

RAYPA

Leading
Lab Technologies

 Sterilization

MEDIA PREPARATORS AE-MP SERIES

EFFICIENT SOLUTION
FOR CULTURE MEDIA
PREPARATION



Media Preparators

AE-MP Series media preparators streamlines the operative workflow for microbiology and plant tissue culture laboratories. One single piece of equipment integrates the preparation, sterilization, cooling and dispensation of high quality culture media with outstanding batch to batch reproducibility. They are designed to reduce total run time while delivering high volumes of sterile culture media thanks to its efficient heating system and fast cooling phase at the end of the sterilization process.



FAST CLEANING OF VESSEL AND DISPENSING LINES

The media vessel can be easily removed thanks to integrated handle grips. Dispensing lines can be cleaned and disinfected before, during and after every dispensing cycle with steam pulses reaching all the length of the dispensing line.

SCALABLE AND PRECISE DISPENSATION

Once the media is sterilized and ready for dispensation it can be dispensed manually or semiautomatically by either a pedal, time delay or an optic sensor.

ACCURATE STERILIZATIONS MANAGED BY F_0

The sterilization of the culture media is managed by a P.I.D microprocessor and controlled by a flexible heat probe. Sterilization cycles can either be programmed by F_0 value or temperature and time.



INTENDED USE

- + MICROBIOLOGY
- + PLANT TISSUE CULTURE



F₀ VALUE

The sterilization is managed by a flexible heart probe with precise temperature readings directly taken from the culture media.

The microprocessor uses these readings to calculate the progression of F₀ until complete sterilization is achieved.

The sterile media is then dispensed with a built-in peristaltic pump with programmable settings while using a foot pedal. Other semiautomatic options for dispensing are available.

BENEFITS



Increase efficiency of microbiology and plant tissue culture laboratories.



Accurate control of sterilization with flexible heart probe.



All models include an integrated peristaltic pump.



Scalable and precise dosage of culture media with different options.



Automatic water level control and optional automatic water feed.



Cleaning and disinfection of the dosage pipes before, during and after dispensation.



Sterilization management by either F₀ value or chamber temperature.



Included:

- ✓ Flexible heart probe.
- ✓ Peristaltic pump.
- ✓ 3 dosage pipes.



Media Preparators

Accessories

DOSING STATION FOR CULTURE MEDIA

- Automation and acceleration of the dispensing phase in repetitive operations of medium and small volumes controlled by optical sensor or pedal control.
- Must be installed in our facilities.

Components supplied:

- 1 Control box with timer.
- 1 Dosing foot pedal.
- 1 Support with proximity sensor (for object detection, for example: vessel).
- 2 Clamps for tube.
- 1 Dosing tube with nozzle.
- 1 Power cord.
- 1 Sensor connection cord.
- 1 Manual of instructions.

Reference: **DW-MP**

Resolution seg	0,01
Exterior dimensions L x D x H mm	250 x 285 x 100
Power W	75
Gross weight Kg	6
Voltage V	230
Frequency Hz	50/60



ADDITIONAL PERISTALTIC PUMP HEAD



- To increase dosing flow rate.
- Reference: **CAB-2**

DOSING TUBES WITH NOZZLE



- Diameters of the tube set:
3,2 - 4 - 4,8 - 6,4 - 8 mm

References:
TUB-DOSIF-3,2
TUB-DOSIF-4
TUB-DOSIF-4,8
TUB-DOSIF-6,4
TUB-DOSIF-8

PERFORMANCE FOR DIFFERENT DISPENSING OPTIONS

Dispensing performance	Ø Tube (mm)	Dispensing speed
Dispensing via single peristaltic pump	3,2	7 ml/s
	4	9 ml/s
	4,8	11 ml/s
	6,4	15 ml/s
Dispensing via double peristaltic pump	8	20 ml/s
	3,2	12 ml/s
	4	15 ml/s
	4,8	18 ml/s
Dispensing via external dispensing station and counterpressure	6,4	25 ml/s
	8	33 ml/s
		65 ml/s (0,6 bar)
		76 ml/s (0,7 bar)
	87 ml/s (0,8 bar)	
	94 ml/s (0,9 bar)	

- Dispensing via peristaltic pump can be either manual through pedal or semi-automatic via delay.
- The second peristaltic pump is an accessory that can be added later on.
- Dispensing via counterpressure and the external dispensing station (DW-MP) can be either manual through pedal or semi-automatic via optic sensor.
- The air compressor is included in AE-60-MP, AE-80-MP and AE-100-MP, on other models it is an accessory.



