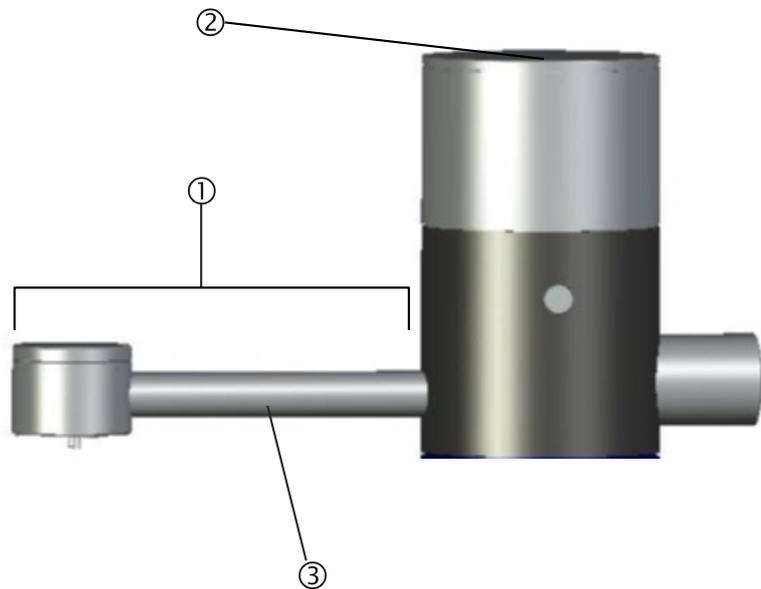


- Using a screwdriver or similar tool, carefully remove the plastic cap, which covers the CitoDoser mounting point.



- Carefully cut the cable tie fixing the cable to the shaft ② inside the mounting hole.
- Connect the plug ① on the end of the cable to the socket on the bottom of the dosing unit base plate ④.
- Locate the base unit in the mounting hole by slipping the bayonet fitting ③ over the shaft ② inside the mounting hole.
- Screw the base plate firmly into position using its Allen bolt ⑤.

Installing the CitoDoser Dosing Unit



- ① Spout
- ② Lid
- ③ Screw conveyor housing

Mounting the CitoDoser Dosing Unit

- Hold the unit above the dosing unit base plate with the spout ① to the front of the machine.
- Place the rear of the dosing unit, onto the rear of the base plate first.
- There are 2 location slots on the base plate and dosing unit (front and rear), which must be lined up. If necessary turn the dosing unit slightly to one side until the location slots line up, the dosing unit will be located flat on top of the base unit.
- Turn the dosing unit to lock it securely onto the base plate.

Before using the dosing unit a method must be associated with the unit, see "[Creating and Deleting CitoDoser Associations](#)" in the Reference Guide.

Removing the CitoDoser Dosing Unit

- With the spout in the centre of the machine, line up the location slots on the dosing unit and base plate.
- Lift the front (spout end) of the dosing upwards. When the location slots are lined up properly, it will be possible to lift the front of the dosing unit clear of the base plate.
- When the front of the unit is clear of the base plate, push the dosing unit backwards slightly and lift at the same time. When the rear location slots are lined the whole of the dosing unit can be lifted free of the base plate.

For information on how to empty and clean the CitoDoser Dosing Unit, see "[Emptying the CitoDoser Dosing Unit](#)" and "[Cleaning the CitoDoser Dosing Unit](#)".

Software Settings

When CitoPress is initially powered up, using the mains switch, the following two screens will be displayed:

Initial Start Up Screen



NOTE

The screens in this Instruction Manual show a number of possible texts and may differ from the actual screens displayed on CitoPress.



CitoPress-30

Version 1.00

A pop-up will appear to select the preferred Language setting:



Service Information Start Up
Screen



CitoPress-30

SERVICE INFO

Total operation time: 1620 h

Time since last service: 1259 h

Main Menu

The MAIN MENU will automatically replace these screens.

MAIN MENU

Process

Extensions

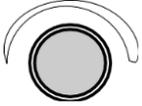
Configuration

Service

Using Software Menus

Use the multi-function knob key to navigate and use CitoPress' software menus

Multi-function Knob



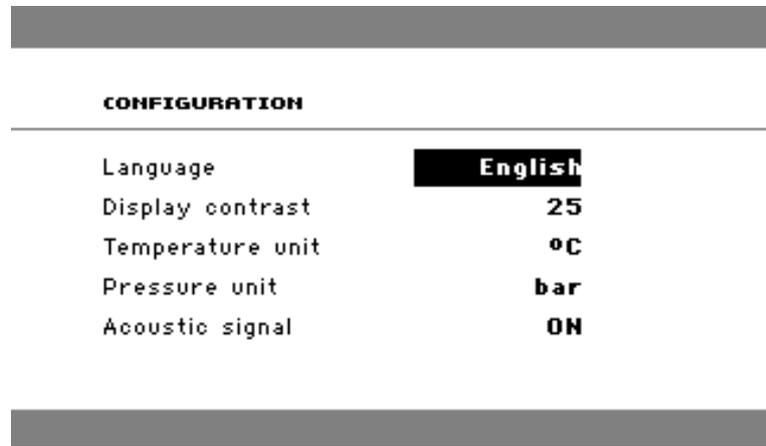
- Turn the knob to navigate to menu items.
- Push the knob to select items.
- Turn the knob to change a selected item's value.
- Push the knob to store a value that has been changed.

ESC Key Esc

- Press the ESC key to return to the previous menu.
- Press the ESC key to exit a selected item, discarding any changes that have been made.
- Press the ESC key to access the software's top-level menus.

Configuration and Extensions Menu

The following is a description of the items found in the CONFIGURATION menu.



The screenshot shows a menu titled "CONFIGURATION" with a horizontal line above it. Below the line, five items are listed with their current values: Language (English), Display contrast (25), Temperature unit (°C), Pressure unit (bar), and Acoustic signal (ON). The values are displayed in a monospaced font.

CONFIGURATION	
Language	English
Display contrast	25
Temperature unit	°C
Pressure unit	bar
Acoustic signal	ON

Language

The language can be set to English (default), German, French, Spanish or Japanese.

Display contrast

The contrast settings of the display can be adjusted to suit individual preferences (default value: 22, adjustment range: 0-15/-300).

Temperature unit

The temperature display units, which can be set to be displayed in either Celsius or Fahrenheit.

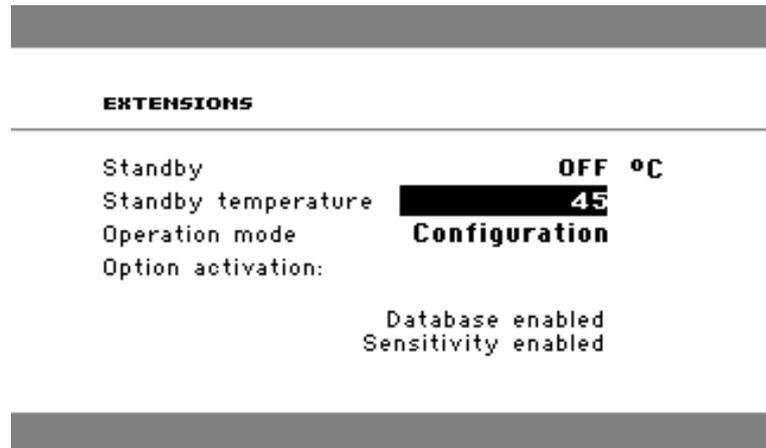
Pressure unit

The pressure display units, which can be set to be displayed as Bar or psi.

Acoustic signal

The option to have the machine signal audibly when it has completed the mounting process can be switched **ON** or **OFF**. If switched on, CitoPress will “beep” when the mounting process has been completed.

Extensions Menu



Standby

The *Standby* option can be switched **ON** or **OFF**.

Standby temperature

The *Standby temperature* (the temperature that the machine will maintain in standby mode) can be adjusted.

Operation mode

It is possible to select three different operation modes. Different operation modes allow operators different levels of access to parameters as follows:

Configuration: Full functionality, access to all parameters.

Development: No access to parameters in the CONFIGURATION menu, except Display contrast:

Production: No access to parameters. Only Start, Stop and Dosing can be operated.

Option activation

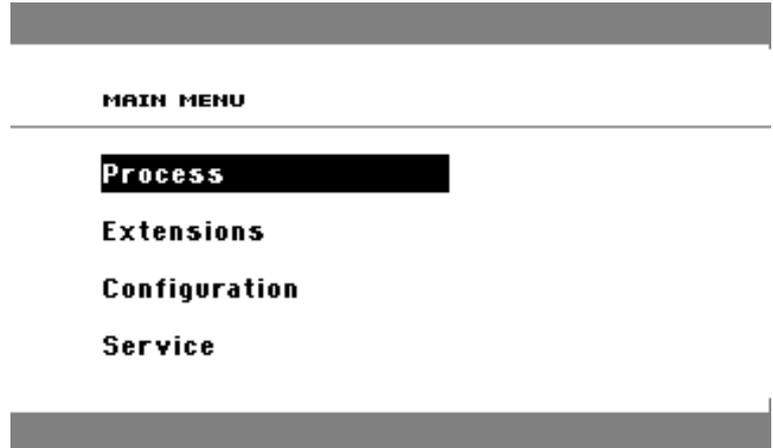
Database and *Sensitive Options* (if purchased) can be enabled. Options are enabled by entering the appropriate unlock code supplied by Struers. Selecting the *Option activation* menu item then pressing the knob opens the Enter password menu. Use this menu to enter passwords. For more information on how to use this menu, see "[Using the Enter Name Menu](#)".

Setting the Language

The default language is English.
To change the language after the initial start-up:



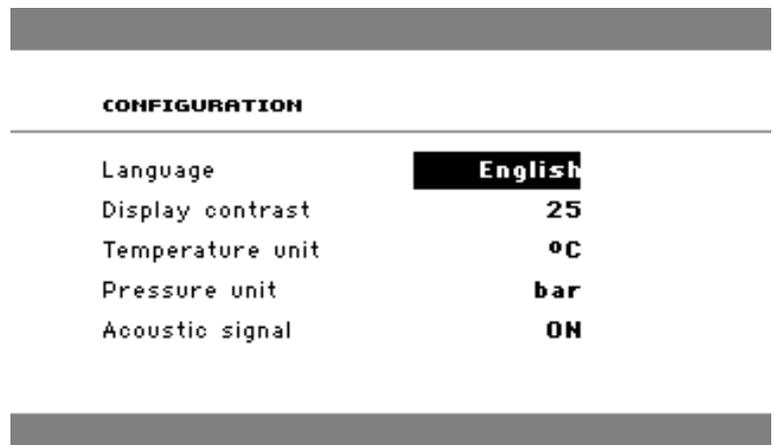
From the *MAIN MENU*, turn knob to highlight *Configuration*.



Push knob to enter the *CONFIGURATION* menu.



Turn knob to highlight *LANGUAGE*.



Push knob to activate the *SELECT LANGUAGE* pop-up menu.



Turn knob to select the language you prefer.



Push knob to accept the language.

The *Configuration* menu now appears in the language you have chosen.

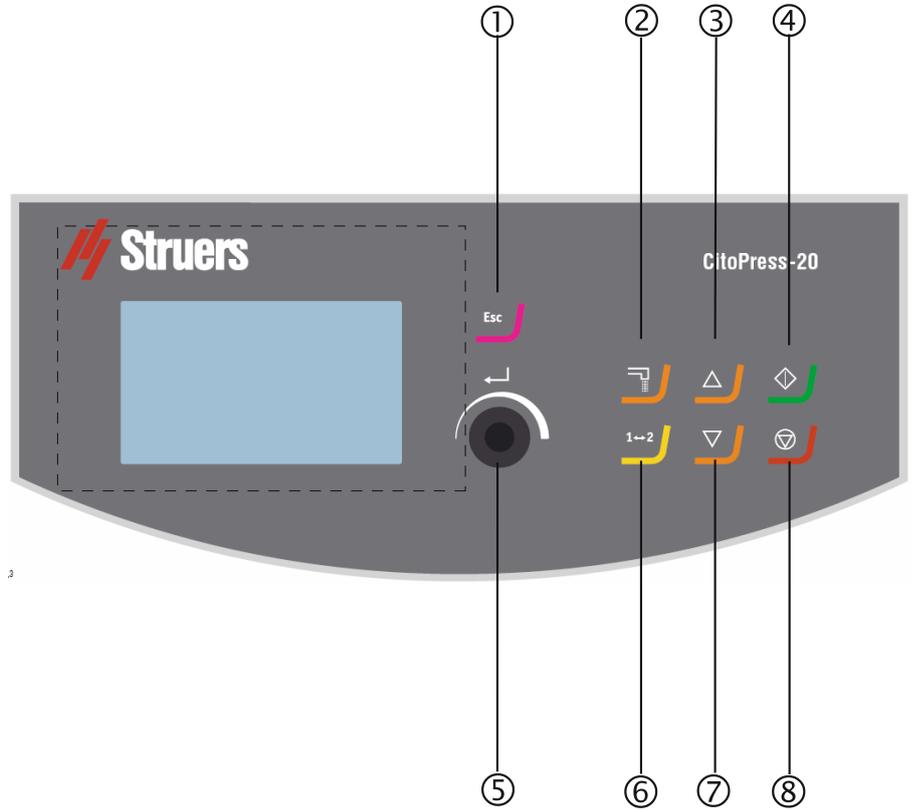


Press Esc to return to the MAIN MENU.

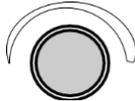
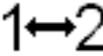
2. Basic Operations

Using the Controls

Control Panel of CitoPress-30



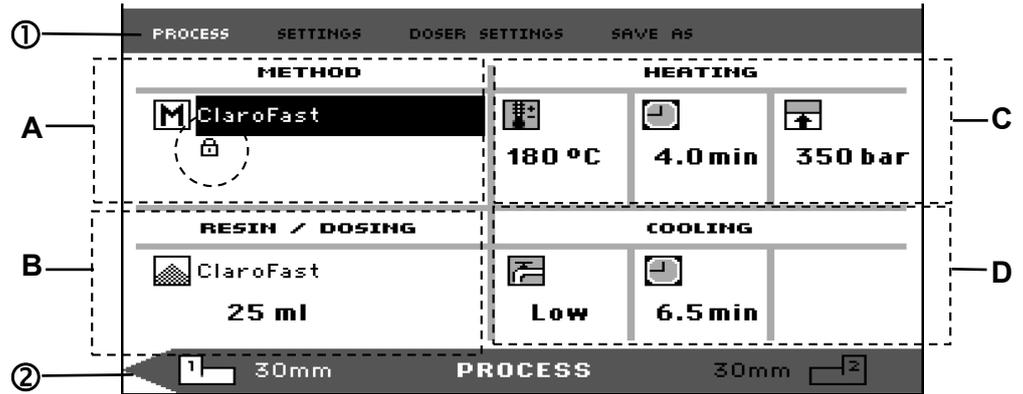
Control Panel Functions

Name	Key	Function	Name	Key	Function
ESCAPE		Moves one step backward in menus. (If modified parameters have not been stored, they are discarded.)	MULTI-FUNCTION KNOB		Push knob to select function. Turn knob to adjust settings. Push knob to store modified settings.
DOSING		Starts the dosing unit (option). The dosing unit stops automatically when the amount of resin (stated in the method) has been dispensed.	TOGGLE UNIT		Switches between the machine's two mounting units. N.B. CitoPress-30 only.
RAM UP		Starts the upward movement of the lower ram. The ram automatically stops when its upper limit is reached.	RAM DOWN		Starts the downward movement of the lower ram. The ram automatically stops when its lower limit is reached
START		Starts the machine and recirculation cooling unit, if one is connected.	STOP		Stops the machine and recirculation cooling unit, if one is connected. CitoPress—30 only: Press twice to stop the process on both mounting units at the same time.

Process Setup Display

The PROCESS display has four main areas:

- A** METHOD
- B** RESIN / DOSING
- C** HEATING
- D** COOLING



The display also has an upper and lower bar ① and ②.

The upper bar ① provides additional top-level menu items: *PROCESS*, *SETTINGS*, *DOSER SETTINGS* and *SAVE AS*.

The lower bar ② provides additional status and context information, for example, which mounting unit's process information is being displayed (unit 2) and the cylinder diameters (30 mm and 30 mm above).

Method

The *METHOD* area (**A**), displays the selected method.

The lock (circled) shows whether the method is locked or unlocked.



HINT

If the Sensitive option has been installed, the display shows whether it is switched on or off for the current method.

Dosing

The *RESIN / DOSING* area (**B**), displays information about the resin being used, and whether dosing is manual or automatic.



HINT

If a CitoDoser (option) is being used, the value displayed will be a percentage not a volume.

Heating

The HEATING area displays information about the selected method's heating values

-  Temperature
-  Duration
-  Pressure



HINT
 If the Sensitive option has been enabled, the settings for the two phases are displayed on separate lines.

