

Anexa tehnica, lot 2: Model EC-350, Modular Tissue Embedding Center

Prodicator: Especialidades Médicas Myr. Tara de origine: Spania

Specificarea tehnică deplină solicitată, Standarde de referință	Specificarea tehnică deplină oferită, Standarde de referință
Stație de includere în parafină cu anexă de răcire Descriere Stația de includere în parafină cu anexă de răcire este un echipament utilizat în laboratoarele de anatomie patologică pentru prelucrarea probelor biologice. Aceasta permite impregnarea și includerea țesuturilor în parafină topită, facilitând obținerea de blocuri solide pentru secționare microscopică. Anexa de răcire asigură solidificarea rapidă a parafinei, contribuind la păstrarea structurii tisulare și la creșterea eficienței fluxului de lucru în laborator. Parametru Specificație Componente: Unitate de includere Obligatoriu Rezervor parafină Obligatoriu Dispenser parafină Manual sau controlat electronic Suprafață de lucru Cu încălzire Suport casete / matrice Cu încălzire Iluminare Iluminare LED/Halogen Anexă de răcire Placă rece pentru solidificarea parafinei Specificații tehnice - unitate de includere: Tip echipament Stație de includere în parafină Temperatură parafină Reglabilă, până la $\geq 65^{\circ}\text{C}$ Control temperatură Electronic Capacitate de includere ≥ 70 casete/blocuri simultan Capacitate rezervor ≥ 2 litri Suprafață de lucru Încălzită, temperatură reglabilă Dispenser parafină Flux controlat prin pedală sau automat Specificații tehnice – anexă de răcire: Tip anexă Placă de răcire pentru parafină Temperatură de lucru $\leq +5^{\circ}\text{C}$ Suprafață utilă Mai multe blocuri simultan Control temperatură Automat Capacitate de răcire blocuri cel puțin 50 blocuri / casete / forme Stabilitate termică Obligatoriu Funcționalități utile: Reglaj independent temperaturi Rezervor, suprafață lucru, suporturi Curățare ușoară Suprafețe netede, accesibile Operare intuitivă Comenzi simple, afișaj clar Funcționare continuă Potrivită pentru lucru zilnic Compatibilitate Casete și matrice standard Sursă de alimentare 220V, 50 Hz	Stație de includere în parafină cu anexă de răcire Descriere Stația de includere în parafină cu anexă de răcire este un echipament utilizat în laboratoarele de anatomie patologică pentru prelucrarea probelor biologice. Aceasta permite impregnarea și includerea țesuturilor în parafină topită, facilitând obținerea de blocuri solide pentru secționare microscopică. Anexa de răcire asigură solidificarea rapidă a parafinei, contribuind la păstrarea structurii tisulare și la creșterea eficienței fluxului de lucru în laborator. Parametru Specificație Componente: Unitate de includere DA Rezervor parafină DA Dispenser parafină Manual: prin touch plate sau prin pedala. Suprafață de lucru Cu încălzire Suport casete / matrice Cu încălzire Iluminare Iluminare LED Anexă de răcire Placă rece pentru solidificarea parafinei Specificații tehnice - unitate de includere: Tip echipament Stație de includere în parafină Temperatură parafină Reglabilă pe interval $40-70^{\circ}\text{C}$ Control temperatură Electronic Capacitate de includere - Capacitatea compartimentului stâng/drept: 1,7 l / 190 casete / 400 matrice Capacitate rezervor parafina 5 litri Suprafață de lucru Încălzită, temperatură reglabilă pe intervalul $40-70^{\circ}\text{C}$ Dispenser parafină Flux controlat prin pedală sau manual prin touch plate Specificații tehnice – anexă de răcire: Tip anexă Placă de răcire pentru parafină Temperatură de lucru ajustabilă pe intervalul 0 to -12°C Suprafață utilă Mai multe blocuri simultan Control temperatură Automat Capacitate de răcire blocuri 80 blocuri / casete / forme Stabilitate termică Obligatoriu Funcționalități utile: Reglaj independent temperature: Rezervor, suprafață lucru, suporturi Curățare ușoară Suprafețe netede, accesibile Operare intuitivă Comenzi simple, afișaj clar Funcționare continuă Potrivită pentru lucru zilnic Compatibilitate Casete și matrice standard Sursă de alimentare 220V, 50 Hz