Accessories

AUTOMATIC WATER FILLING KIT



- Water pump to automate the feed of the water tank with purified water in AE-MP series.
 - Compatible with installations that either have a purified water network, a purified water tank or facilities that have an unpurified water network, in the latter case, the kit should be supplied with two other accessories: water purifier (ECOPUR-500) and purified water tank (TANK-KLL).
 - Must be installed in our facilities.
- Reference: **KLL-MP**

COMPRESSED AIR SYSTEM



- Air compressor that offers support pressure during cooling phase to avoid liquid loss by evaporation. This accessory is necessary to enable external dispensation control through the Dosing station for culture media (DW-MP).
 - Must be installed in our facilities.
- Reference: **CP-MP**

INTEGRATED THERMAL PRINTER



- Prints program number, cycle number, temperature, pressure, date and hour of the run and error messages.
 - Selectable printing cadence between 10 and 240 seconds.
 - Must be installed in our facilities.
- Reference: **IT/TS**
Consumable:
Paper: **PAPER-IT**

SW8000 SOFTWARE



- Communication software between the equipment and the PC that allows the real-time and posterior visualization and registry of each cycle. Cycles can also be exported to Excel or printed.
 - Connection to PC via Ethernet, data can also be exported directly with USB stick.
 - Supplied with an Ethernet cable, an USB stick that includes the software and installation drivers and an Ethernet to USB adapter.
- Reference: **SW8000**

ECO-EFFICIENT WATER PURIFIER



- Direct flow eco-efficient water purifier without water accumulation capable of filtering 1,3L/min with LED display.
 - The installation of this accessory requires the joint installation of the external tank (TANK-KLL) and the automatic water filling system (KLL-MP) corresponding to each model.
- Reference: **ECOPUR-500**

Exterior dimensions L x D x H mm	220 x 425 x 415
Purity (TDS) ppm	0,0005
Electrical conductivity µS	>1
Hardness mmol/l	0,0125

TABLE



Reference: **TABLE-MP**

CABLE GLANDS



Reference: **PRENSACLAV**

TRANSPORT TROLLEY



Reference: **TR-TR**

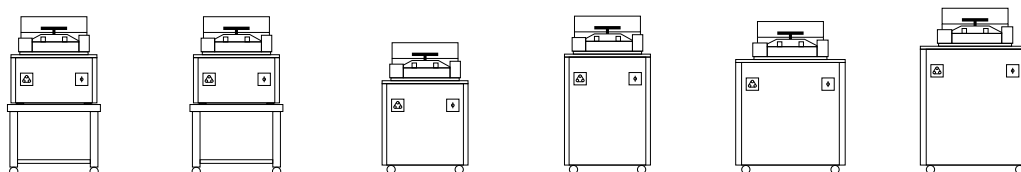
EXTERNAL PROBE ADAPTER



Reference: **CAP-MP**

Media Preparators

Technical Data



GENERAL DATA

	AE-20-MP-10L ¹	AE-20-MP ¹	AE-40-MP	AE-60-MP	AE-80-MP	AE-100-MP
Media preparation capacity² Min - max L	5 - 8	10 - 18	20 - 36	30 - 54	50 - 72	70 - 90
Exterior dimensions L x D x H mm	615x815x735	615x815x735	615x815x1100	615x815x1320	755x935x1285	755x935x1385
Internal cuvette dimensions Ø x H mm	210 x 236	330 x 236	330 x 461	330 x 696	420 x 594	420 x 734
Power³ kW	3	3	6 or 12	9 or 15	15, 20 or 30	15, 20 or 30
Voltage⁴ V	230 (1P+N+E)	230 (1P+N+E)	400 (3P+N+E)	400 (3P+N+E)	400 (3P+N+E)	400 (3P+N+E)
Frequency Hz	50/60	50/60	50/60	50/60	50/60	50/60
Weight Kg	125	128	136	155	245	265

¹Included stainless steel table with casters for AE-20-MP-10L & AE-20-MP (LxDxH: 700 x 700 x 600 mm).

²The minimum volume capacity can actually be lower, much lower on larger unit, if we sterilize by F₀.

³Consult for equipments with enhanced heating capacity.

⁴Consult for other voltages.