PROCESS		SETTINGS	DOSER SETTINGS		SAVE AS
METHOD		HEATING			
 New method <input type="checkbox"/> Sensitive ON					
	80 °C 180 °C	5.0 min 5.0 min	50 bar 250 bar		
RESIN / DOSING		COOLING			
 MultiFast Black 20 ml					
	High	5.0 min			
1	30mm	PROCESS	30mm	2	

Cooling

The COOLING area displays information about the selected cooling method:

-  Speed: High, Medium or Low
-  Cooling time

Using the Process Setup Menu

Selecting a Mounting Method

The CitoPress can either be operated using a Struers method (which is a stored set of process settings), or a User method. Both are referred to as automatic, all parameters are retrieved automatically. Alternatively, the press can be operated by simply modifying the parameters in the process menu. This is referred to as manual operation.

CitoPress-15 and 30 come standard with a library of preset Struers methods matching the Struers' range of hot mounting resins (the On Screen Hot Mounting Application Guide). Choosing any of the Struers methods will automatically adapt the selected method to the cylinder size, thereby greatly reducing the risk of errors.

Up to two methods can be stored on the mounting press. If additional storage space is required, the Database option is available. After activation of this option, a total of 15 methods can be stored in the machine's database.

Sensitive mode
 Option

Sensitive mode, with a dual heating phase, is used for fragile/porous samples.

PROCESS		SETTINGS	DOSE	SETTINGS	SAVE AS
METHOD		HEATING			
New method	Sensitive ON	80 °C	5.0 min	50 bar	
		180 °C	5.0 min	250 bar	
RESIN / DOSING		COOLING			
MultiFast Black	20 ml	High	5.0 min		
30mm	PROCESS		30mm		

Adjust the Heating values to suit the samples to be mounted.
 E.g.

Fragile/brittle samples:

- Phase 1 Apply Heat to melt the resin, no Pressure
- Phase 2 Apply Heat and Pressure

Metal samples:

- Phase 1 Deduct 1 minute from the total heating time.
Apply Heat and Pressure
- Phase 2 For 1 minute, Apply Heat, no Pressure

PCB, plastics and other poor conductors:

- Phase 1 Apply Heat to melt the resin, no Pressure for 15 minutes
- Phase 2 For 1 minute, Apply Heat and Pressure

Manual operation

When operated using manual settings, you will need to change the process settings manually each time you process a sample (unless the previously used settings are appropriate for the next sample).



HINT

When a CitoDoser (option) dosing unit is used and the database option is enabled, the dosing unit stores information about which method should be used for a particular resin. Placing the CitoDoser on CitoPress will select this method.

Reuse the Method Settings for the Next Sample

After completing a specimen preparation, CitoPress displays the last used process settings (this also applies after restarting). If these settings are appropriate for the next sample to be processed, no changes are necessary and you can begin placing the sample.

Change the Method Settings for the Next Sample

If the process settings last used by CitoPress are not appropriate for processing the next sample, they can be changed by:

- Editing the method's values manually.
- Selecting a stored method.
- Changing the CitoDoser dosing unit (option).

Editing the Method's Values Manually

To edit a mounting method manually:

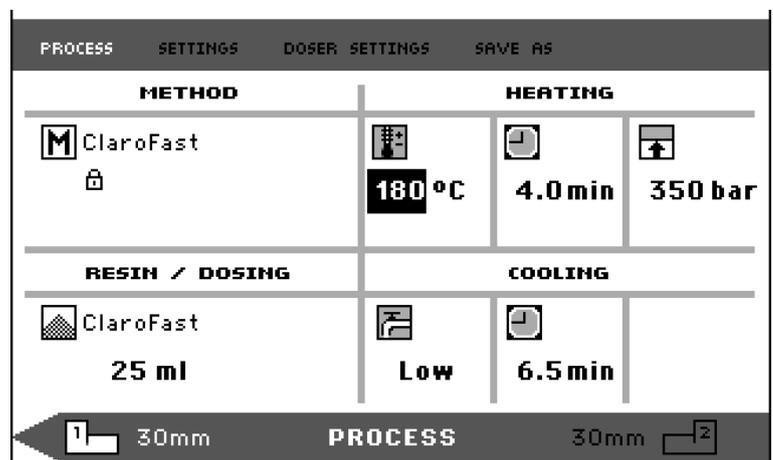


NOTE

The example below is based on editing the method's temperature value; the procedure for editing other values is the same. More than one of the method's values can be edited.



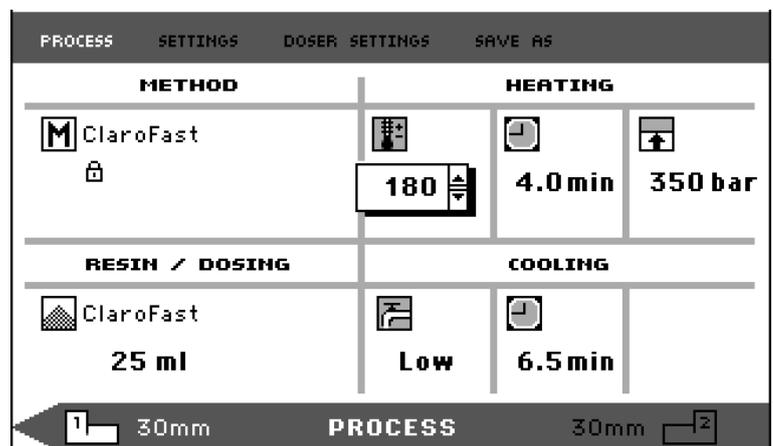
In the *PROCESS* menu, turn knob to highlight the HEATING temperature item.



Push knob to edit the value.

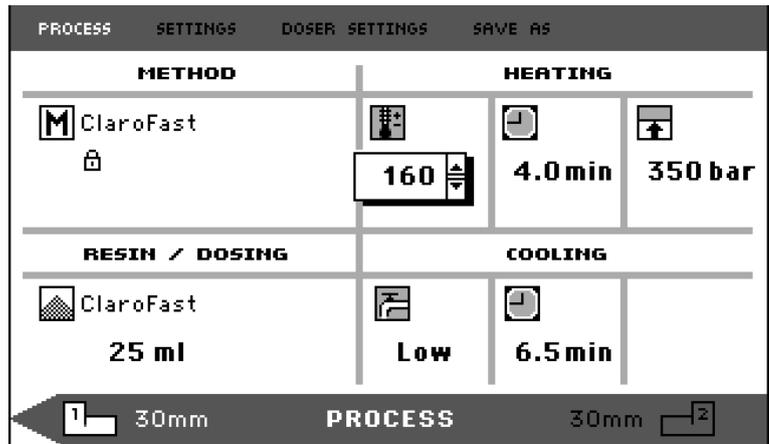


A scroll box appears around the value.

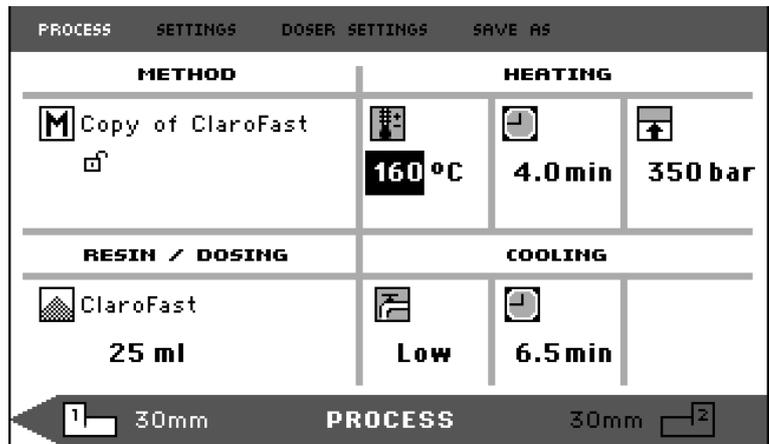


Turn knob to increase or decrease the numeric value.





Push knob to accept the new value.



HINT

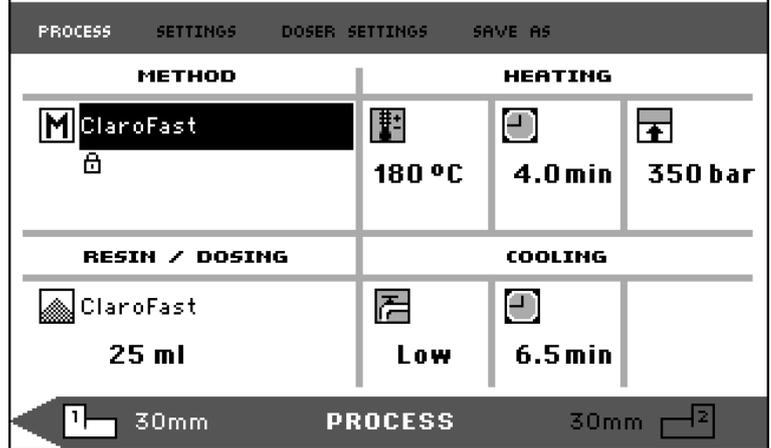
When you edit a stored method's values, a temporary copy of the method is created. This is called "Copy of *Method Name*", for example, "Copy of ClaroFast". These values can be used to process the samples but will not be stored to the database unless the method is saved. If the machine is switched off, before it is stored, the temporary copy will be lost. See, ["Creating and Storing User Methods in the Database"](#) (option).

Selecting a Stored Method

To select a stored mounting method from the database:



From the *PROCESS* menu, turn knob to highlight the *METHOD* item.



Push knob to activate the *SELECT GROUP* pop-up menu.

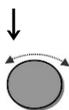
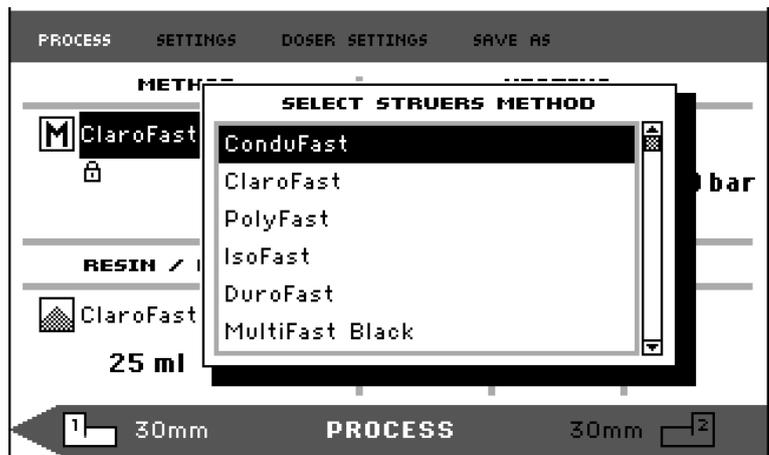


Turn knob to highlight the required group

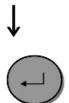


Push knob to activate the *SELECT METHOD* pop-up.

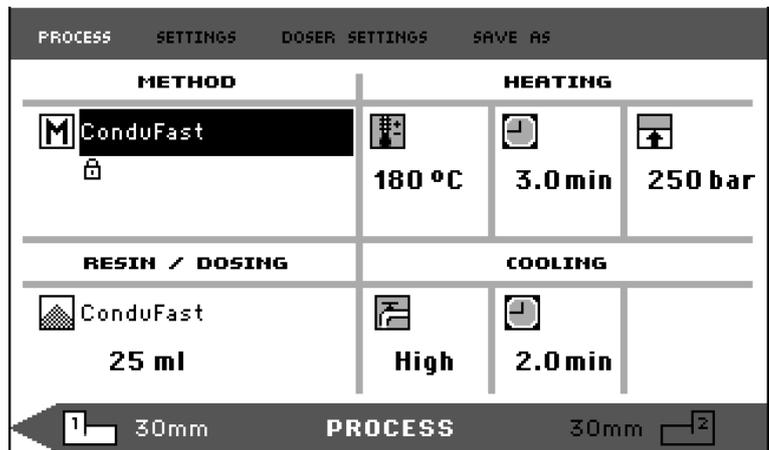




Turn knob to highlight the method required.



Push knob to accept the method.



Changing Method by Changing
the CitoDoser Dosing Unit
(option)

When a dosing unit is replaced with another, the method that is associated with the new dosing unit is automatically recalled from the database (option). See also, "[Creating and Deleting CitoDoser Associations](#)".

Mounting a Sample Placing the Sample

- If necessary, use the toggle unit button (1↔2) to switch to the required cylinder.
- Press RAM UP ▲ to raise the lower ram to its upper limit.
- Apply mount release agent to the surface of the lower ram.



NOTE

A thin layer of mount release agent must always be applied to the mounting rams to prevent the mounting materials sticking to the surface. Using Struers' AntiStick a thin layer of stearate powder can easily be dabbed on the rams.

- Place the sample on the ram. The sample must be clean, dry and free from grease. The distance between the sample and the cylinder wall must be minimum 3 mm to avoid cracks in the resin.

Pouring Resin over the Specimen using the Dosing Unit (option)

- Press and hold the RAM DOWN ▼ key for a few seconds to lower the ram to its lowest limit.
- Swivel the CitoDoser dosing unit's outlet spout over the mounting unit.
- Press the dosing key .



NOTE

If the lower ram has not been lowered when pressing the dosing key, a warning will be displayed.

The dosing unit will automatically dispense the preset amount of resin for the selected method.

Dosing Extra Resin

- Press the dosing key again, to add a small amount (20% of the preset amount).

Pressing **STOP**  and then pressing the dosing key will re-set the amount of resin dosed to the preset amount (100%).

Pouring Resin over the Sample Manually

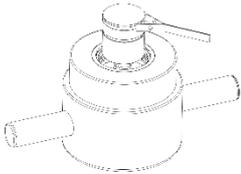
- Fill a suitable amount of mounting material into the cylinder using the funnel supplied. Please refer to the [Application Guide for Hot Mounting](#).



NOTE

Always make sure there is sufficient mounting material to cover the sample after compression. Please note that the volume of the mounting material reduces when the granulate becomes compressed. If insufficient mounting material is used, the rams may come in contact with the sample, and the rams and cylinder may be damaged.

Closing the Top Closure



- Before use, remove mounting material dust from the upper part of the mounting cylinder.
- Without damaging the surface, clean the cylindrical surface of the upper ram. Use the scraper to remove cured mounting material.
- Apply mount release agent to all accessible surfaces of the upper ram.
- Place the top closure with the upper ram on the mounting cylinder.
- Press the top closure straight down, turning it clockwise until it is closed.



CAUTION

During operation, the mounting unit will become very hot. Ensure that the top closure is **fully closed**, before starting the mounting process.



NOTE

If the ram does not fit easily into the cylinder, then check ram and cylinder for cured mounting material. The tolerance between the cylinder and the ram is very small and even small amounts of mounting material from previous mountings may cause problems.

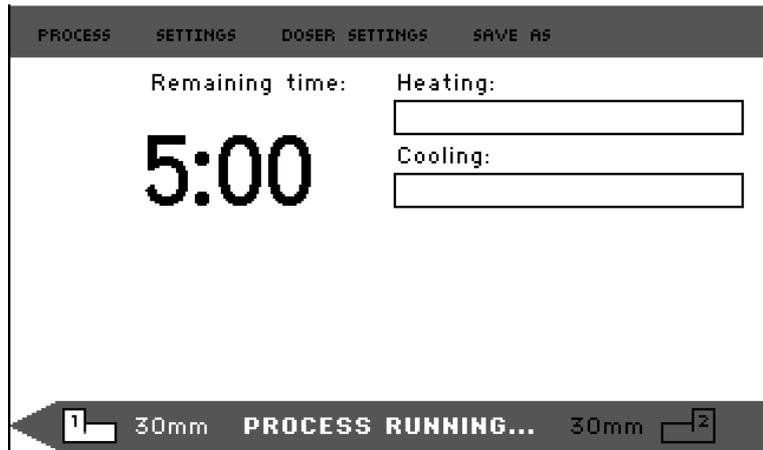
Starting the Mounting Process

- Press START \diamond to start the mounting process.

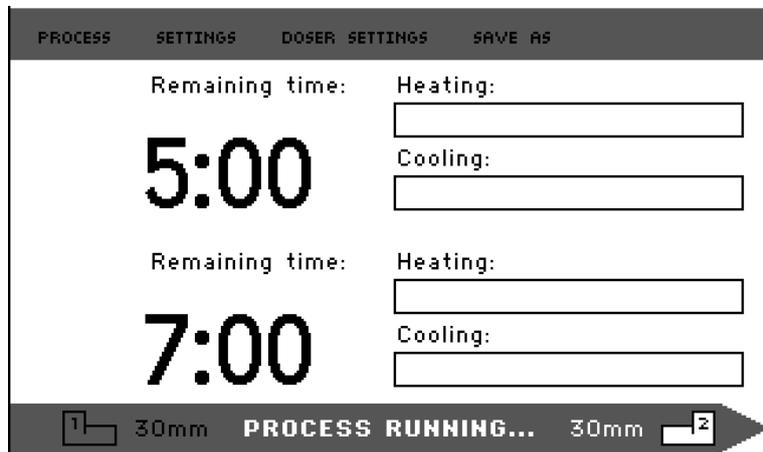
Display during the Mounting Process

The display with the mounting parameters will change to a new display, which illustrates the progress of the current stage (Heating or Cooling) and the time remaining before the mounting process is complete.