Technical data

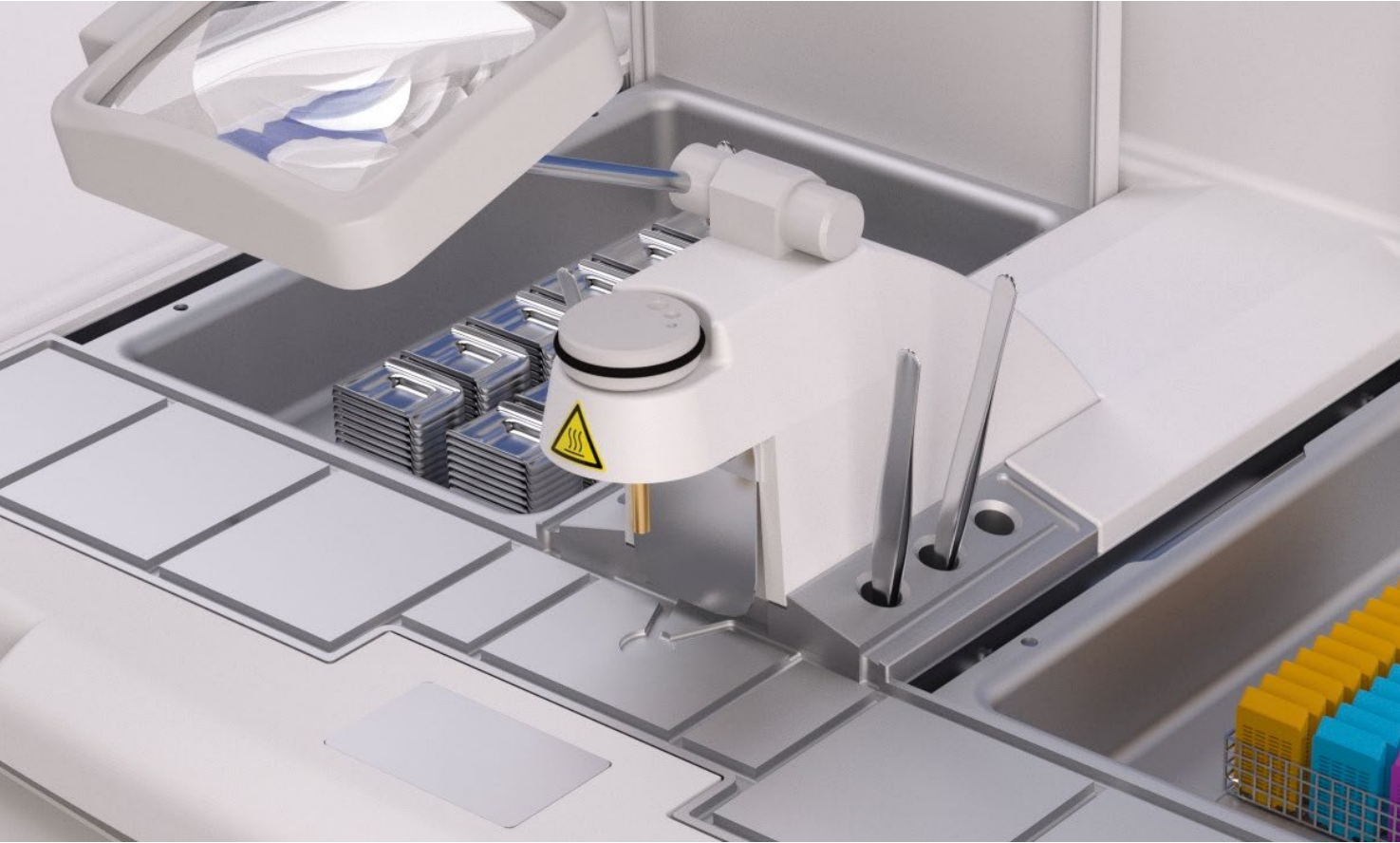
EC 350-1: DISPENSING CONSOLE

SIZE (W - D - H)			
Console	595 X 650 X 430 mm		
Removable trays	262 X 175 X 55 mm		
WEIGHT			
	27,8 Kg		
ADJUSTABLE TEMPERATURE RANGE			
Paraffin reservoir, left/right	40-70 °C		
Chamber, heated area, forceps receptacle	40-70 °C		
Electrically heated forceps	60-75 °C		
LEFT/RIGHT CHAMBER CAPACITY			
	1,7 l / 190 cassettes / 400 moulds		
PARAFFIN RESERVOIR			
	5 l		
POWER REQUIREMENTS			
Version 1	100-120VAC	50/60Hz	7,5A
Version 2	100-120VAC	50/60Hz	7,5A
ACCESSORIES			
Magnifying glass, Electrically heated forceps (1 / 2 / 4 mm)			



EC 350-2: CRYO CONSOLE

SIZE (W - D - H)			
Console	340 x 600 x 405 mm		
Cold plate	375 x 307 mm		
WEIGHT			
	24,4 kg		
ADJUSTABLE TEMPERATURE RANGE			
	from 0 to -12 °C		
CAPACITY			
	Up to 80 cassettes/60 molds		
POWER REQUIREMENTS			
Version 1	100-VAC	50/60Hz	2,4A
Version 2	110-120VAC	50/60Hz	3,0A
Version 3	220-240VAC	50/60Hz	1,2A
ACCESSORIES			
Methacrylate cover			



EC-350

Design, functionality and versatility
for an easy operation.

MODULAR TISSUE EMBEDDING CENTER
EC-350

MODULAR TISSUE EMBEDDING CENTER

EC-350

Featuring innovative design as well as easy operation offering a simple and flexible process execution



ERGONOMIC & EFFICIENT EMBEDDING EXPERIENCE

The spacious, heated working area is enhanced with non-glare white LED lighting, ensuring optimal visibility. An optional swiveling magnifier enables precise, ergonomic embedding. Paraffin flow is activated manually or via footswitch, with adjustable flow rate. The integrated cold spot beside the nozzle streamlines workflow and simplifies sample orientation for fast, reliable processing.



INTELLIGENT CONTROL AT YOUR FINGERTIPS

The energy-saving automatic timer calculates pre-heating times and manages activation autonomously. Simply program the working hours and the system handles the rest—automating startup and shutdown. Cryo module temperatures are seamlessly controlled via this same intuitive panel.



SMART STORAGE & HIGH CAPACITY RESERVOIR

Two independently heated trays flank the wax dispenser, ideal for warming and organizing cassettes and moulds. The large 5-liter paraffin tank ensures uninterrupted operation, even during peak workflow, supporting high-efficiency performance in any lab setting.



CRYO CONSOLE EC 350-2

- Large cooling surface for up to 80 cassettes / 60 moulds.
- Selectable temperature between 0 and -12° C.
- Even temperature distribution over the entire surface.
- Allow placement on the right or left side of the dispensing console.
- Stand-alone operation possible.

ACCESSORY

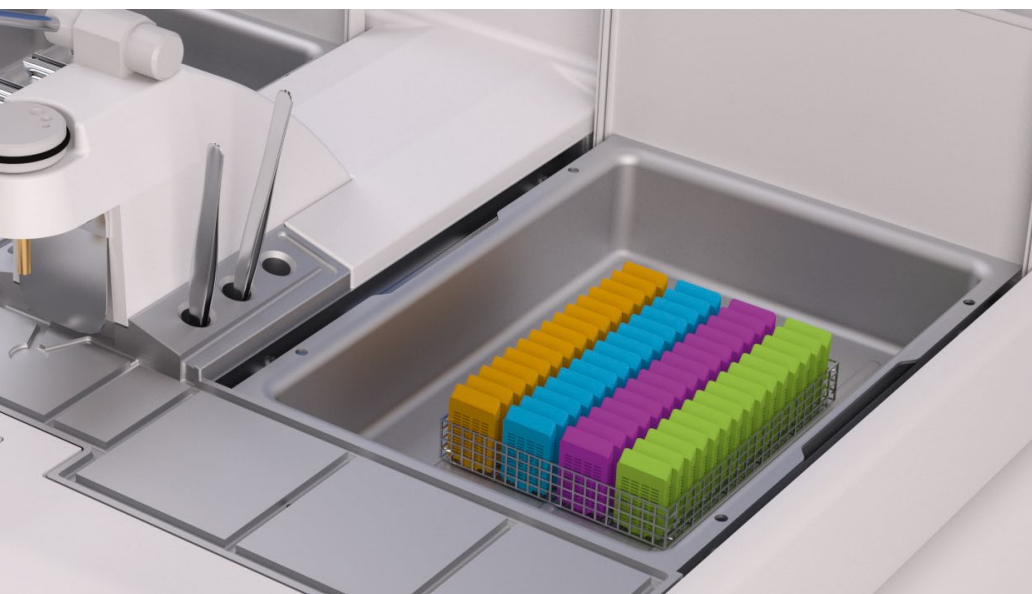
- Methacrylate cover to prevent building up of frost