One unit (CitoPress-15/-30)



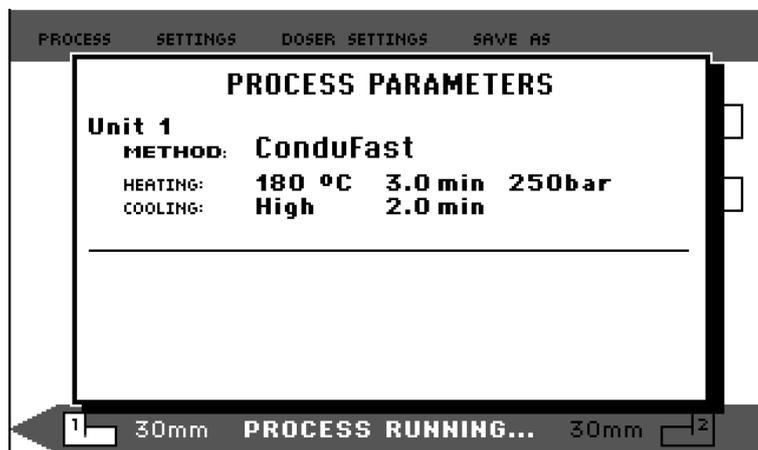
Two units (CitoPress-30)



Displaying Process Parameters



Push knob to display process parameters.



Esc

Press Esc to return to the process display.

Switching between LEFT and
RIGHT CYLINDER
(CitoPress-30)

Press toggle unit button (1↔2) to switch between the two cylinders. The arrow on the lower bar changes to indicate the unit that the information being displayed applies to. The selected unit is white, the other unit is gray.

Stopping the Mounting Process

The machine automatically stops when the cooling time has elapsed.

- The machine can be stopped at any time during the mounting process by pressing STOP .



NOTE

CitoPress—30 only:
Press twice to stop the process on both mounting units at the same time.



NOTE

Please note that the mount may be destroyed if the mounting cycle is stopped during the process.

Removing the Top Closure

When the mounting process is finished:

- Turn the top closure counter-clockwise until released from thread.
- Press RAM UP  to raise the lower ram to its upper limit.
- Turn the top closure to one side to give access to remove the mount.



CAUTION

During operation, the mount and the mounting unit will become very hot.
Following a heating cycle, ensure the mounting cylinder is cooled actively for a minimum of two minutes before opening



CAUTION

Always follow the recommended heating and cooling parameters described in Struers Application Guide for Hot Mounting.
Always make sure to that the mounting unit is cooled sufficiently before opening the top closure.

3. Maintenance

Proper maintenance is required to achieve the maximum uptime and operating lifetime of the machine. Maintenance is also important in ensuring your machine's continued safe operation. The maintenance procedures described in this section must be carried out by skilled or instructed persons.

Daily Inspection

The machine must be checked before use. Do not use the machine until any damage is repaired.

Daily Maintenance

Removing Residues

- Clean all accessible surfaces with a soft, damp cloth.

**HINT**

Do not use a dry cloth as the surfaces are not scratch resistant. Grease and oil can be removed with ethanol or isopropanol.

**NOTE**

Never use acetone, benzol or similar solvents.

- Open the cover (see, "[Removing the Mounting Unit](#)") and remove residues from exposed surfaces, including the threads
- Close the cover, see "[Installing the Mounting Unit](#)".

Cleaning the Rams

Before each mounting:

- Check that there is no mounting material left on the flat surface of the rams from previous operations.
- Clean the cylindrical surface of the upper ram. Cured mounting material can easily be removed without any damage to the surface of the ram using the scraper supplied.

**NOTE**

If the sides of the rams are heavily scratched, they must be replaced. If the top closure has been dropped, causing a dent or deformation in the edge of the upper ram, the ram must also be replaced.

NOTE

Accumulated mounting material can restrict movement or cause damage to the rams.

Lubricating the Threads of the Top Closure

A build-up of residues of mounting material may make it difficult to close the top closure.

- Remove any mounting material on the threads of the top closure and mounting unit using the scraper supplied or a paint brush.



NOTE

The top nut is a wear part because it's threads will get worn over time. Therefore, it is crucial to remove any residues of mounting material, or it will reduce the lifetime of the top nut.



HINT

If there is a slight friction in the threads, lubricate using a dry lubricant such as Molybdenum Sulphite or graphite. DO NOT lubricate the threads in the joint between the top closure and the mounting cylinder with oil or grease. The mounting cylinder operates at high temperatures, therefore only a dry lubricant, resistant to high temperatures, can be used.

Weekly Maintenance

Checking the Cooling Water Struers Cooling Unit, option

- Clean painted surfaces and the control panel with a soft damp cloth and common household detergents.
- Check the level of cooling water in the cooling unit every week.

For other, more detailed, instructions on the use of the Recirculation Cooling Unit, see the instruction manual.

Monthly Maintenance

Cleaning under the Lower Ram

When mounting, some old cured mounting material will fall down from the lower ram and build up underneath. The cured mounting material must be cleaned away, to stop it harming the machine. A pop-up will appear after 200 mounting cycles (default value) to remind the user to clean beneath the lower ram.

- Press **OK** when the area under the lower ram has been cleaned.
- Press **Later** to continue operating CitoPress.

Follow these steps:

- Remove the mounting unit.
- Remove the piston pin and dismount the lower ram.
- Remove the mounting material under the lower ram with a cloth or a soft brush.
- Remount the lower ram and secure with the piston pin.
- Install the mounting unit.

Replacing the Cooling Water Struers Cooling Unit, option

- Replace the cooling fluid in the cooling unit tank.

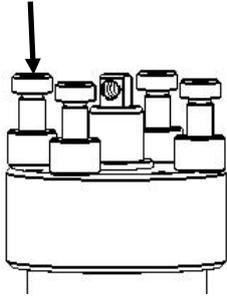
For other, more detailed, instructions on the use of the Recirculation Cooling Unit, see the instruction manual.

Check the threads

- The threads of the top nut will get worn over time and therefore the top nut is a wear part. If the threads are worn do not use the top closure any more. Contact Struers Service and order a new top nut.

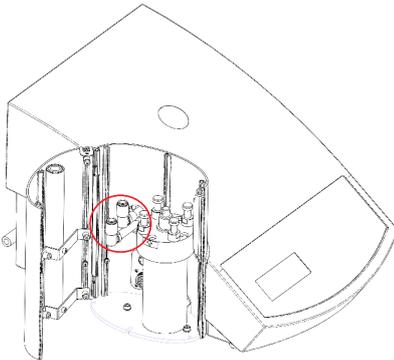
Yearly Maintenance

Check the Bolts



- Using a 17 mm torque wrench, check that the bolts that hold the mounting unit to the cylinder are tight.
 - If necessary, tighten with a force of maximum 25 Nm / 18 lbf-ft.

Maintenance of water couplings



Maintenance of the inlet and outlet connections for the Mounting Unit. The water couplings must be lubricated to prevent the FPM/FKM O-rings to dry out over time, which will make the water Couplings difficult to use, when changing Mounting Unit.

- Disconnect the mounting unit's male inlet and outlet water couplings from the machine's female fittings.
- Lubricate the O-rings in the female fittings



NOTE Use a generic tap lubricant resistant to high temperatures (min. 100°C/212°F) to lubricate the FPM/FKM O-ring in the water coupling

Cleaning the Water Filter

Over time, small particles may collect in the water filter and should be removed.

To clean the water filter:

- Switch off the water supply and dismount the water inlet tube.
- Remove the filter gasket from the coupling nut and rinse thoroughly with water.
- Reconnect the water inlet. (See "[Connecting the Water Inlet](#)").

Decalcifying the Cooling Coil

When using cooling water from the mains tap in areas with a high chalk or mineral content, deposits can build up in the cooling coil. This reduces the cooling effect, so once a year the cooling coil should be decalcified.

- Remove the mounting unit. (See, "[Removing the Mounting Unit](#)".)
- Drain water from the cooling system.
- Flush the coil with a **mild** decalcifying acid², and leave for ½ hour.

² For decalcification of the m

- Flush the cooling coil with clean water.
- Re-install the mounting unit (see, "[Installing the Mounting Unit](#)").

If there are still deposits in the coil, repeat this procedure and leave the decalcifying fluid in the mounting unit overnight before flushing with water the next day.

Emptying the CitoDoser Dosing Unit

When the optional CitoDoser is fitted to CitoPress, the CitoDoser Service menu option is used when emptying the dosing unit of resin.

From the Service menu,



Turn knob to highlight *CitoDoser*.



Push knob to enter the *CitoDoser* menu.



SERVICE

Statistics

Sensors

CitoDoser



Turn knob to highlight *Doser resin feed*.

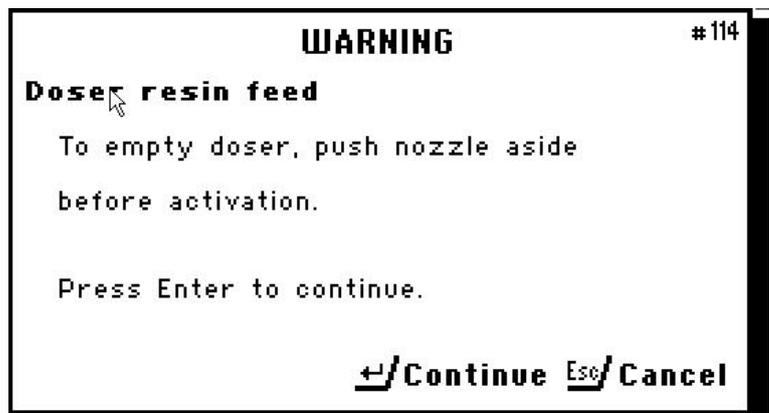


mounting unit acetic acid or citric acid is recommended.
Do NOT use oxidizing acids such as nitric acid (HNO₃), this will degrade the copper of the mounting unit, and may generate toxic gases.
Do NOT use acids in combination with oxidising agents such as hydrogen peroxide (H₂O₂), this will degrade the copper of the mounting unit.



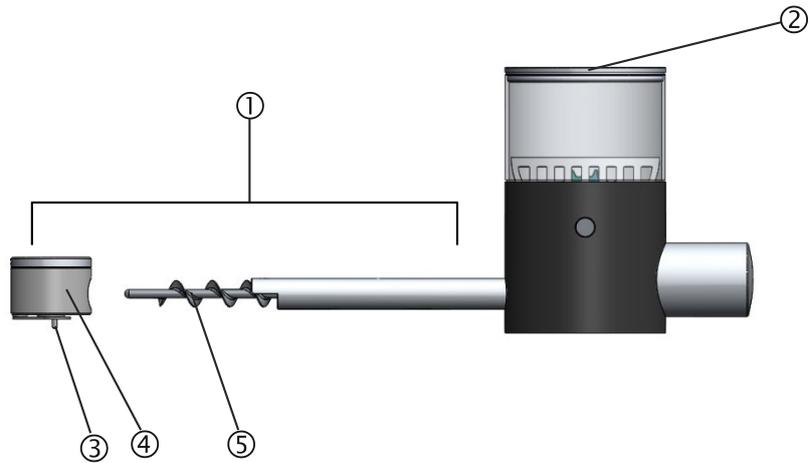
↓
 Push knob to Start/Stop the Doser resin feed.
The following warning will be displayed.

↓



↓
 Ensure that the nozzle is in a suitable position.
Push knob to start emptying the CitoDoser.

*Cleaning the CitoDoser Dosing
Unit*



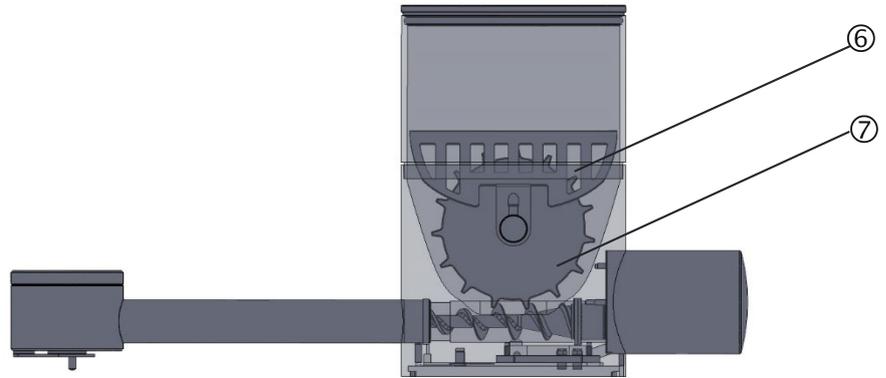
- ① Spout
- ② Lid
- ③ Nozzle
- ④ Nozzle cover
- ⑤ Screw conveyor

- Place the CitoDoser on a flat steady surface.
- Remove the lid ②.
- Remove the nozzle cover ④ by turning it anti-clockwise and pulling it away from the spout ①.
- Remove the screw conveyor ⑤.
It may be necessary to turn it slightly to disengage it from the drive connection.
- Clean the inside surfaces using either a vacuum cleaner or a suitable cloth.



NOTE

Do not use any form of liquid to clean the inside of the CitoDoser.
This may result in damage to the Doser.



- ⑥ Protective grid
- ⑦ Agitator wheel

- If necessary, loosen the agitator wheel by pushing it to each side to eject the 'O' ring bearings and then remove it.
- Reassemble the CitoDoser in reverse order.



WARNING

Check that the protective grid in CitoDoser is intact and that it is not possible to come into contact with the agitator wheel whilst rotating.

Spare Parts

For further information, or to check the availability of replacement parts, please contact your local Struers Service department. Contact information is available on Struers.com.

4. Cautionary Statements

List of Safety Messages in the Manual



CAUTION

Prolonged exposure to loud noises may cause permanent damage to the hearing,
Use hearing protection if exposure to noise exceeds levels set by local regulations.



ELECTRICAL HAZARD

The machine must be earthed (grounded).
Check that the mains voltage corresponds to the voltage stated on the type plate on the side of the machine.
Incorrect voltage may result in damage to the electrical circuit.



ELECTRICAL HAZARD

DO NOT use this cable to connect equipment that use a 110V power supply. Failure to adhere to this may result in material damage.



CAUTION

Burns or scalding.
Water from the water outlet tube may become very hot.



ELECTRICAL HAZARD

Disconnect the machine from the mains electricity and water supply whilst installing the mounting unit.
Installation of the mounting unit must be carried out by skilled or instructed persons.
Connect the water and electrical connections in the order described. Connecting the water connections before the electrical connections could result in water being leaked into the electrical connections and lead to a short.



ELECTRICAL HAZARD

- Disconnect the machine from the mains electricity and water supply before removing the mounting unit.
- Removal of the mounting unit must be carried out by skilled or instructed persons.



CAUTION

During operation, the mounting unit will become very hot.

- Before removing the mounting unit, ensure that it is cool enough to be handled.



ELECTRICAL HAZARD

- Disconnect the machine from the mains electricity while installing the dosing unit.
- Installation of CitoDoser must be carried out by skilled or instructed persons.



CAUTION

During operation, the mounting unit will become very hot. Ensure that the top closure is **fully closed**, before starting the mounting process.



CAUTION

During operation, the mount and the mounting unit will become very hot. Following a heating cycle, ensure the mounting cylinder is cooled actively for a minimum of two minutes before opening.



CAUTION

Always follow the recommended heating and cooling parameters described in Struers Application Guide for Hot Mounting. Always make sure to that the mounting unit is cooled sufficiently before opening the top closure.



WARNING

Check that the protective grid in CitoDoser is intact and that it is not possible to come into contact with the agitator wheel whilst rotating.



ELECTRICAL HAZARD

Disconnect the machine from the mains electricity and water supply before moving the machine.



ELECTRICAL HAZARD

Before connecting, check that the mains voltage corresponds to the voltage stated on the type plate on the side of the machine.

Symbols on the Machine



Hot surface symbol

- Top plate on mounting unit
- On side on mounting unit



Warning!

- Inside mounting unit cover

5. Transport and Storage

**NOTE:**

Package the machine securely before transportation. Insufficient packaging could cause damage to the machine and will void the warranty. Contact Struers Service for advice. Struers recommends that all original packaging and fittings are kept for future use.

**ELECTRICAL HAZARD**

Disconnect the machine from the mains electricity and water supply before moving the machine.

Follow these steps:

- Disconnect the power supply.
- Disconnect the water supply – residual water drains from the machine when the water supply is disconnected.
- Clean the machine.
- Lift the machine onto a trolley.
 - Lift CitoPress-15/-30 by holding underneath the base of the machine, on the left side and on the right side. Two persons are required to lift the machine.
- Lift the machine off the trolley into its new position.

If the machine is bound for long-time storage or shipping, follow these additional steps:

- Close the ventilation valve, secure using the locking nut.
- Mount a plastic cap on the ventilation valve.

**NOTE**

CitoPress-30 has two ventilation valves.

- Place a large plastic sheet on a pallet.
- Place the machine on blocks on the pallet
- Secure the machine using the original transport brackets.
- Place desiccant (silica gel) by the machine.
- Strap and tape the plastic sheet close to keep the machine dry.
- Pack the loose parts in the cardboard box and place it on the machine.
- Build a crate around the machine and secure.

At the new location:

- Check the [Pre-Installation Checklist](#).

6. Disposal



Equipment marked with a WEEE symbol  contain electrical and electronic components and must not be disposed of as general waste.

Please contact your local authorities for information on the correct method of disposal in accordance with national legislation.

Reference Guide

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1. Advanced Operations

Connecting a Cooli Cooling Unit (optional)

To connect a Struers recirculation unit to CitoPress:

**NOTE**

Before connecting the cooling unit to the CitoPress, follow the instructions in the Struers Cooling Units Instruction Manual to prepare it for use.

**NOTE**

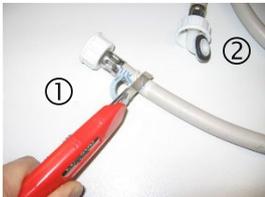
To avoid corrosion, Struers recommends the use of Struers Additive in the cooling water (percentage stated on the Additive container).
Remember to top up with Struers Additive each time you refill with water.

Modifying the High Pressure Hose

To connect CitoPress to a Struers Recirculation Cooling Unit, the coupling on one end of the high-pressure hose (supplied with CitoPress) has to be changed to a quick fit coupling.

**NOTE**

The Cooli Unit is supplied with 2 quick couplings, use the smallest one to modify the high pressure hose.



- Cut the high-pressure hose just behind the existing screw fitting ①.

**NOTE**

Do NOT cut at the other end of the hose ②.
This is used to connect to CitoPress



Place the screw clip ③ onto the hose.

- Insert the quick coupling ④ into the end of the hose.
- Slide the screw clip over the shaft of the quick coupling.
- Tighten the screw clip until the quick coupling is fastened firmly in position.

Connecting to the Cooli Unit

Connecting the Cooli Water Inlet



Connect the Cooli unit to CitoPress as follows:

- Mount the pressure hose onto the water inlet tube on the back of CitoPress.
 - Insert the filter gasket in the coupling nut with the flat side against the pressure hose.
 - Tighten the coupling nut completely.
- Connect the quick coupling to the Cooli pump outlet ⑤.

Connecting the Cooli Water Outlet

- Place the unconnected end of the water outlet tube in the top of the Cooli filter inlet.
- Check that the outlet hose slopes downwards towards the drain along the whole of its length.

Connecting the Control Unit and Mains Power Supply

- Connect the 24 V / CAN control cable to the Cooli control unit by plugging one end into CitoPress's control socket and the other end into the socket on the rear panel of the control unit.
- Connect the cooling unit to the mains power supply.



ELECTRICAL HAZARD

Before connecting, check that the mains voltage corresponds to the voltage stated on the type plate on the side of the machine.

Using the Methods Database (option)

With the CitoPress database option enabled up to 15 User Methods can be stored as well as associations between a number of resins and CitoDoser units.



HINT

Without Database option: Only 2 methods can be stored.

Creating and Storing User Methods in the Database Creating a New Method

- From the *Select Group* menu, select *User methods*, then *New method*.

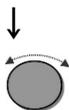


Turn knob to highlight the required group

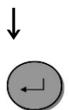


Push knob to activate the *SELECT METHOD* pop-up.
A New method will automatically be created based on the resin in the current process.

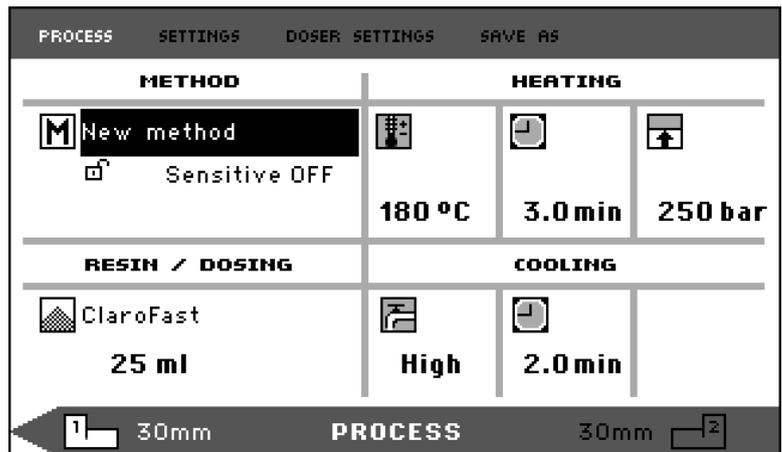




Turn knob to highlight the method required.



Push knob to accept the method.



- Edit the method's values to create your user method.
For information on how to edit a method's values, see "[Editing the Method's values manually](#)".
- Save the method to the database.
For information on how to save a method, see "[Creating and Storing User Methods in the Database](#)".

Modifying a Struers Method

- From the Select Group menu, select a Struers method. For information on how to select a method, see “[Selecting a Stored Method](#)”.
- Edit the method's values to create your user method, for information on how to edit a method's values, see “[Editing the Method's values manually](#)”.
- Save the method to the database, for information on how to save a method, see “[Creating and Storing User Methods in the Database](#)”.



HINT

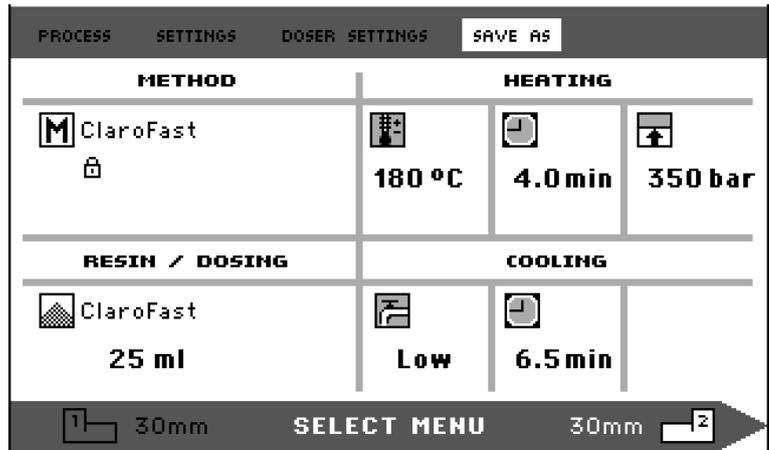
The Struers method is NOT overwritten when the new method is saved. The method has to be saved using a different name.
All Struers methods are protected against being overwritten.

Saving a User method

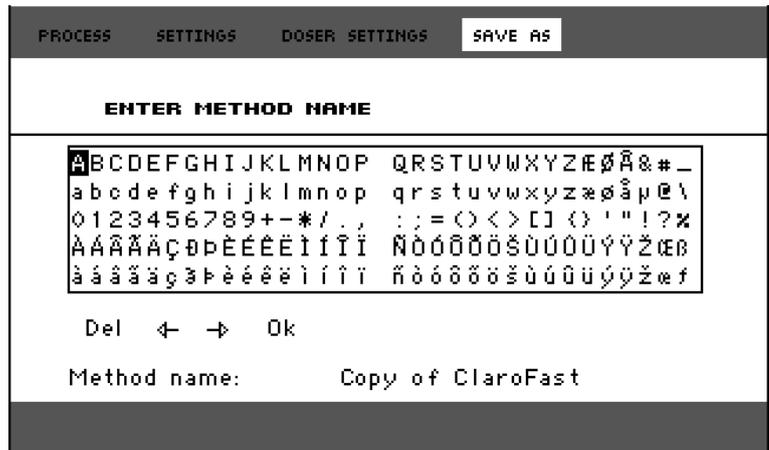
ESC From the *PROCESS* menu, press the Esc button to access the top-level menu items.



Turn knob to select *SAVE AS*.



Push knob to activate the *ENTER METHOD NAME* menu.





Turn knob to highlight either the functions at the bottom of the menu or characters to use in the method name. The RAM UP / RAM DOWN keys are used for quick navigation from line to line. For detailed instructions on how to use this menu, see [“Using the Enter Name Menu”](#).



To accept the name and leave the editor, select OK, and then push the knob. The method will be stored in the User methods group.

Using the Enter Name Menu

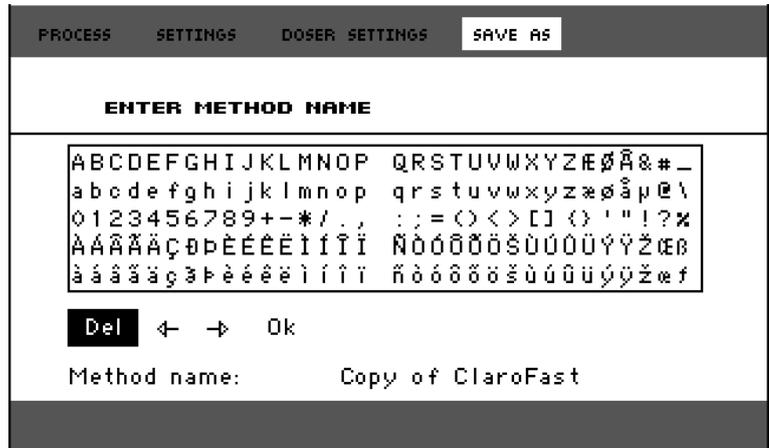
Doser associations, Resins and Method names can also be edited. A cursor is available in the NAME field at the bottom.

A second, large cursor is used for selecting characters or actions:

Entering Characters



Use RAM DOWN key and the knob to move the large cursor and highlight DEL.



Press knob to delete the existing name.



Turn knob and/or use RAM UP/DOWN keys to highlight the character to be used.





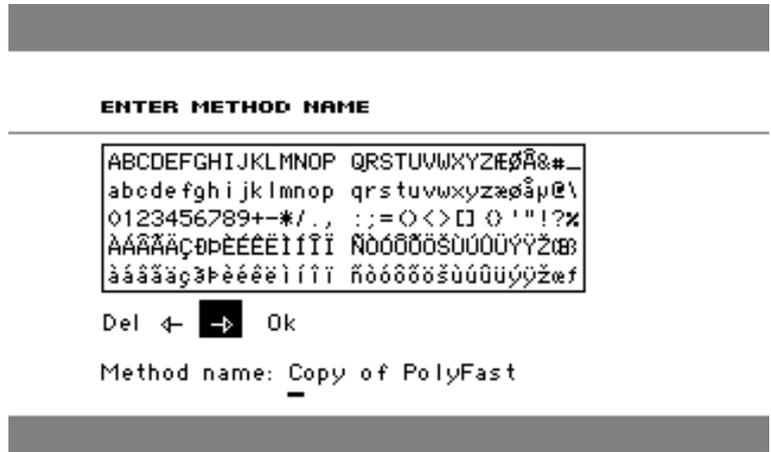
Press the knob to enter the character.

Deleting Characters

Characters can be deleted from a name by using the **Del** and ← (left), → (right) editing symbols at the bottom of the menu.
 To delete characters from a name:



Turn knob to the left or right until the cursor moves from the character selection area to the editing area at the bottom of the menu.



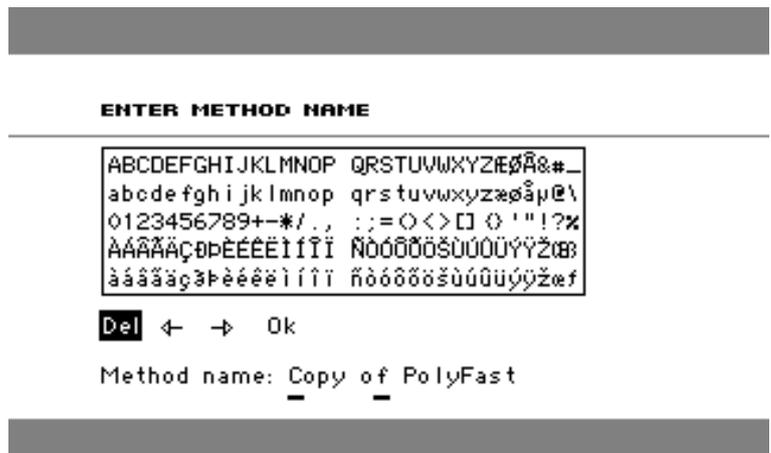
Turn the knob to select the left or right arrow.



Press the knob to move the underline cursor one place to the left or right, respectively.



Turn the knob to select the Del symbol.





Press the knob to delete the underlined character.



ENTER METHOD NAME

```

|-----|
| ABCDEFGHIJKLMNOP QRSTUVWXYZE@#_ |
| abcdefghijklmnopqrstuvwxyzæøåµ@ \ |
| 0123456789+* / . , ; = < > [ ] ^ ' " ! ? % |
| ÅÄÅÄÇÐÈÉÊËÌÍÎ ÑÒÓÔÕÖŠÙÚÛÜÝŽžß |
| åäåäçðèéêëìíî ñóôõöøšùúûýžžæf |
|-----|
| Del ← → Ok |
| Method name: Copy o PolyFast |
|           _  _ |
|-----|

```

Creating a User Resin

Resin data is stored separately in the database. As well as using Struers resins it is possible to create and store user resins. To create and store a user resin:

 In the *PROCESS* menu, turn the knob to highlight the *RESIN / DOSING* item.



 Push knob to activate the *SELECT GROUP* menu.



 Turn knob to highlight the *User resins* group.



 Push knob to activate the *SELECT USER RESIN* menu.



 Turn knob to highlight *New resin*.

Using the Settings Menu

The SETTINGS menu is used to view and, in the case of User Methods, delete, rename and lock/unlock methods.

Viewing Resin Details

CitoPress stores details about Struers resins. To view these details:

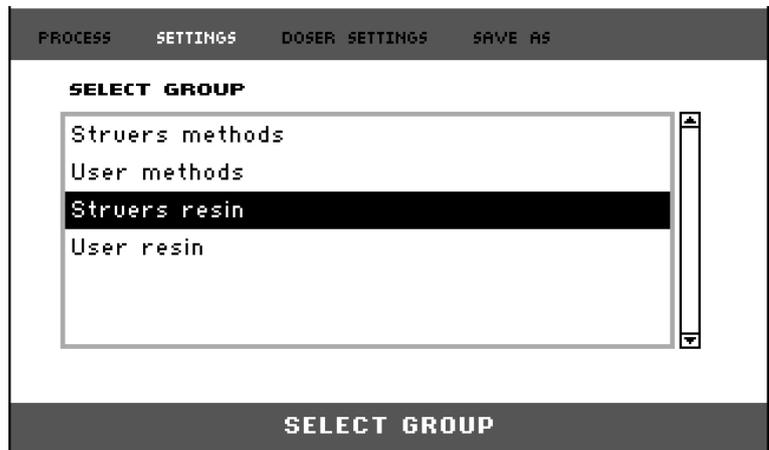
Esc From the PROCESS menu, press the Esc button once to access the top-level menu.



Turn knob to highlight the SETTINGS item.



Push knob to activate the *SETTINGS* menu.



Turn knob to highlight Struers resin or User resin.

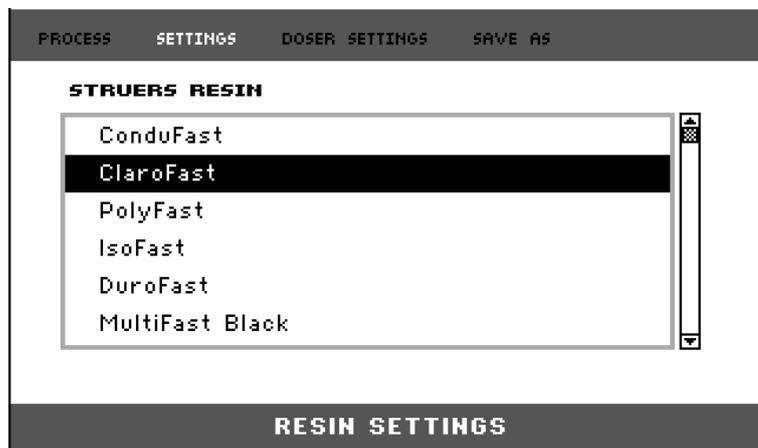


Push knob to open the Resin menu.

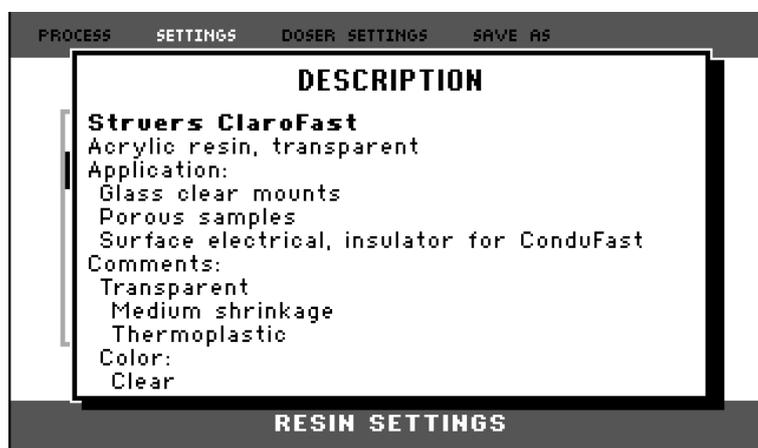


Turn the knob to highlight the resin





Push knob to view the details for the resin selected.