DISPENSING CONSOLE EC 350-1

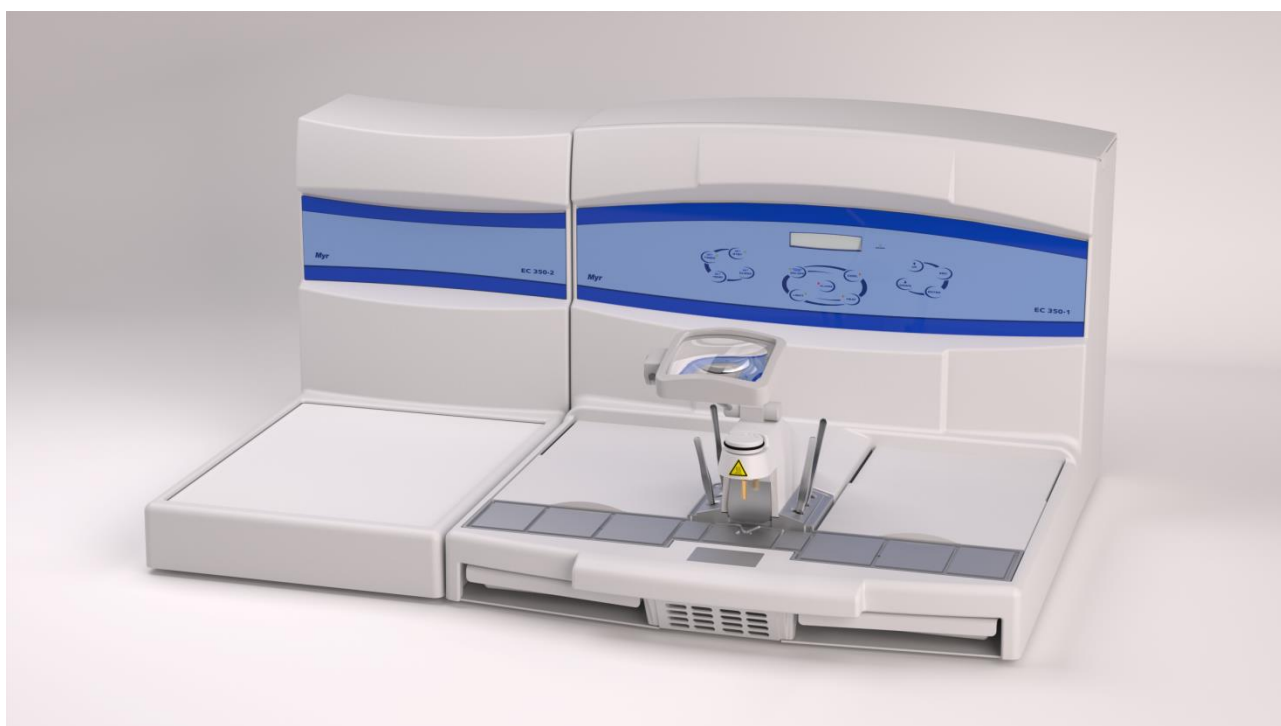
- 5 liter paraffin reservoir.
- Knob to adjust paraffin flow.
- Paraffin flow can be released manually (touch plate) or via footswitch.
- Adjustable white LED illumination.
- 6 heated wells for forceps.
- Cold spot integrated into the working surface.
- Integrated connector for electrically heated tweezers.

ACCESSORIES

- 1, 2 or 4 mm heated tweezers.
- Magnifying glass.



TISSUE EMBEDDING CENTER EC 350



User manual
Version 11 – 16/09/2022

TISSUE EMBEDDING CENTER EC 350
Dispensing Console
Cryo Console

USER MANUAL

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Introduction

The Tissue Embedding Center EC 350 actually consists of two instruments or consoles that enable the procedure for the embedding of tissues to be performed easily and comfortably:

- EC 350-1: Dispensing Console
- EC 350-2: Cryo Console

It is also possible to purchase the Dispensing Console or the Cryo Console separately. The Cryo Console can also work as stand-alone unit.

Intended Use

The EC 350 Embedding Center is a device for paraffin embedding of human tissue specimens previously infiltrated in paraffin and used for medical histological diagnosis by a pathologist.

The EC 350 Embedding Center is exclusively intended for use in In Vitro diagnostic procedures and fulfils the corresponding in-force regulations.



Any other use not described above is considered improper use!

The Tissue Embedding Center EC 350 is designed for professional use only. It must only be operated by trained and qualified laboratory personnel.

The users of the device must previously read the User Manual carefully and must be familiar with all aspects of operation and safety precautions before starting out to operate the instrument.

Safety

The installation and normal use of the Tissue Embedding Center is simple and safe if you observe the instructions given in this manual.

Should the equipment be used for unauthorised purposes or uses not specified by the manufacturer, safety may be impaired.

Input and output circuits are isolated from the main power supply.

However, those situations which could constitute a risk for laboratory personnel or equipment, are distinguished in this manual with the following symbols and warning messages:



DANGER

This sign, symbolizing DANGER, means that injury to persons as well as material damage to the unit may occur if these instructions are not observed.

For your own safety, observe these instructions carefully.



CAUTION

This sign, symbolizing CAUTION, means that material damage may occur if these instructions are not observed.

For a long service life of the unit, observe these instructions carefully.



INFORMATION

This sign calls your attention to specific details of the unit whose relevance requires them to be given special consideration.