Deleting, Renaming or
Locking/Unlocking User Methods

To delete, rename or lock/unlock a user method:



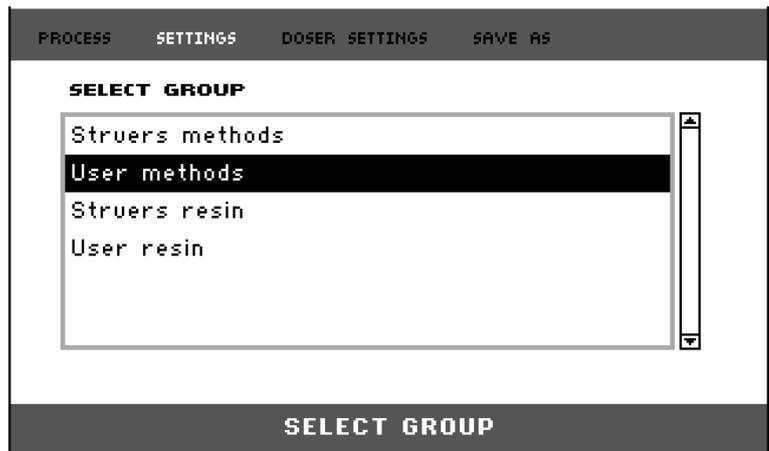
From the *PROCESS* menu, press the Esc button \square once to access the top-level menu.



Turn knob to highlight the *SETTINGS* item.



Push knob to activate the *SETTINGS* menu.

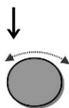
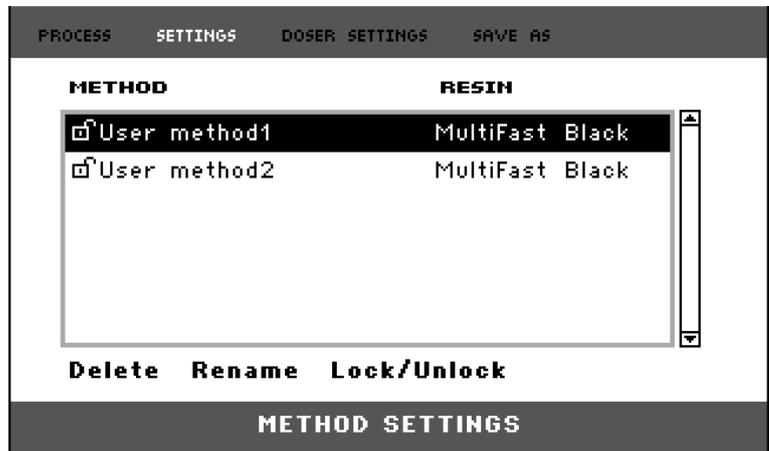


Turn knob to highlight *User methods*.

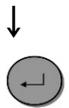


Push knob to activate the *METHOD SETTINGS* menu.

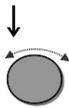




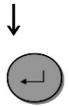
Turn knob to highlight a User method.



Push knob to select the method.
The method can now be deleted.



Turn knob to select *DELETE*, *RENAME* or *LOCK/UNLOCK*.



Push knob to carry out the action required.



Press Esc to return to the *PROCESS MENU*.

Creating and Deleting CitoDoser Associations

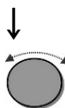
A dosing unit is able to store information electronically, which associates it with a specific method stored in the mounting press.

Creating a CitoDoser Dosing Unit Association

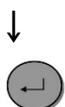
When using a dosing unit for the first time or if the dosing unit's association has been deleted (see, "[Deleting a CitoDoser Dosing Unit Association](#)") the dosing unit will need to be associated with a method.

A resin is selected and the method that uses this resin will then be associated with the CitoDoser.

Mount the CitoDoser on CitoPress, the Struers resin menu will be displayed.



Turn the knob to highlight the resin to be associated with the CitoDoser.



Push knob to select the resin and its method to be associated with the CitoDoser.



PROCESS SETTINGS DOSER SETTINGS SAVE AS			
METHOD		HEATING	
 ClaroFast 🔒	 180 °C	 4.0 min	 350 bar
RESIN / DOSING		COOLING	
 ClaroFast 100 %	 Low	 6.5 min	
 30mm	PROCESS		30mm  2

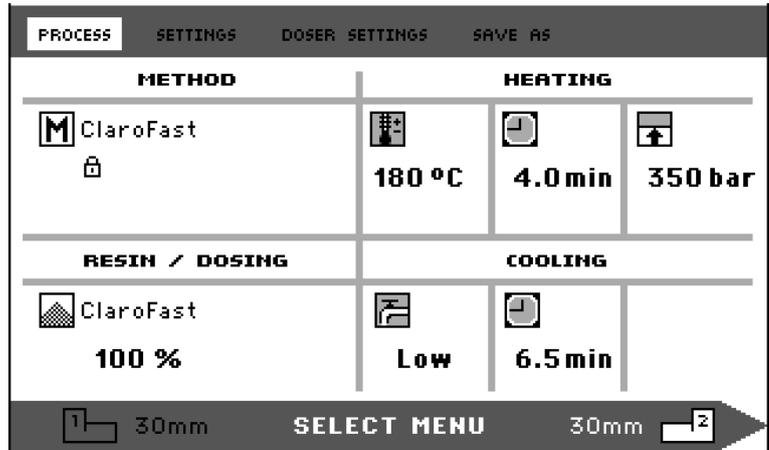


Press Esc to return to the *PROCESS* menu.

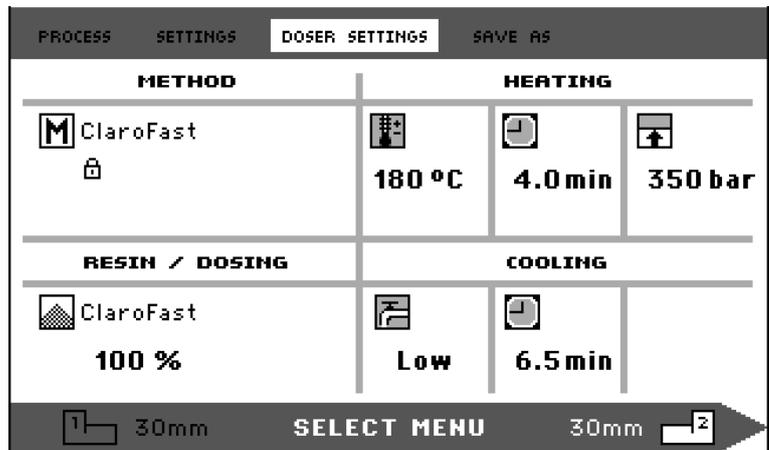
Deleting a CitoDoser Dosing Unit Association

To associate the dosing unit with a different method, the existing association must first be deleted.

Esc From the *PROCESS* menu, press the Esc button  once to access the top-level menu.

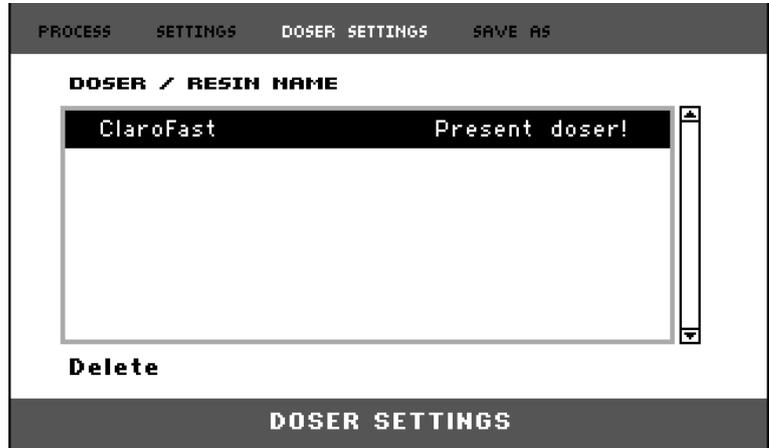


Turn the knob to highlight *DOSER SETTINGS*.



Push knob to open the *DOSER SETTINGS* menu.





The associated resin will be highlighted.



Push knob to highlight the *DELETE* option at the bottom of the menu.



Push knob to delete the resin association.

Setting the Operation Mode

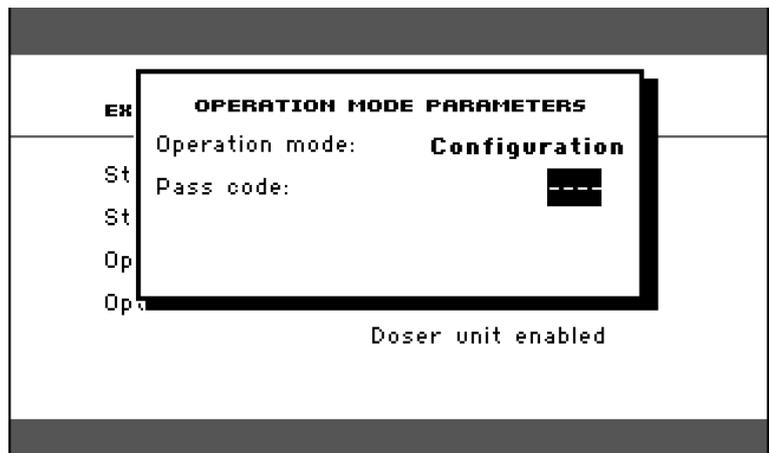
To change the operation mode:

From the *EXTENSIONS* menu:

 Turn knob to highlight *Operation mode*.

↓
 Push knob to activate the *OPERATION MODE PARAMETERS* menu.

↓



↓

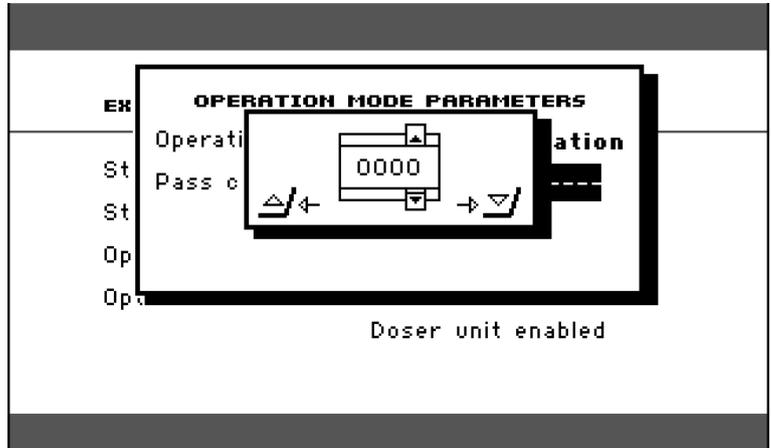
 Turn knob to highlight *Pass code*.

↓

 Push knob to select *Pass code*.

Enter the Pass code:
Turn knob to change the digits.
Press the up key to move the cursor one place to the left.
Press the down key to move the cursor one place to the right.
(The default pass code is '2750').

↓

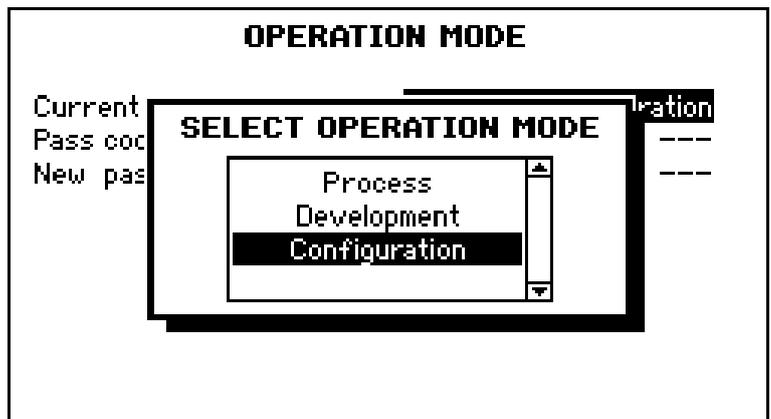


Push knob to accept the *Pass code*.

Operation mode can now be changed and a new Pass code set.



Push knob to activate the *SELECT OPERATION MODE* menu.



Turn the knob to highlight the Operation mode.



Push knob to accept the changed Operation mode.



NOTE

Remember to make a note of the new Pass code as settings can no longer be changed without the Pass code.

2. Struers Knowledge

Materialographic mounting can be regarded as a helping process assisting the mechanical preparation process as well as the final test. Understanding the different characteristics of mounting materials and being able to evaluate the need for mounting is the key to have specimens that are easy to handle and clean and gives a good image of a coating or an edge.

For further information, see the section on [Mounting](#) on the Struers website.

3. Application Guide for Hot Mounting

Useful mounting data and hints can be found in the Struers [Application Guide for Hot Mounting](#) (delivered with CitoPress) or visit the Struers website on <http://www.struers.com> and see the section on **Knowledge**.

4. Accessories

Please refer to the www.struers.com for details of the range available.

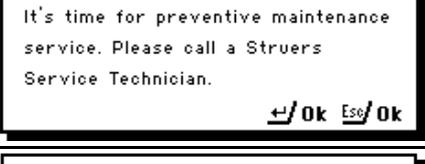
5. Consumables

The use of Struers mounting consumables is recommended.

Other products (e.g. coolants for recirculation purposes) may contain aggressive solvents, which dissolve e.g. rubber seals. The warranty may not cover damaged machine parts (e.g. seals and tubes), where the damage can be directly related to the use of non-Struers consumables.

Please refer to the www.struers.com for details of the range available.

6. Troubleshooting

Display/error	Cause	Action
Error Message		
	<p>There is room for 2 methods in the database.</p> <p>(15 methods when a Database Option is purchased and activated).</p>	<p>To save a new method, delete one of the old ones.</p> <p>(Activate the Database Option)</p>
	<p>Pressure error with the ram movement.</p> <p>(CitoPress-30: the message will indicate whether the problem occurs with Unit 1 or Unit 2)</p>	<p>Please contact Struers Service.</p>
	<p>No digits in the password number being saved.</p>	<p>Press ESC and enter 4 digits for the password number</p>
	<p>Temperature error, mounting unit.</p> <p>(CitoPress-30: the message will indicate whether the problem occurs with Unit 1 or Unit 2)</p>	<p>Please contact Struers Service.</p>
	<p>START has been pressed and no cylinder has been detected.</p>	<p>Check the cylinder is mounted correctly.</p> <p>If error persists, please contact Struers Service.</p>
	<p>Reminder to do preventive maintenance service.</p>	<p>The set interval has expired.</p>
	<p>Process Parameters are displayed when ENTER has been pressed whilst a process is running.</p>	<p>To remove the message press ENTER again.</p>
		<p>Turn CitoPress OFF and then turn ON.</p> <p>If this does not help, contact Struers Service.</p>

*CitoPress-15/-30
Instruction Manual*

Display/error	Cause	Action
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">ERROR #27 P.O.S.T. Main supply voltage too high!</p> </div>		<p>Turn CitoPress OFF and then turn ON.</p> <p>If this does not help, contact Struers Service.</p>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">ERROR #28 P.O.S.T. PCB voltage out of range!</p> </div>	Voltage overload	<p>Turn CitoPress OFF and then turn ON.</p> <p>If this does not help, contact Struers Service.</p>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">ERROR #29 P.O.S.T. Trafo OVERLOAD!</p> </div>		<p>Turn CitoPress OFF, wait for 5 minutes then turn ON.</p> <p>If this does not help, contact Struers Service.</p>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">WARNING #30 No cooling! Do not open top closure. Please check connection <i>Esc/Ok</i></p> </div>	<p>Insufficient or no cooling.</p> <p>(CitoPress-30: the message will indicate whether the problem occurs with Unit 1 or Unit 2)</p>	<p>Check cooling water connections.</p> <p>If the error continues to display, contact a Struers Service Technician.</p>
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">ERROR #37 Doser unit not found! <i>↵/Restart Esc/Cancel</i></p> </div>	CitoDoser was removed before it is configured.	Replace the CitoDoser and select a resin for the doser.
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">WARNING #38 Top closure not tightened!</p> </div>	START has been pressed and the CitoDoser nozzle is positioned over the cylinder.	Remove the CitoDoser nozzle and tighten the top closure.
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">ERROR #40 Hydraulic system overload <i>Esc/Ok</i></p> </div>	This Error is displayed if the Hydro pump power current is over the limits (22Amp).	
<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">MESSAGE #43 Main supply voltage too low! <i>↵/Ok Esc/Later</i></p> </div>	Main supply voltage low at start of the process.	<p>Turn CitoPress OFF and then turn ON.</p> <p>If this does not help, contact Struers Service.</p>