Apart from the instructions given in this manual, the personnel involved in operating the Tissue Embedding Center should know and observe the general guidelines and rules for safety and hygiene applicable to the workplace where the unit is installed. The symbol shown here indicates areas where the temperature may exceed 60°C.



Everyone involved in operating and programming the Tissue Embedding Center should read these instructions carefully and fully understand them before using the unit.



BIOHAZARD:

Warning of biological danger.



RADIOACTIVITY:

Warning of radioactive danger.

Safety Precautions

The operator's safety is affected, when the instrument is not operated in accordance with this instruction manual.

Please observe the following general precautions during operation of this instrument. Failure to comply with these precautions violates safety standards and the intended use of the instrument. Especialidades Médicas MYR, S.L. is not liable for misuse of the instruments and failure to comply with basic safety requirements.

Instrument grounding

To avoid injury from electrical current, the instrument must be connected with the protective earth. The instrument is equipped with a three wire ground plug. The power outlet must be connected to the protective earth and must meet the International Electrotechnical Commission (IEC) regulations.

Caution: mains Voltage

Never remove instrument housing during operation. Component replacements as well as adjustments must only be made by trained service personnel. Only use original spare parts for replacement work. Unplug the unit before removing or opening the covers.

Danger in explosive environment

The instrument must not be operated in the presence of flammable gases. Moreover, the instrument must not be exposed to conditions whereby dangerous gas concentrations can occur.

Hazard of radioactive radiation



When working with radioactive specimens observe all applicable radiation safety procedures. When working with radioactive contaminated material, appropriate safety and disinfecting measures must be carried out. According to the rules and regulations concerning the handling of radioactive contaminated material of the respective laboratory, safety clothing (e.g. particle mask, gloves, protective shoe covers) must be worn. Radioactive contaminated waste must be disposed of according to the respective regulations.



All containers in instrument are only suitable for paraffin and not for any other inflammable material.



Due to the fact that work might be hazardous because of freezer burns on frozen parts, the EC-350-2 should be only operated by skilled or well trained lab personnel. We recommend to wear protective gloves.

Hazard of infection



Specimens used during the intended operation of the instrument might potentially be infectious. For this reason, it is recommended to observe the general laboratory regulations concerning protection against danger of infection.

Information on decontamination media, their use, dilution and effective range of application can be read in the Laboratory Biosafety Manual:1984 of the World Health Organization.

When working with infectious specimens observe all applicable safety procedures. When working with infectious material, appropriate safety and disinfection measures must be carried out. According to the rules and regulations concerning the handling of infectious material of the respective laboratory, safety clothing (e.g. particle mask, gloves, protective shoe covers) must be worn. Infectious waste must be disposed of according to the respective regulations.

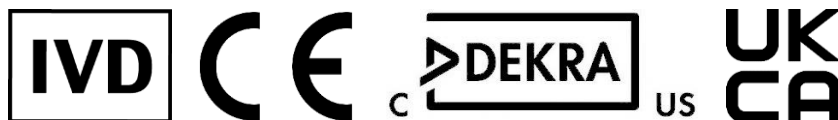
Hazard of malfunction

To avoid the hazard of malfunction of an instrument, it must only be operated in a controlled electromagnetic environment. This means that transmitters such as mobile phones must not be operated in their close vicinity.

In case of malfunctions and/or service work, please turn off the instrument and contact your local dealer.

Certification

Especialidades Médicas MYR, S.L. certifies that this instrument has been tested and checked carefully. Its technical data was verified before shipment to be in accordance with the published specifications. The instrument complies with applicable international safety regulations.



Warranty

The MYR product is warranted against defects in material and workmanship for a period of 1 year. Parts which prove to be defective during the warranty period will be repaired or replaced free of charge. No other warranty is expressed or implied. Unauthorized modification or repair by third party persons will void the warranty. The warranty will expire in case of improper or wrong use of the instrument and in case the warning and precautionary messages are not observed. Especialidades Médicas MYR, S.L. is not liable for any occurring damage.

Once the guarantee period has expired, a maintenance contract should be signed to ensure the unit is kept in optimum operating condition. For more information on maintenance contracts, please contact your local distributor.

Documentation

This instruction manual will be supplied together with each instrument. Additional copies can be ordered by indicating the serial number of the instrument.

This manual has been written in the Spanish language and it has been translated into English and French. The Spanish version shall prevail. Especialidades Médicas *Myr*, S.L. shall not be liable for the consequences of mistakes, omissions or other defects in the translation of this manual.

Subject to amendment and improvement without notice.

Reception and installation of the unit

1. Before removing the Consoles from their shipping packages, carefully inspect the cardboard for any damage which may have occurred during transport. Should you detect any sign of damage, do not open the package and immediately report the situation to the transport agency.
2. After removing each Console from its package, inspect it carefully for damage. Should any be noted, immediately notify the distributor from whom the unit was purchased.
3. Remove cardboard, foamed parts and accessories used for shipment. Please keep the original packing as well as the foamed parts for possible return shipments.
4. Place the instruments on a stable level surface with ventilation space both behind and above the unit to ensure adequate air circulation.
5. Place the Consoles in position one beside the other: The Cryo Console may be installed on either the left or the right hand side of the Dispensing Console, whichever is preferred.

Connection

The figure on page 10 shows the connections which must be performed on every Console.



CAUTION

Before turning on the instrument for the first time, please check if the power requirements indicated on the type label correspond to the power supply voltage being used! See page 20 Maintenance