*CitoPress-15/-30
Instruction Manual*

Display/error	Cause	Action
<p style="text-align: center;">MESSAGE #47</p> <p>It's time to change the hydraulic oil. Please call a Struers Service Technician.</p> <p style="text-align: right;">↔/Ok</p>	<p>Reminder to change the hydraulic oil.</p>	<p>The set interval has expired.</p>
<p style="text-align: center;">MESSAGE #48</p> <p>It's time for cleaning under the Lower Ram</p> <p style="text-align: right;">↔/Ok</p>	<p>Reminder to clean under the lower ram.</p>	<p>The set interval has expired.</p>
<p style="text-align: center;">WARNING #49</p> <p>Top closure, mount and cylinder may be hot</p> <p style="text-align: right;">Esc/Ok</p>	<p>The mounting process has been stopped manually and the mentioned items may be hot.</p>	<p>The top closure, mount and cylinder may be hot and must be allowed to cool.</p> <p>Before removing the mounting unit, ensure that it is cool enough to be handled.</p>
<p style="text-align: center;">WARNING #50</p> <p>Processing error: Heating unit failure!</p> <p style="text-align: right;">↔/Ok Esc/ Later</p>	<p>Processing error: Heating unit failure.</p>	<p>The Heating unit has failed. Please, contact Struers Service.</p>

*CitoPress-15/-30
Instruction Manual*

Acoustic Signals		
Long beep.	The command cannot be accepted.	Please refer to the <i>Basic Operation</i> section in the manual.
Four double beeps.	There is an error.	See the error message.
Machine Problems		
Process will not start.Strange symbols appear or a line is missing in the display.	Heating time and cooling time are set at zero.The machine was switched off then switched on again within 5 seconds.	Set the correct times.Switch the machine off and wait for 5 seconds before switching on again.
Process will not start.	Heating time and cooling time are set at zero.	Set the correct times.
Insufficient compression.	Incorrect setting of force/pressure.	Set the correct parameter. The force should be min. 50 bar/800psi.
	Incorrect configuration of cylinder diameter.	Check the configuration.
	Incorrect unit for force or pressure.	Contact Struers Service.
Insufficient heating.	Incorrect setting of time or for preheating or heating.	Set the correct parameters.
	Incorrect temperature unit set.	Contact Struers Service. Check the configuration.
Insufficient cooling.	Incorrect setting o cooling time.	Set the correct parameter.
	Incorrect setting for cooling rate.	
	Incorrect Temperature unit set.	Check the configuration.
	Mains tap supplying cooling water is either closed or not opened sufficiently.	Open the tap.
	Filter at the water inlet is blocked.	Clean the filter.
	Insufficient water within the Recirculation Cooling Unit. The water is too hot.	Fill to the correct water level. See the section: <u><i>Maintenance</i></u> .
	Lime scale deposits built up in the cooling coil.	See the section on Decalcifying the Cooling Coil under Routine Maintenance .
Defect in the cooling system.	Contact Struers Service.	
Cooling water drips underneath the machine.	The quick coupling is not mounted correctly.	Remove the cover from the mounting unit and check the quick coupling connections.

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The top closure will not start threading on the mounting cylinder.		
	The top closure is not mounted correctly.	Press the top closure straight down, turning it counter-clockwise until you hear a click. To close: Press the top closure straight down, turning it clockwise until it is fully closed.
	The upper ram is too hot.	Let the top closure and the upper ram cool down. Reduce the mounting temperature.
	Cured mounting material inside the mounting cylinder.	Clean the mounting cylinder with a brass wire brush.
	Cured mounting material on the cylindrical surface of the upper ram.	Clean the ram with the scraper supplied.
	The top closure has been dropped on the floor/table, causing a bulge in the edge of the ram.	Replace the upper ram.
	The swivel arm has become askew.	Call a Struers service technician. In the meantime the mounting press can be used without the swivel arm.
The top closure cannot be screwed down completely.	Damage to the threaded connection in the top closure or to the upper ram.	Remove the upper ram from the top closure (see instructions in the section on Maintenance). Try both the following procedures to identify the problem: <ul style="list-style-type: none"> ▪ Try to mount the top closure, without the upper ram. If this is not possible, Contact Struers Service. ▪ Try to insert the disconnected upper ram into the mounting cylinder. If this is not possible, Contact Struers Service.
	Dirt in the threads on the top closure and the mounting cylinder.	Clean the threads. Use only a dry lubricant powder.
	The disc for thermal insulation, placed on the top of the upper ram, has a larger diameter than the upper ram.	Contact Struers Service.

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<p>The top closure cannot be loosened.</p>	<p>Cured mounting material on the cylindrical surface of the top ram.</p> <p>Dirt in the threads of the top closure.</p>	<p>To release the top closure:</p> <ul style="list-style-type: none"> ▪ Move the lower ram up and down several times. <p>If this does not help:</p> <ul style="list-style-type: none"> ▪ Put heating on for 1 min. <p>If this does not help:</p> <ul style="list-style-type: none"> - Set the force or pressure to zero. - Set the heating time and cooling time to 15 min. <ul style="list-style-type: none"> ▪ Complete a mounting process <p>If this does not help:</p> <ul style="list-style-type: none"> ▪ Remove the two handles on the top closure. ▪ Remove the plastic cover from the top closure (See the section on Maintenance). ▪ Loosen the top closure with a fork spanner.
<p>The mount has sharp edges which damage grinding/polishing surface.</p>		<p>Replace the lower ram with a <i>Chamfered ram</i> (option).</p> 

7. Service

Struers recommends that a regular service check be carried out yearly or after every 1500 hours of use.

Struers offers a range of comprehensive maintenance plans to suit the requirements of our customers. This range of services is called **ServiceGuard**.

The maintenance plans include equipment inspection, replacement of wear parts, adjustments/calibration for optimal operation, and a final functional test.



NOTE:

Servicing may only be performed by a Struers engineer or a qualified technician (electromechanical, electronic, mechanical, pneumatic, etc.).

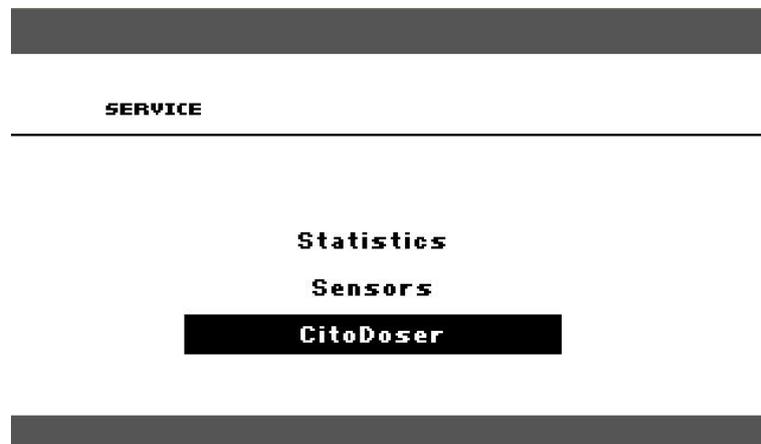
Contact Struers Service for information.

Service Menus

CitoPress is equipped with operator service menus, which provide important information about the operational history and current operational state of the machine. In addition, they provide a CitoDoser emptying function.

Accessing the Service menus

From the Main Menu, highlight and then select the Service menu item.



When the Service menu opens, three menu items (Statistics, Sensors and CitoDoser) are available.

To access these menu items, first highlight and then select them.

Statistics Menu

CitoPress measures and records statistical information about its operation, this data is shown in the Statistics display. The following table provides information about this statistical data.

Item	Display
Statistics	
Serial Number	(number)
Software Version	(number)
Database Version	(number)
Bootloader Version	(number)
TOTAL USAGE	
Total operation time	(hours)
Left Hydraulic Motor run time	(hours)
Right Hydraulic Motor run time (option).	(hours)
Left Heating Element run time	(hours)/(sum of all units)
Right Heating Element run time (option).	(hours)/(sum of all units)
Number of ON/OFF operations	(counter)
Number of left cooling operations.	(counter)
Number of right cooling operations (option).	(counter)
CitoDoser number of activations (option).	(counter)

*CitoPress-15/-30
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Item	Display
Statistics SINCE LAST RESET (individual reset of each parameter)	
Total operation time	(hours)
Operation Time since last service	(hours)
Left Hydraulic Motor run time	(hours)
Right Hydraulic Motor run time (option).	(hours)
Left Heating Element run time	(hours)/(sum of all units)
Right Heating Element run time (option).	(hours)/(sum of all units)
Number of ON/OFF operations	(counter)
Number of left cooling activations	(counter)
Number of right cooling activations (option).	(counter)
CitoDoser number of activations (option).	(counter)

Sensors Menu

CitoPress is equipped with a range of sensors. Real time data, provided by these sensors, is shown in the Sensors display. The following table provides information about this sensor data.

Sensor	Display
PCB VOLTAGES	
Main PCB version	ADC + Volt
+DC	ADC + Volt
+24VDC	ADC + Volt
+12VDC	ADC + Volt
+9.8VDC	ADC + Volt
+3.3VDC	ADC + Volt
-22VDC	ADC + Volt
LCD Contrast	ADC + Volt
Transformer Overload	Yes/No
PCB OUTPUTS	
Recirculation	OK/short circuited
LED left	OK/short circuited
LED right	OK/short circuited
Relay for heating left unit	OK/short circuited
Relay for heating right unit (option).	OK/short circuited
Valve for cooling left unit	OK/short circuited
Valve for cooling right unit (option).	OK/short circuited
Relay for pump selector.	OK/short circuited
Relay for voltage selector.	OK/short circuited
Pump motor in doser (optional).	OK/short circuited
RS232 Service	Connected/not connected

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Instruction Manual

Sensor	Display
Mounting Unit	
Left cylinder size	ADC+ (mm or inch)
Left cylinder temperature	ADC + (°C)
Left Cylinder Oil Pressure	ADC + (bar)
Right cylinder size (option).	(mm or inch)
Right cylinder temperature (option).	ADC + (°C)
Right Cylinder Oil Pressure (option).	(bar)
Hydraulic Pump Current	(ADC + ampere) (mean)
Hydraulic Pump Voltage	(ADC + +DC volt) (mean)
MAIN SUPPLY VOLTAGE	
Supply voltage at power on.	ADC + Volt
Current supply voltage.	ADC + Volt
Minimum voltage (200 hours).	ADC + Volt (field displaying 200 hours of operation)
Maximum voltage (200 hours).	ADC + Volt (field displaying 200 hours of operation)
CitoDoser (Option)	
Left position sensor	(ADC-value + active/not active)
Right position sensor	(ADC-value + active/not active)
PCB-ID.	(ADC-value + version x)
RFID number	Number
Motor connection	OK/short circuited

Doser Menu

When the optional CitoDoser is fitted to CitoPress, the *Doser* menu option is used to empty the dosing unit of resin.



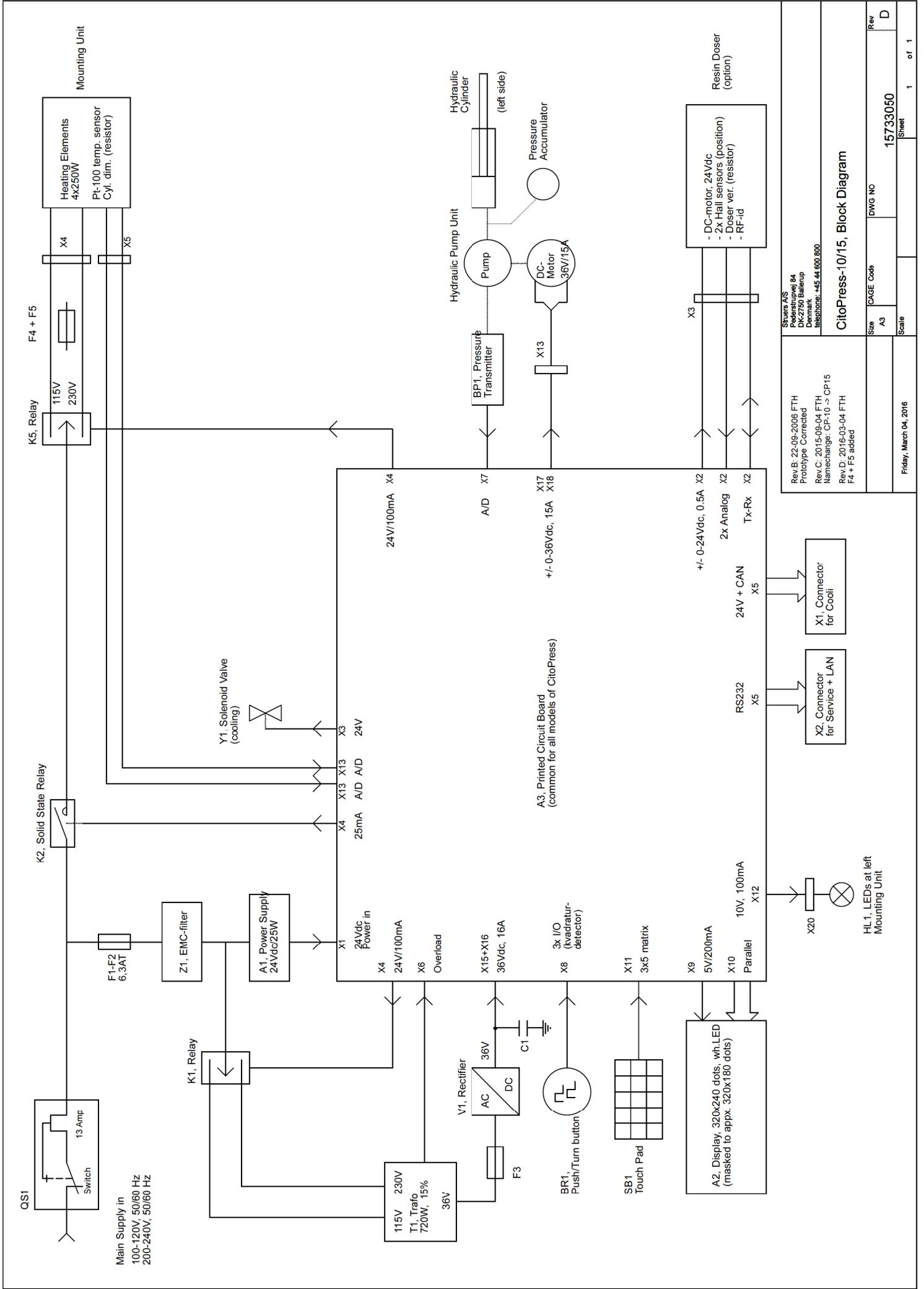
8. Spare Parts and Diagrams

For further information, or to check the availability of replacement parts, please contact your local Struers Service department. Contact information is available on Struers.com.

Diagrams

CitoPress-15	Block Diagram.....	15733050
	Water Diagram.....	15731001
	Hydraulic Diagram.....	15731000
CitoPress-30	Block Diagram.....	15743050
	Water Diagram.....	15741001
	Hydraulic Diagram.....	15741000

Please see the following pages.