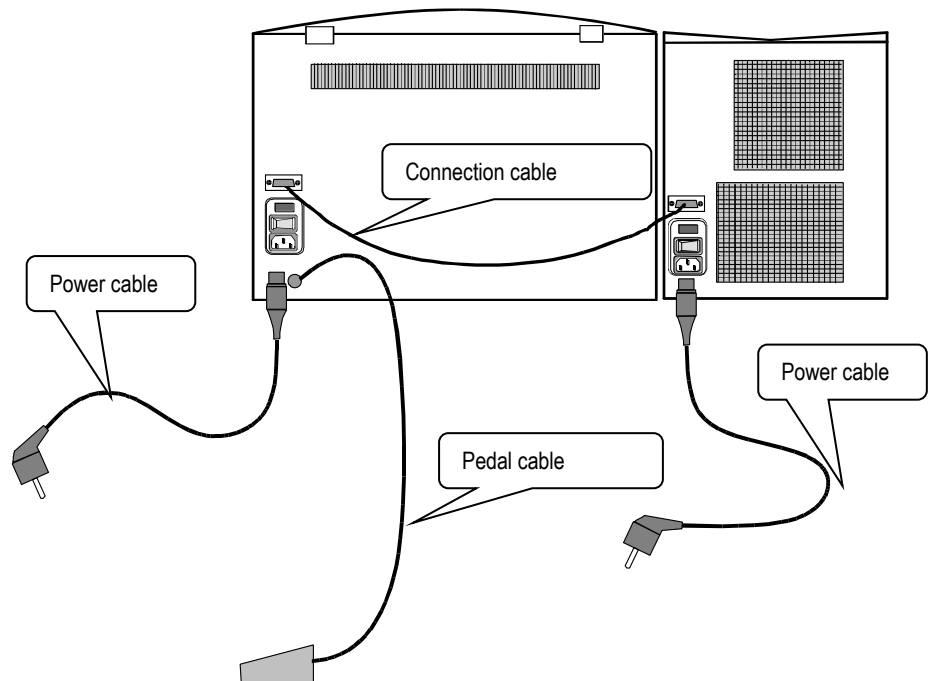
DANGER

Be sure that the mains socket into which you plug the equipment is provided with a protective earth connection.

Technical data

Dispensing Console				
Size in mm		Width 595, Depth 650, Height 430,		
Electrical connections	Voltage (± 10%)	100-120V/50-60 Hz	220-240V/50-60 Hz	
	Power consumption	7.5A	3.6A	
Adjustable temperature range	Paraffin storage tank	from 40° to 70°C		
	Right and left chambers			
	Hot zone			
	Tweezers	from 40° to 70°C		
	Auxiliary heated forceps	from 60° to 75°C		
Capacity	Paraffin storage tank	5 l		
	Right and left chambers	1,7 l		
		190 cassettes		
		400 molds		
Embedding Area		Sealed		
Weight		27.80 kg		
Primary circuits		100 – 120 V, 2 x T10AH 220 – 240 V, 2 x T5AH		
Cryo Console				
Size in mm		Width 340, Depth 600, Height 405,		
Electrical connections	Voltage (± 10%)	100-V/ 50-60 Hz	110-120 V/ 50-60 Hz	220-240V/ 50-60Hz
	Power consumption	2.4A	3.0 A	1.2A
Adjustable temperature		Adjustable from 0° to -12°C		
Size of the cold plate		305 x 375 mm		
Weight		24.40 kg		
Ambient conditions	Max. humidity	80% (without condensation)		
	Temperature range	from 5 °C to 40 °C		
Primary circuits		100 – 120 V, 2 x T10AH 220 – 240 V, 2 x T6,3AH		
Dispensing & Cryo Console				
Transportation & storage conditions				
Storage temperature range:		-20°C up to +50°C		
Operating conditions:		+5°C to +40°C (at a max. rel. humidity of 80%) altitude up to 2000 m M.S.L. for indoor use only		
Pollution degree:		2		
Overvoltage category:		II		
Floor loading requirements:		150 kg/m²		

Connections between the Dispensing Console and the Cryo Console



The power supply cable should be connected to the corresponding input on both console units.

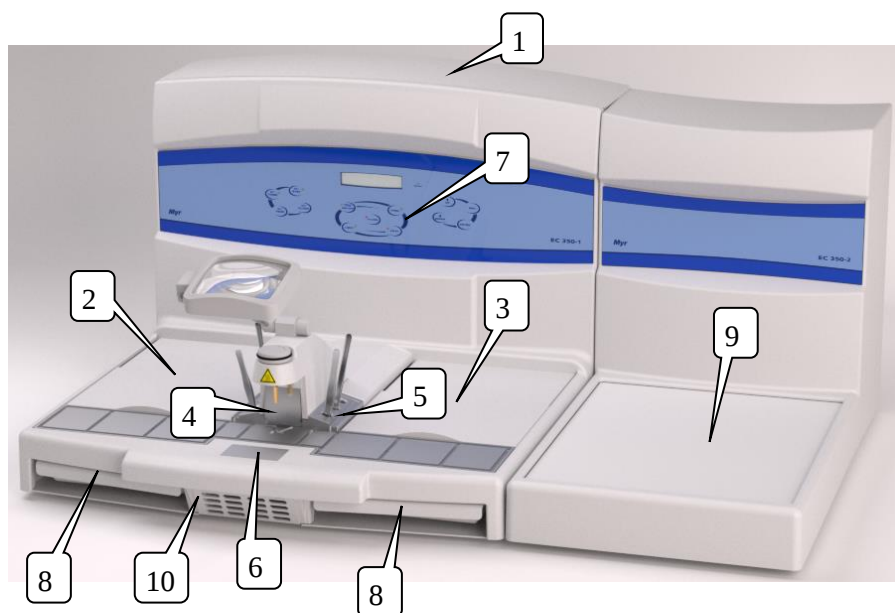
If required, the Dispensing Console should be connected to the Cryo Console using the connection cable provided as shown above.

The pedal cable should also be connected to the Dispensing Console if the pedal has been supplied as an optional extra, together with the additional external set of tweezers.

Tighten the screws on the plugs to prevent the connections from becoming loose.

To reach the maximum working efficiency, dispensing console must be always connected to the mains and with the mains switch in On position.

Components of the Dispensing Console and the Cryo Console



- | | |
|-----------------------------|---|
| 1. Storage for hot paraffin | 7. Keypad and display for programming and control |
| 2. Left-hand chamber | 8. Waste trays |
| 3. Right-hand chamber | 9. Cryo Console |
| 4. Dispensing nozzle | 10. Connector for auxiliary heated forceps |
| 5. Storage for forceps | |
| 6. Cold zone | |

Fill a mould with paraffin by simply placing it below the dispensing nozzle and then touching the touch-plate or pressing the pedal.

If necessary, it is possible to illuminate the nozzle area by pressing the key marked LIGHT on the control keypad.



The paraffin flow rate can be adjusted by turning the knob located on top of the nozzle. The maximum flow rate is when the knob is in the position shown in the figure (with the largest circle at the top).

Turning the knob to the left reduces the amount of paraffin dispensed. When the smallest circle is placed at the top, the paraffin dispensing nozzle is closed.

Refer to page 15 and following pages for instructions on how to program the operation of the Dispensing Console and the Cryo Console.



Dispensing unit features as standard equipment, an auxiliary heated forceps connector only for **Myr** heated forceps.

Start-up and programming



ATTENTION

The Dispensing Console and Cryo Console are independently connected to the power supply. However, if connected together, both units are controlled and programmed from the Dispensing Console. For this reason it is important that the cable connecting both units be correctly installed. Refer to page 10.

After connecting both units to the power supply, and making sure that the connection cable is correctly installed, turn on **firstly** the Cryo Console and **then** the Dispensing Console.

The POWER pilot light on the keyboard and beside the display screen indicates that the unit is under power.

Under normal operating conditions the screen may display different messages depending on the status of the unit and the selected interface language:

TIMER
IN PROGRESS

Waiting for start-up.

This display appears on the screen if the unit is programmed to start and stop within a time range which does not include the time now, or if the timer is set to 00:00.



In this case, the console must be started manually by pressing the MANUAL MODE ON/OFF key (see page 17, programming start and stop).

STANDBY
IN PROGRESS

Programmed pause.

This display appears on the screen if the unit is programmed to remain on standby between certain dates, including the current date (see page 18, programming standby).

HEATING PARAFFIN
PRESS ESC KEY

Heating mode. The paraffin storage tank or another point that requires heating has not yet reached the programmed temperature.



Press ESC key.

23-07-03 14:02:40
PARAFFIN 47°C

The display appears illuminated. The equipment is in operation with the settings as programmed (see page 15, "Programming").



Pressing either the UP or DOWN keys successively displays the temperatures of the:

PARAFFIN - FORCEPS - AREA - VALVE - LEFT CHAMBER. - RIGHT CHAMBER. - DELIVERY TUBE - AUXILIARY HEATED FORCEPS - CRYO CONSOLE

Keypad

This soft-touch keypad is used to control and program the embedding center:



Actions of the keys:



Enables programming date intervals when the unit will not start automatically (e.g. public holidays, vacations, etc.).

When the key is in programming mode, the pilot incorporated in the key will be lit.



Sets the time when the unit will be turned on and off. When the key is in programming mode, the pilot incorporated in the key will be lit.



Sets the temperature for each of the areas to be heated.



Sets the date and local time of where the unit is installed.



For manual control over starting and stopping the unit without using the timers for automatically starting and stopping the unit. When the unit is in manual mode, the pilot incorporated in the key will be lit.



Turns the light illuminating the dispensing nozzle on or off. The pilot indicates that the light is on



Starts and stops the heating process.

- Red pilot light: heating in progress
- Green pilot light: at operating temperature



Starts and stops the Cryo Console.

- Green pilot light: the Cryo Console has reached the pre-set temperature
- Red pilot light: the Cryo Console is stopped
- Intermittent green pilot: the Cryo Console is in the start-up phase
- Intermittent red pilot: the Cryo Console is disconnected from the power supply or not connected to the Dispensing Console



This key is used to acknowledge alarms or display the most recent alarm conditions that have occurred. The red pilot indicates that an alarm has been activated.



When the unit is in operation (display lit), these keys successively display the current temperatures of each area.



When the unit is in programming mode, these keys are used to set (increase or decrease) the values for the temperatures, times, dates, etc.



Press this key to cancel any programming situation.

This key is used to validate or accept the option selected using the arrow keys. Once the option is validated the program automatically passes to the next option.

Selecting operating parameters

Before beginning to program the unit you will probably want to select the interface language, the units for temperatures and other variables.

Turn off the Dispensing Console using the switch on the rear panel and then turn it on again.

Before 5 seconds have elapsed press the following keys one after the other; MANUAL MODE, UP and DOWN.

The screen will display the following message:

S.A.T.
MANUFACTURER

This message indicates that the unit is in the special programming mode for Technical Service.

After about 5 seconds the following message will appear:

SELECT LANGUAGE
* ENGLISH

Use the UP or DOWN arrow keys to select the desired interface language. Once selected, press the ENTER key to confirm. The following screen is displayed:

TEMPER. SELECTION
* CELSIUS

Use the UP or DOWN keys to select the temperature units as CELSIUS or FAHRENHEIT and confirm the choice by pressing ENTER.

AUX. FORCEPS
* ENABLED

Use the UP and DOWN arrow keys to select ENABLED if the optional auxiliary tweezers are installed or DISABLED if they are not. Confirm by pressing ENTER.

DATE FORMAT
*EUROPEAN FORMAT

Use the UP and DOWN keys to select the date format:

- European Format: DD-MM (Day – Month)

- American Format: MM-DD (Month - Day)

Confirm by pressing ENTER

CONT.RESERVOIR HEAT
* ENABLED

Use the UP and DOWN keys to select ENABLED if you want that unit always be ready to dispense paraffin, or DISABLED to turn off dispensing function on STANDBY mode (see pag.18).

Confirm by pressing ENTER

Programming

The Tissue Embedding Center EC 350 combines vast programming possibilities with simple handling.

It is possible to program:

The real date and time (internal clock/calendar)

The temperature of each zone

The scheduled time for automatic start-up ¹ and shut down of the unit.

That the unit does not start on certain dates (e.g. vacations, etc.)

Programming the date and time:

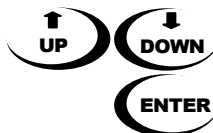
Should the display be greyed out press the MANUAL MODE key and wait for five seconds.



Press the SET CLOCK key and the following display will appear (example)²:

TUESDAY	11:40:00
24-11-03	

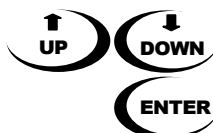
The day of the week (in this example, Tuesday) flashes.



Change the day using UP or DOWN key as required and confirm the selection by pressing ENTER.

The first digit of the date then begins flashing.

Remember that the date format may be DAY-MONTH-YEAR if the European date format has been programmed, or MONTH-DAY-YEAR, if the American date format has been programmed (refer to page 14.)



Change the date using the UP or DOWN key as required and confirm the selection by pressing ENTER

And so on successively to edit all the values for the date and time.

Programming temperatures

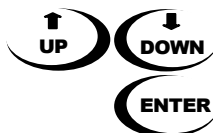
Should the display be greyed out press the MANUAL MODE key and wait for five seconds.