Stuers A/S
 Pedestalsvej 84
 DK-2750 Ballerup
 Denmark
 Telefon: +45 44 600 800
 E-mail: info@stuers.com

Rev.B: 22-09-2006 FTH
 Prototype Corrected
 Rev.C: 2015-09-04 FTH
 Namechange: CP-10 -> CP15
 Rev.D: 2016-03-04 FTH
 F4 + F5 added

CitoPress-10/15, Block Diagram

Size	A3	DWG NO	15733060	Rev	D
CAGE Code				Sheet	1
Scale				of	1

Friday, March 04, 2016

A

Water supply (fresh or Cooli)

B

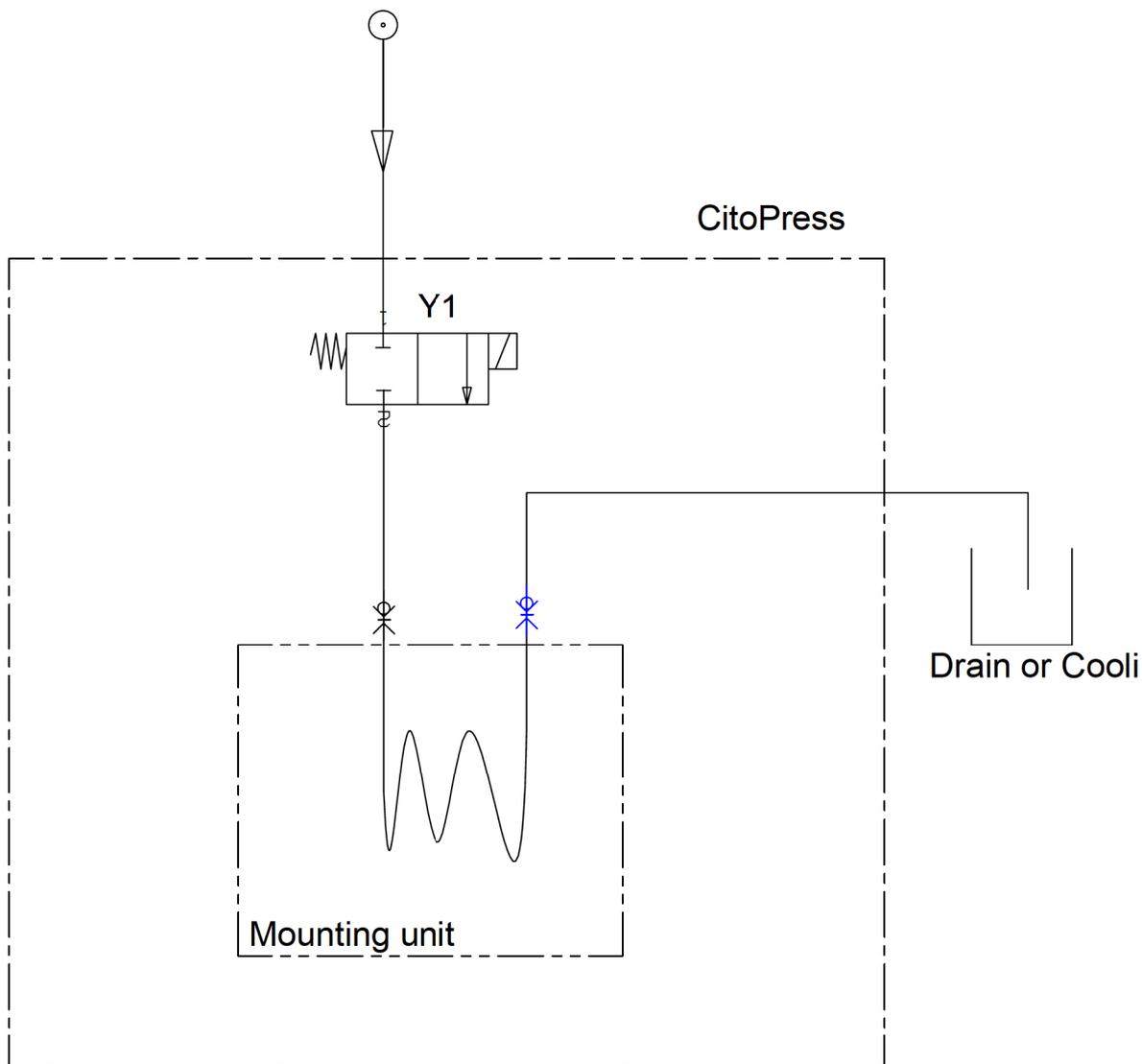
CitoPress

C

D

E

F

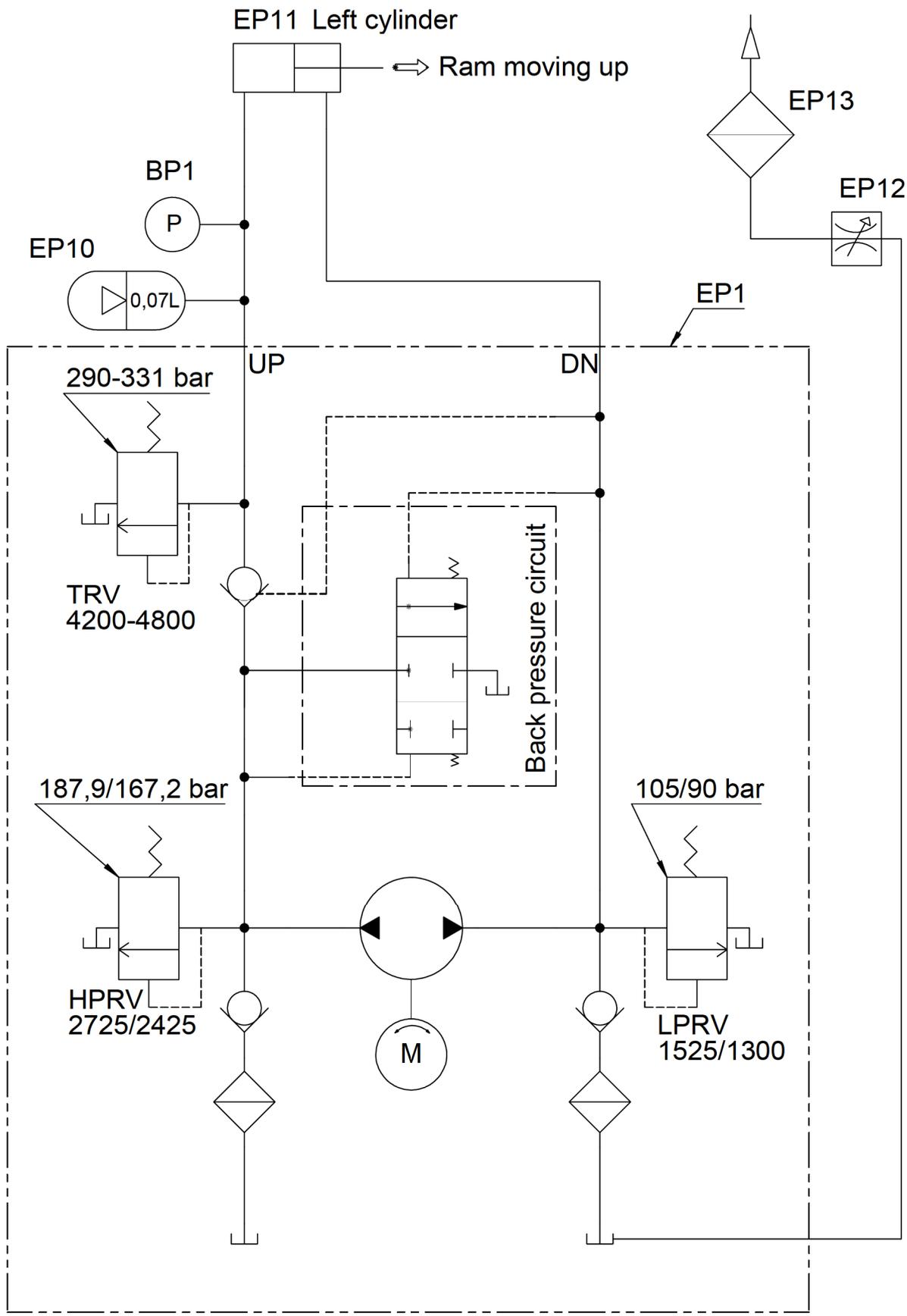


Drain or Cooli

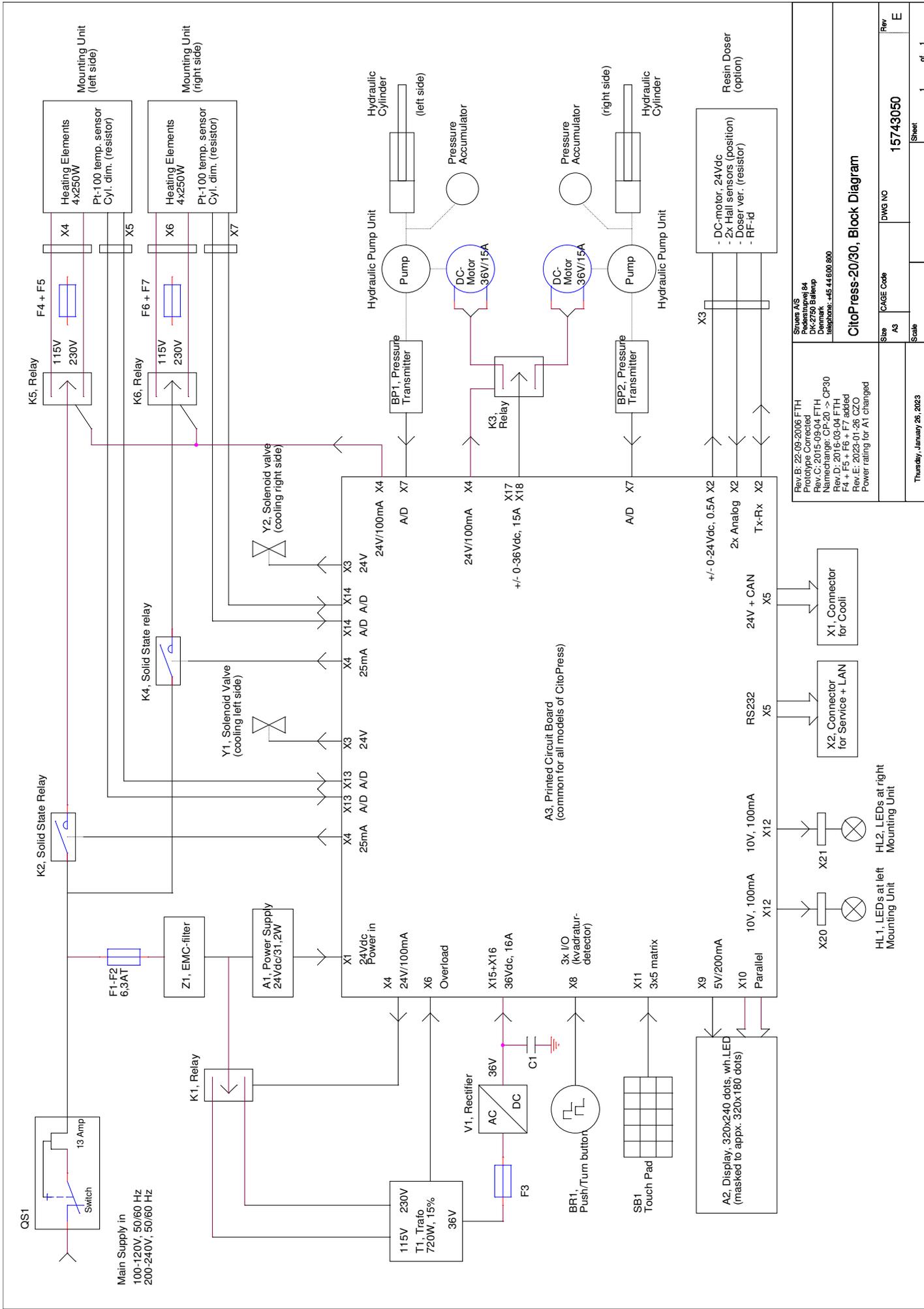
Mounting unit

Y1

A	2018-10-05			JLI	2018-10-05	THF
Rev	Crea. date yyyy-mm-dd	Revision description		Draw. Init	Appr. date yyyy-mm-dd	Appr. Init
F	 Pederstrupvej 84 DK-2750 Ballerup Copenhagen Denmark Phone: +45 44600 800 Fax: +45 44600 804	Material:	Scale: 1:1	Format: A4	Tolerance: DS/ISO 2768 -	
		ID:	Description: 15731001 Water diagram	Weight :	g	Sheet 1 of 1



D	2019-03-22	Valve symbol changed. Vol. for accumulator added	JLI	2019-03-22	POP
A	2006-07-28		BMJ		
Rev	Crea. date yyyy-mm-dd	Revision description	Draw. Init	Appr. date yyyy-mm-dd	Appr. Init
F	 Pederstrupvej 84 DK-2750 Ballerup Copenhagen Denmark Phone: +45 44600 800 Fax: +45 44600 804	Material:	Scale: 1:5	Format: A4	Tolerance: DS/ISO 2768 - Weight: g
		ID:	Description: 15731000 Hydraulic diagram, CitoPress-1/-5/-10/-15	Sheet 1 of 1	Rev: D



Rev.B: 22-09-2006 FTH
Prototype Corrected
Rev.C: 2015-09-04 FTH
Namechange: CP-20 -> CP30
Rev.D: 2016-03-04 FTH
F4 + F5 + F6 + F7 added
Rev.E: 2023-01-26 CZO
Power rating for A1 changed

Stuers AS
Pedestalsvej 84
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Telefon: +45 44600.800