Press the SET TEMP key and the following display will appear:

SET TEMPERATURE	
PARAFFIN	60°C

Note that the temperature units (Celsius / Fahrenheit), will depend on those set in the section on language and units (refer to page 14).



Use the UP or DOWN keys to change the value, if necessary, and confirm the selection by pressing ENTER.

¹ When programming the start-up time the unit automatically calculates when it should connect the heaters so that the temperatures of the paraffin and other areas are correct for the Tissue Embedding Center EC 350 to be used at that time.

² The interface language will depend on that selected (refer to page 14)

It is then possible to successively change the temperature values for other zones of the Tissue Embedding Center EC 350 in the order shown below. Please note that for safety reasons some values are internally limited by the unit. This is why it is not possible to select temperature values that exceed certain limits.

Repeat the same procedure for each of the other zones.



The recommended values for each of the zones (factory default values) are:

PARAFFIN	61°C	142°F
TWEEZERS	65°C	149°F
AREA	60°C	140°F
VALVE	62°C	144°F
LEFT CHAMBER	62°C	144°F
RIGHT CHAMBER	62°C	144°F
PARAFFIN CONDUIT ³	62°C	144°F
CRYO CONSOLE	-10°C	14°F
AUX. HEATED FORC.	62 °C	144°F

If Cryo console works as stand alone unit, temperature will be adjusted through a potentiometer located at the back of the instrument.

In list below are showed temperatures of Cryo console depending on position of potentiometer knob:



Knob position	Temperature in °C (±1°C)
0	0
1	0
2	-1,2
3	-2,7
4	-4,0
5	-5,4
6	-6,8
7	-8,2
8	-9,6
9	-11,4
10	-12,0

³ This is the tube that transports the paraffin from the storage tank to the solenoidvalve.

Programming automatic start-up and shut-down

The Modular Embedding Center offers different program options for the unit operating times:

The same times from MONDAY to FRIDAY

Different operating times (or stopped) on SATURDAYS and SUNDAYS

Individual programs for each day of the week



It is important to remember that the unit will be ready for operation at the programmed time as it will have already automatically connected the heaters so that the different areas are at the required temperature.



Should the display be grayed out press the MANUAL MODE key and wait for five seconds.

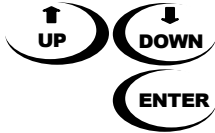


Press the SET TIMER key and the following display will appear. Example:

START UP
* MON-FRI

START UP
* DAILY

MON-FRI
ON TIME HH-MM



Use the UP or DOWN keys to select the operating time programmed for all work days (Monday to Friday)

or if necessary, it is possible to individually program each day of the week. Confirm the selection by pressing ENTER

The upper left corner of the display shows the appropriate reference (Monday to Friday or each day of the week).

Use the UP or DOWN keys to change the value for start-up or operation of the unit if necessary, and confirm the selection by pressing ENTER to move to the next value.

Once the start time has been set the screen will display the options for the unit shut-down time:

MON-FRI
OFF TIME HH-MM

Proceed in the same way to set time when the unit should be automatically shut-down.

Once these values have been set the option for SATURDAY and SUNDAY will be displayed:

SATURDAY
ON TIME 00-00

In the event that the unit is not to be used over the weekend, enter the values 00:00 for START and 00:00 for STOP if the unit is set on the European time format (24h). Repeat the same operation for SUNDAY.

If the selected time format is the American (12h - AM/PM), the time value 00:00 does not exist therefore please enter any time value that should be the same for BEGINNING and END. Repeat the same operation for SUNDAY.

If the DAILY option has been selected it will be necessary to set the START and STOP time for each day of the week.



The default values for the TIMER (factory-set values) are:

MON - FRI ON TIME: 08:00
OFF TIME: 15:00

SATURDAY ON TIME: 00:00
OFF TIME: 00:00

SUNDAY ON TIME: 00:00
OFF TIME: 00:00

Programming pauses

The Tissue Embedding Center EC 350 can be programmed so that it will **NOT START** automatically between certain dates. This option is ideal for saving energy when the unit is not in use (e.g. on Public Holidays or during vacations).

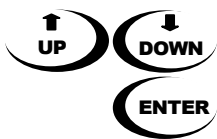
Should the display be greyed out press the MANUAL MODE key and wait for five seconds.



Press the SET STBY key and the following display will appear (example):

SET	STANDBY	ON	TIME
00-00		00-MM	

Use the UP, DOWN and ENTER keys to set the day and month (or the month and day if the American format has been selected) ON WHICH the unit is **NOT TO START** automatically, that is, the beginning of the pause. Confirm the settings by pressing ENTER for each value.



Use the UP, DOWN and ENTER keys to set the END of the pause, that is, the day and month AFTER which the unit **WILL COME INTO OPERATION AGAIN** with the programmed operating times.

If the unit is not to have any programmed pause in operation enter 00-00 as the values for START and STOP.



The default values for the pause are:

PAUSE START: 00-00
END: 00-00

(pause not programmed)

Maintenance and Cleaning



Do not use solvents, neither aggressive detergents nor sharp or pointed objects to clean the unit. Use the scraper delivered together with instrument.

Citric based detergents and/or hot soapy water are also adequate for cleaning the unit.



The work area has drainage channels that guide any surplus paraffin to the waste collection trays. Before the paraffin collection trays can be emptied, any excess paraffin on the work area must be removed in order to prevent any paraffin from penetrating into the instrument. To clean the drainage channels and outlet holes it is very advisable to use a cotton swab.

Empty both paraffin collection trays regularly. Emptying frequency may vary depending on use but at least **ONCE A DAY**. If the paraffin collection trays are not emptied following instructions above, excess paraffin will flow into the instruments and may damage the instrument.



Cleaning any paraffin that may be deposited in the waste collection trays is much easier if a simple piece of paper is placed so that it covers the whole bottom of each tray. Paper should be removed carefully when required, but at least **ONCE A DAY**.

Before the removable paraffin trays located right and left of the dispensing nozzle, rest of liquid paraffin should be removed with great care to avoid that paraffin can and penetrate in the instrument inner parts through the sliding cover slots.

Maintenance

Annual routine maintenance

To secure optimum performance of the instrument, it is recommended that a **routine maintenance** be performed by a trained service technician **once a year**.



Exchange of fuses – voltage version

The instrument fuses are placed on the rear side of the instrument. To replace the fuses, turn off the mains switch of the instrument and unplug the unit.

Unlock the fuse cap on the upper side by using a pointed tool (1) and fold it down (2).



Pull off the red fuse insert and check or replace the fuses. In case of replacing fuses, please **verify the value and characteristics corresponding to the name plate**. When inserting the fuses into the fuse holder, please note the correct positioning of the lateral holding clips.

Place the fuse insert in a way that the local voltage version can be read and shows upwards.

Again fold the fuse cap upwards and press it. Now the valid voltage version can be seen in the small window.

Please note that the voltage corresponds with the voltage being used at your place.

Insert the mains cable and turn on the instrument.

Troubleshooting

The following list of possible problems and checks should help you find the cause of the most common difficulties that may arise during normal operation.

The POWER pilot light does not come on

Check:

- the electrical connections to the power supply.
- the position of the switch on the rear panel
- the condition of the two fuses located above the switch

No paraffin is dispensed

Check:

- that the temperatures of the paraffin, delivery tube and valve have been set to adequate values (page 15)
 - that the nozzle flow rate is adjusted correctly (page 11)
- Alternatively operate the pedal and/or the touch-plate to see which of the two systems is failing.

Some of the zones do not heat

Check that the temperatures are programmed correctly.

The cold area does not cool

Contact the Maintenance Service Center

In any case, if the unit still fails to operate after completing these checks, immediately contact the Maintenance Service Center

Alarm messages

Should any technical failure that could damage the unit occur during operation of the Dispensing Console or the Cryo Console, the screen will display one of the following messages:

ERROR SECURITY

Indicates that the system has stopped automatically because of excess temperature.

ERROR SENSOR ERROR

Indicates that one of the temperature probes controlling the heating process is faulty.

In any case, turn the unit off using the switch located on the rear panel of the console or disconnect it from the power supply and immediately notify the Maintenance Service Center.



In case of malfunctions and/or service work, please turn off the instrument and contact your local dealer.

Conditions for the transportation of the instrument

Repair or maintenance work are normally carried out at the site of installation. If this is not possible for some special reasons, the instrument can be returned to MYR. The contact address can be found at the end of this instruction manual.

To guarantee trouble-free function of the instrument after transportation, please note the below-mentioned measures for the transportation preparation.

In addition, the conditions for storage and transportation as mentioned under "Technical Data" must be observed during the entire transportation.



Biohazard:

Please also note the precautionary measures described in our safety precautions concerning biological hazards!

Measures for closing down:

Turn off the instrument and unplug the unit.

In case a cryo console is connected, please loosen the connecting cable.

Empty paraffin reservoir or let the paraffin solidify.



For transportation outside closed buildings use the original packing.

If the original packing is no longer available, please contact your local MYR representation.

Disposal of the instrument after final shutdown



Separate taking back of electrical and electronic instruments in the European Union countries.



This is to be applied in the countries of the European Union and other European countries with a separate collecting system within the waste management.

This product, being an electro and/or electronic instrument, must be treated separately within the waste management process (WEEE).

For non-European Union countries, the disposal of the instrument after final shutdown must be done according to local laws in force

Technical Service

Contact your distributor



Especialidades Médicas **Myr** S.L.

Especialidades Médicas Myr, S.L.

c/ Lleida, 17-23

43712 Llorenç del Penedès – Spain

Tel. +34.977.66.80.20

www.myr.com.es

EC Declaration of Conformity / *Declaración de Conformidad CE*

Manufacturer / *Fabricante*

Especialidades Médicas MYR S.L.

C/ Lleida 17-23 - 43712 Llorenç del Penedès - Tarragona - Spain

We declare under our own responsibility that the product / *Declaramos bajo nuestra responsabilidad que el producto*

Tissue Embedding Center EC 350 / *Centro de Inclusión EC 350*

meets all the requirements of the following European Directives that are applicable
cumple todos los requisitos aplicables de las siguientes Directivas Europeas

98/79/EC:	In Vitro Diagnostic Devices Directive Classification: General IVD (Other), neither listed in Annex II of IVD 98/79/EC nor IVDs for self-testing purpose
2014/30/EU:	Electromagnetic Compatibility (EMC) Directive
2014/35/EU:	Low Voltage Directive
2011/65/EU:	Restriction of the Use of Hazardous Substances in electrical and electronic equipments (RoHS) Directive

The product is designed and manufactured according to the relevant parts of the following International Standards
El producto está diseñado y fabricado de acuerdo con las partes relevantes de los siguientes estándares

IEC 61010-1: 2010 + A1:2016	IEC 61010-2-010: 2014
IEC 61010-2-101: 2015	EN 61326-1: 2013
EN 61326-2-6: 2013	EN ISO 14971: 2012

In addition, the following standards are applied:

Además, la empresa trabaja de acuerdo con las siguientes normas:

ISO 9001-2015:	Quality Management system
ISO 13485-2016:	Medical Devices - Quality Management system

Llorenç del Penedès, 23/10/2019

Francisco Ruiz Robles
Managing Director / *Director General*

AENOR



Quality Management System Certificate



ER-0031/2014

AENOR certifies that the organization

ESPECIALIDADES MEDICAS MYR, S.L.

has a quality management system according to the ISO 9001:2015 Standard

for the activities: Design, development and production of machines for pre-treatment before analysis and diagnosis of all types of tissues: human, animal and vegetable.

which is/are carried out in: CL LLEIDA, 17-23. 43712 - LLORENÇ DEL PENEDES (TARRAGONA)

First issued on: 2014-01-24
Validity date: 2028-04-09

Last issued: 2025-04-09

Rafael GARCÍA MEIRO
CEO



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www.aenor.com



Medical Devices Management System Certificate



GS-0002/2014

AENOR certifies that the organization

ESPECIALIDADES MEDICAS MYR, S.L.

has a medical devices management system according to the UNE-EN ISO 13485:2018 Standard

for the activities: Design, development and production of machines for preparation of all types of human tissues for in vitro diagnostic.

which is/are carried out in: CL LLEIDA, 17-23. 43712 - LLORENÇ DEL PENEDES (TARRAGONA)

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