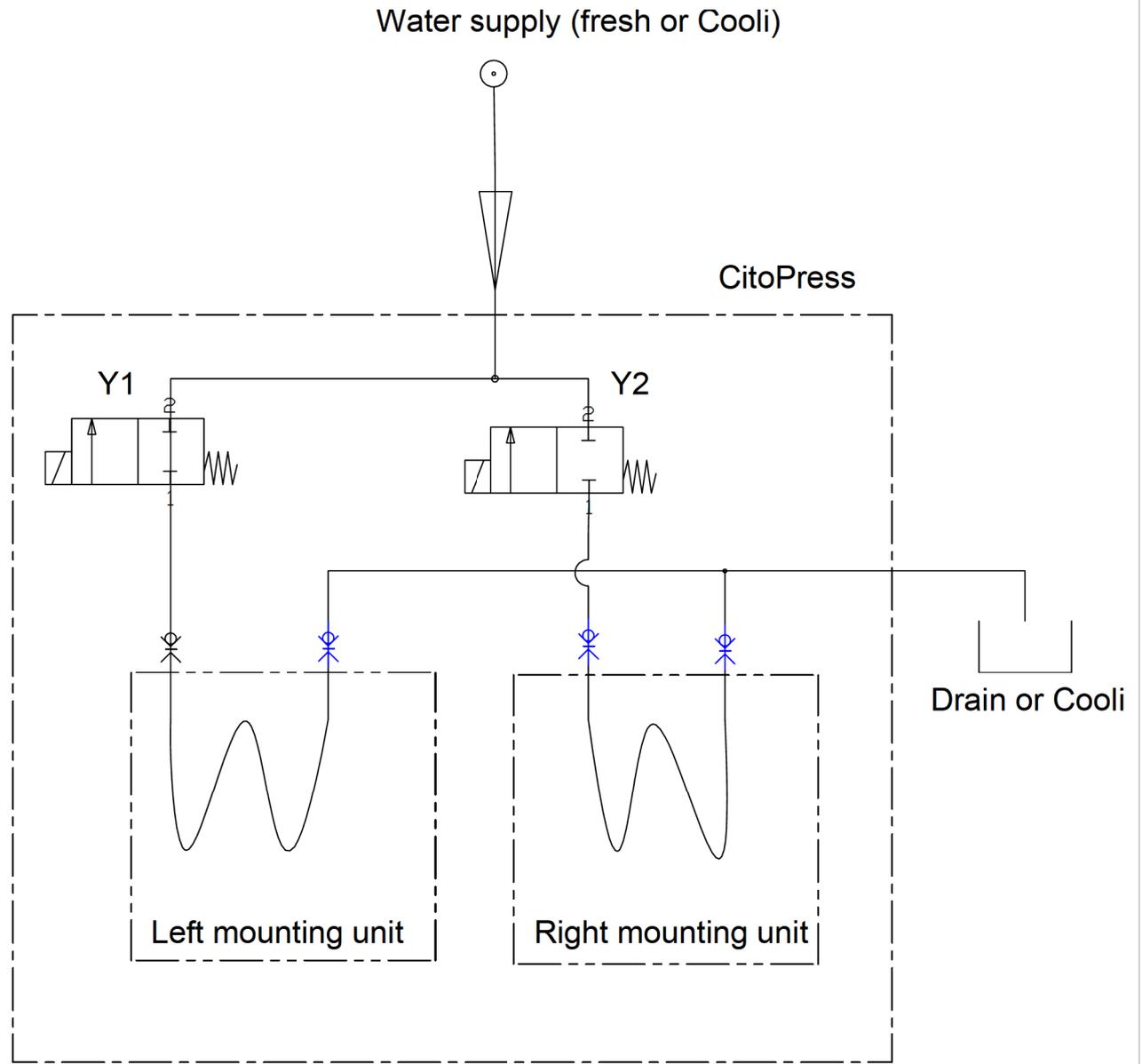
CitoPress-20/30, Block Diagram

Size A3
CAGE Code
Scale

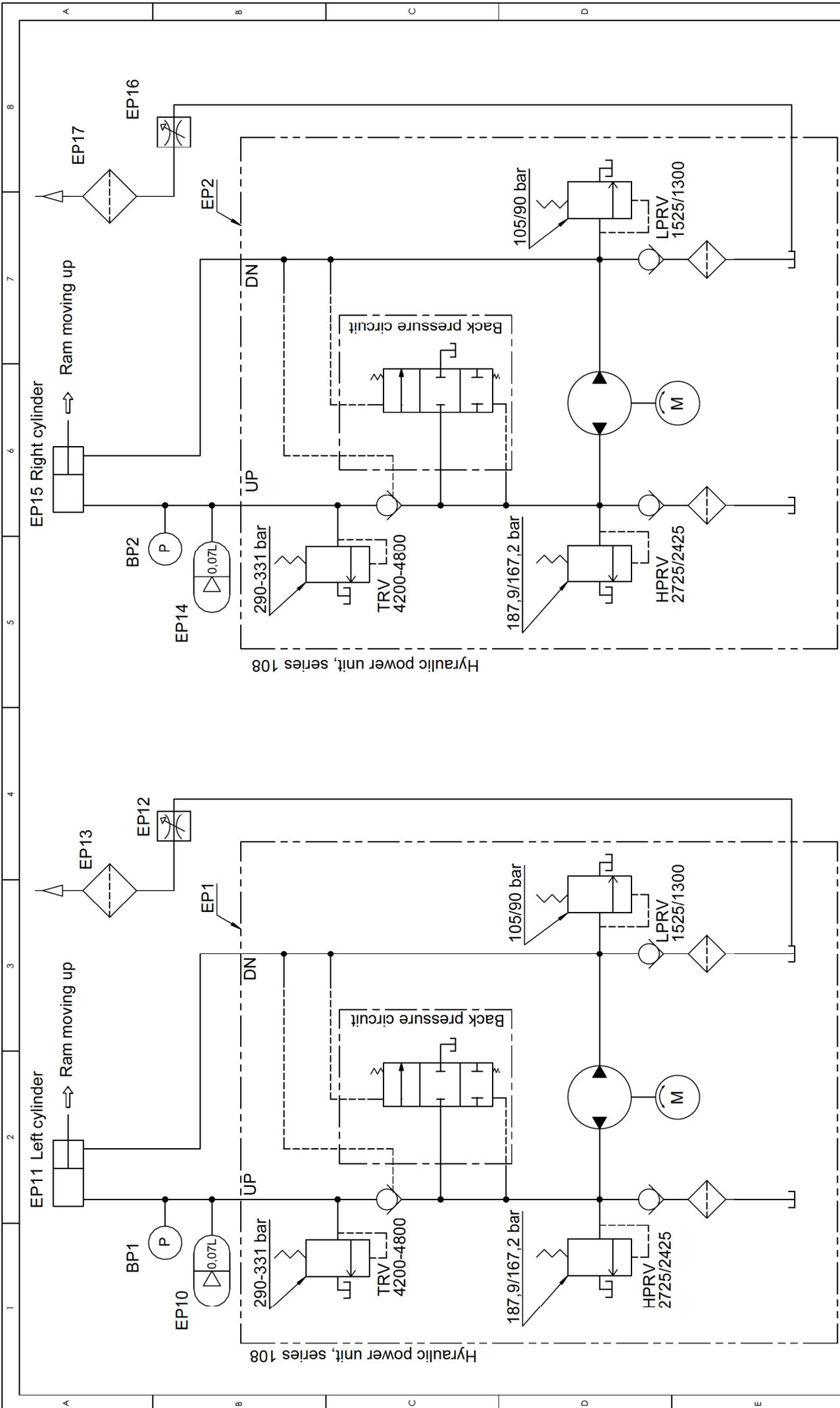
DWG NO
15743050

Sheet 1 of 1

Thursday, January 26, 2023



A	2018-10-05		JLI	2018-10-05	THF
Rev	Crea. date yyyy-mm-dd	Revision description	Draw. Init	Appr. date yyyy-mm-dd	Appr. Init
		Material:	Scale: 1:1	Format: A4	Tolerance: DS/ISO 2768 -
		ID:	Description: 15741001 Water diagram	Weight : g	Sheet 1 of 1
				Rev: A	



D	2019-03-22	Valve symbol changed. Vol. for accumulator added	JLI	2019-03-22	POP
A	2006-07-28		BMJ	2006-07-28	JLI
Revision	Creation date	Revision description	Draw. Init	Appr. date	Appr. Init
	yyyy-mm-dd			yyyy-mm-dd	
		Material:	Scale:	Tolerance: DS/ISO 2768-	
			1:5	Weight:	
			Description:		
			ID:		
			Sheet 1 of 1		
			Rev:		
			D		



15741000 Hydraulic diagram, CitoPress-20/30

9. Legal and Regulatory

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction Manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this product not expressly approved by Struers ApS could cause harmful radio interference and void the user's authority to operate the equipment.

10. Technical Data

Subject		Specifications	
		Metric/International	US
Mounting Specifications			
Mounting Units (Optional)	Diameter	25, 30, 40, 50 mm	1¼", 1½"
Compression	Force on piston rod	50–350* bar in steps of 25 bar	725 - 5076* psi in steps of 363 psi
		 NOTE When using 50 mm cylinder diameter, the max pressure is limited to 250 bar / 3,625 psi.	
Heating (with pressure on)	Temperature	120 / 150 / 180°C	248 / 302 / 356°F
	Time	Variable between 1 and 15 min	
Cooling (with pressure on)	Time	Variable between 1 and 15 min	
	Rate	High:	Full flow (4.8 l/min)
		Medium:	20% of full flow (0.96 l/min)
		Low:	3% of full flow (0.14 l/min)
Dosing (based on optional CitoDoser)	20-150%		
Physical Specifications			
Water Supply	Tap Water		
	Pressure for tap water	1 - 6 bar	14.5 - 87 psi
	Inlet	¾" dia.	¾" dia.
	Outlet	10 mm dia.	0.4"
Electrical Supply and consumption	Voltage/frequency	200-240V / 50-60Hz	100-120V / 50-60Hz,
	Power phases	1-phase (N+L1+PE) or 2-phase (L1+L2+PE)	
	Power consumption:	@200-240V / 50-60Hz	@100-120V / 50-60Hz,
	Idle	8W	8W
	Max (CitoPress-15)	1300W	1300W
	Max (CitoPress-30)	2300W	1300W
	Current (CitoPress-15)	5.6A	13A
	Current (CitoPress-30)	10A	13A
<i>Residual Current Circuit Breaker</i>	Type A, 30 mA (or better) is required		

*CitoPress-15/-30
Instruction Manual*

Subject		Specifications	
		Metric/International	US
Dimensions and Weight	Width (CitoPress-15)	480 mm	19"
	Width (CitoPress-30)	550 mm	21` .5"
	Depth	560 mm	22"
	Height (Mounting Unit and Top Closure installed)	450 mm	17.7"
	Height (Including CitoDoser)	550 mm	21.5"
	Weight (CitoPress-15)	34 kg	75 lbs
	Weight (CitoPress-30)	48 kg	106 lbs
	Weight (CitoDoser)	3.1 kg	7 lbs
Standards Specifications			
Safety Standards	Please refer to the Declaration of Conformity		
Environmental Specifications			
Noise levels ³	Idle	0 dB (A)	
	A-weighted sound emission pressure level at workstations	LpA = 61.5 dB(A) (measured value) K = 4 dB(A) Measurements made in accordance with EN ISO 11202.	
Operating Environment	Temperature (operational)	5–40°C	41-104°F
	Humidity	<85 % RH non-condensing	
Storage Conditions	Temperature	-25 – 55°C	-13 – 131°F
	Humidity	<95 % RH (non-condensing)	
Interface Specifications			
Controls		Touch pad, turn/push-knob	
LCD display with white LED backlight		5.2"	

³ Noise level: The figures quoted are emission levels and are not necessarily safe working levels. While there is a correlation between the emission and exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors that influence the actual level of exposure of the workforce include characteristics of the work room, the other sources of noise, etc., i.e. the number of machines and other adjacent processes. Also, the permissible exposure level can vary from country to country. This information, however, will enable the user of the machine to make a better evaluation of the hazard and risk.

CitoPress-5/-15/-30, Pre-Installation Checklist

Read the Installation instructions in the Instruction Manual *before* installing the machine.

Installation Requirements

- Table: - able to carry at least 60 kg / 132 lbs

Required Accessories and Consumables
(ordered separately)

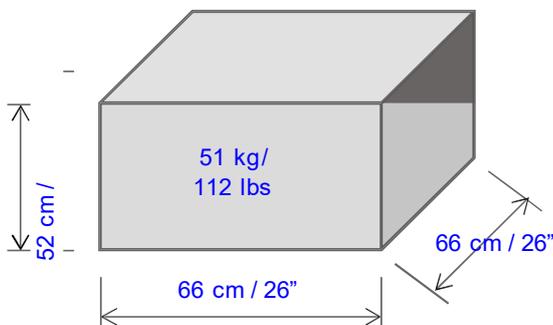
Please refer to the www.struers.com for details of the range available.

Recommended for CitoPress-15/-30

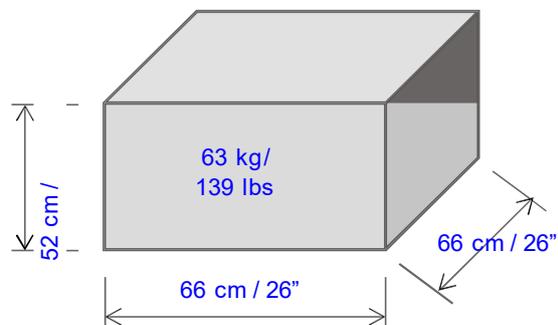
- Recirculation cooling unit

Crating Specifications

CitoPress-5/- 15



CitoPress-30



Location

The machine must be placed close to the power supply.
The machine is designed to be placed on a table unit.
The table must be able to carry at least 60 kg / 132 lbs.
The table should be at least 75 cm / 30" high.

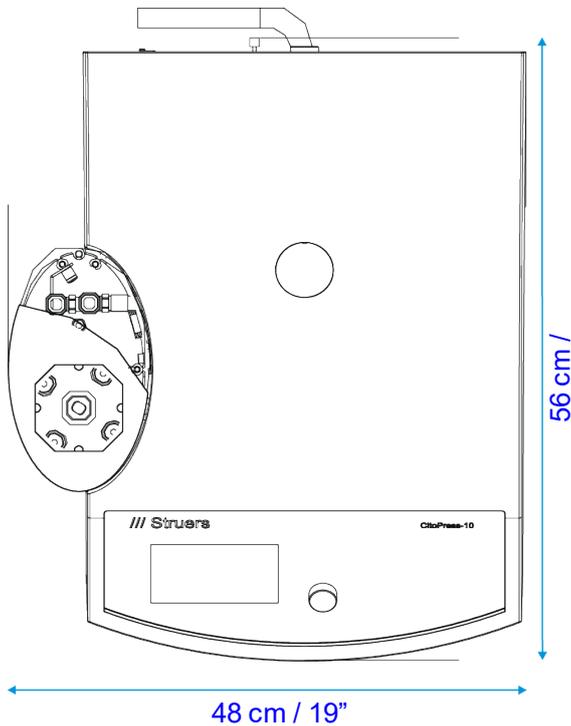
Handling, Transportation and Storage

- Lift CitoPress by holding underneath the base of the machine, on the left side and on the right side.
- Lift the machine onto the table.
- Lift the front of the machine and carefully move into place.
- Check that the machine is resting securely with all 4 rubber feet on the table.

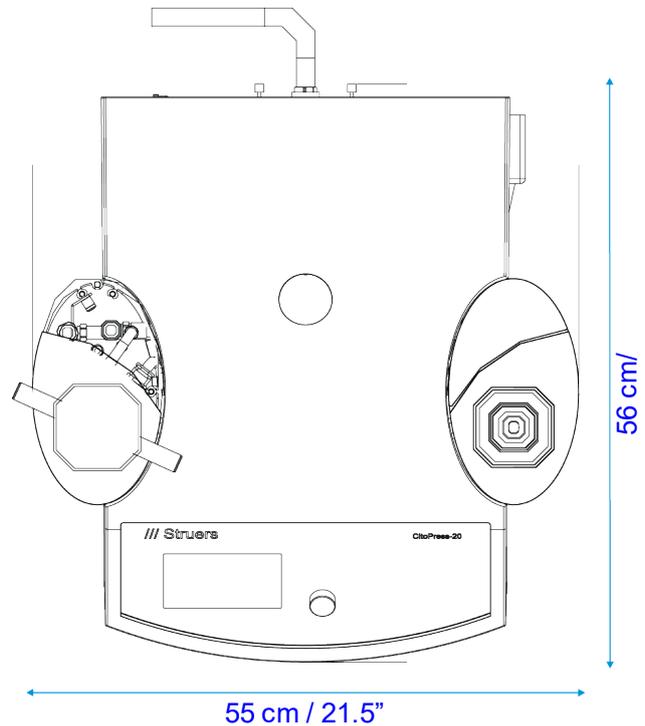
Dimensions

	CitoPress-5/-15	CitoPress-30	CitoDoser
Width:	48 cm / 19"	55 cm / 21.5"	22 cm / 9"
Depth:	56 cm / 22"	56 cm / 22"	55 cm / 22"
Height:			11 cm / 4.3"
- Mounting Unit and Top Closure installed	45 cm / 17.7"	45 cm / 17.7"	
- Including CitoDoser	55 cm / 21.5"	55 cm / 21.5"	
Weight:	34 kg / 75 lbs	48 kg / 106 lbs	3.1 kg / 7 lbs

Footprint : CitoPress-5/-15



Footprint : CitoPress-30



Recommended Space

Front: Recommended space at the front: 100 cm / 40".

Rear: The machine may be placed against a wall.

- Check there is enough room behind the table for the inlet and outlet hoses.
Approx 10 cm / 4"

Sides:

- Check there is enough room at the side to open the doors of the mounting unit towers:
minimum 20cm / 8".
(on *both* sides for CitoPress-30).

Allow 22 x 55 cm / 9" x 22" space for each CitoDoser Base unit if using CitoDoser.

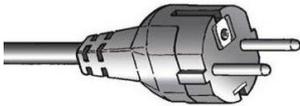
Above:

- Check there is at least 70cm / 28" above the table, if using CitoDoser.

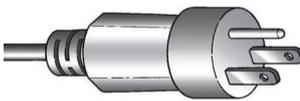
Power Supply

The machine is shipped with 3 types of Mains cables (length 2.5 m/ 8.2').
The mains power socket must be easily accessible and located between 0.6 m - 1.9 m (2½' – 6') above floor level. (An upper limit of 1.7 m (5' 6") is recommended).

Single-phase Supply



The 2-pin (European Schuko) plug is for use on single-phase connections.
If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug.



The 3-pin (North American NEMA 5-15P) plug is for use on single-phase connections.
If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug.

2-phase Supply



The 3-pin (North American NEMA 6-15P) plug is for use on 2-phase connections.
(This cable is recommended for use with CitoPress-30).
If the plug supplied on this cable is not approved in your country, then the plug must be replaced with an approved plug.

Electrical Table:

Voltage / frequency	100-120V / 50-60 Hz, 200-240 V / 50-60 Hz Auto detection and auto switch over		
Power inlet	1-phase (N+L1+PE) or 2-phase (L1+L2+PE) The electrical installation must comply with "Installation Category II"		
	CitoPress-5	CitoPress-15	CitoPress-30
Power consumption: Idle	8 W	8 W	8 W
Power Max 100-120V 200-240V	1300 W 1300 W	1300 W 1300 W	1300 W 2300 W
Current, max 100-120V 200-240V	13 A 5.6 A	13 A 5.6 A	13 A 10 A
Residual Current Circuit Breaker	type A, 30 mA (or better) is required.		

Water Supply

Required

Option

The machine is supplied with a 2 m / 6.5' pressure hose to connect the machine to the water mains.

Water Pressure: 1 - 6 bar / 14.5 - 87 psi

Hose supplied: 3/4" dia. x 2 m/6.5' with standard connector.

Tube Connection: 3/4" British Standard pipe thread

However a recirculation cooling unit is recommended.

See Accessories on page 6 for details.

Water Outlet – Drain

Required

Option

The machine is supplied with a 2 m / 6.5' drain hose.

Ensure that the water outlet drain is below the level of the machine.

Compressed Air

Required

Option

Not required.

Exhaust

Required

Option

Not required.

Ambient Conditions



5-40 °C
41-104 °F



Max. 95% RH

Accessories & Consumables

Please refer to the [CitoPress Brochure](#) and the [Hot Mounting Brochure](#) for details of the range available.

Recirculation cooling unit

Recommended for CitoPress-15/-30

Struers Cooling System 7 with 50 l tank, small pump and Cooli-1 is recommended. For intensive use, *Struers Cooling System 5* with 100 l tank, small pump, Cooli-1 and filter bag is recommended.

The use of Struers consumables is recommended.

Other products (e.g. coolants) may contain aggressive solvents, which dissolve e.g. rubber seals. The warranty may not cover damaged machine parts (e.g. seals and tubes), where the damage can be directly related to the use of non-Struers consumables.

Declaration of Conformity

Manufacturer	Struers ApS • Pederstrupvej 84 • DK-2750 Ballerup • Denmark
Name	CitoPress-5, CitoPress-15, CitoPress-30
Model	N/A
Function	Hot mounting press
Type	0577, 0573, and/or 0574
Cat. no.	CitoPress-5: 05776127 CitoPress-15: 05736127 CitoPress-30: 05746127
Serial no.	



Module H, according to global approach



We declare that the product mentioned is in conformity with the following legislation, directives and standards:

2006/42/EC	EN ISO 12100:2010, EN 60204-1:2018, EN 60204-1-2018/Corr.:2020
2011/65/EU	EN 63000:2018
2014/30/EU	EN 61000-3-2:2014, EN 61000-3-3:2013, EN 61000-6-1:2007, EN 61000-6-3:2007, EN 61000-6-3-A1:2011, EN 61000-6-3-A1-AC:2012
Additional standards	NFPA 79, FCC 47 CFR Part 15 Subpart B

Authorized to compile technical file/
Authorized signatory

Date: [Release date]



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