ADJUSTABLE PARAMETERS OF PREPARATION AND DISPENSING

Sterilization temperature 50 - 125 °C

Dispensation temperature 25 - 80 °C

Sterilization Time 1 - 250 min

Maximum pressure 2,2 bar

MECHANICAL DATA

Cooling system Cooling coils

Dispensation system Integrated single peristaltic pump. Integrated double peristaltic pump (optional)

Type: Magnetic with double paddle

Stirrer **Control:** independent potentiometer on control panel

Speed range: 50-200 rpm

Sterilization control system Fully automatic microprocessor control of PT100 heart probe sensor and chamber temperature sensor. F₀ value to control sterilization cycle

Purge system Gravity displacement

Construction **External case:** AISI 304

Sterilization chamber and lid: AISI 316L

Lid gasket Silicone gasket

Opening lid mode Horizontal swiveling lid with blocking wheel

Casters⁵ 4 casters (with brakes in two of them)

⁵For AE-10-MP & AE-20-MP the 4 casters with brakes are installed in the stainless steel table (Ref. TABLE-MP).



Technical Data

CONTROL DATA

External data transfer	Ethernet USB
Number of programs	50 programs (2 preset programs)
Programable autostart	Date and time
Screen	5" Color TFT-LCD touchscreen
Monitoring of sterilization parameters	Self control of obtained values (T ⁹) vs programmed values. Cycle is automatically interrupted if obtained values differ from programmed values
Pressure display	Pressure gauge on control panel

SAFETY FEATURES

- Door blocking systems with positive pressure.
- Open door sensor.
- Water level detector.
- Safety valve.
- Safety thermostat.

REGULATIONS

This equipment complies with the following standards and European directives:

UNE-EN-ISO 9001:2015 Quality management system.

EN-61010-1 Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements.

EN-61010-2-040 Part 2-040: Requirements for laboratory autoclaves.

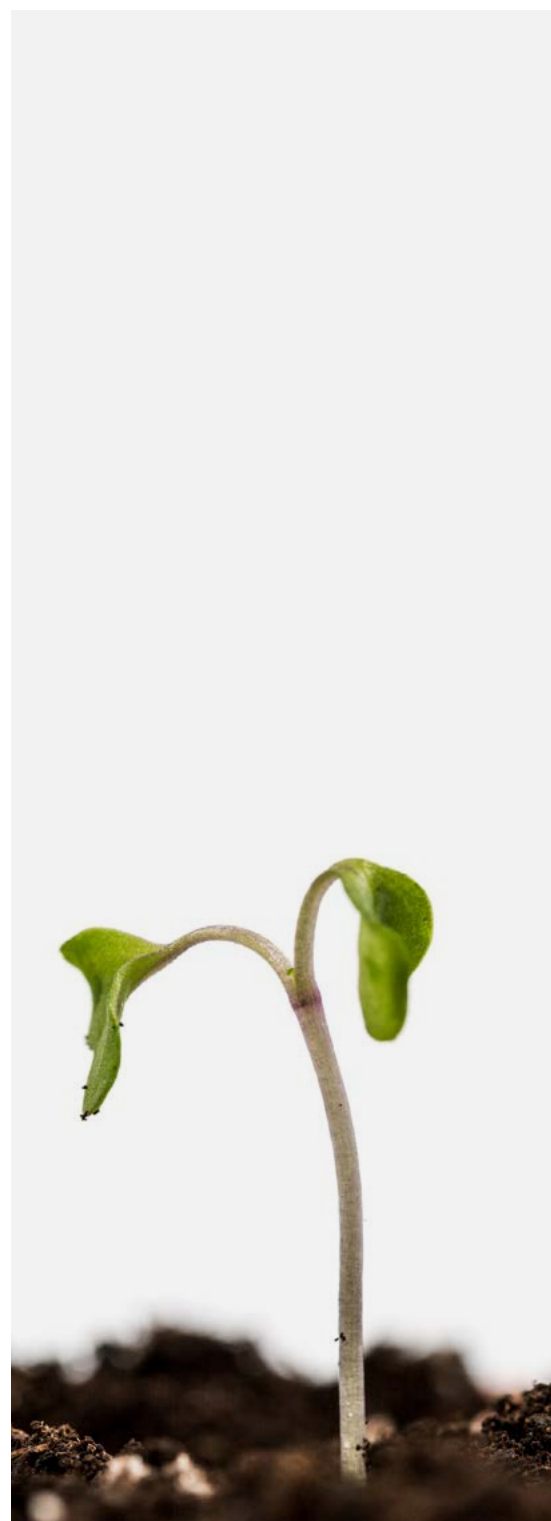
EN-61326 Electrical equipment for measurement, control and laboratory use. EMC Requirements.

AD 2000 Merkblatt Pressure vessels.

2014/35/UE Low voltage.

2014/30/UE Electromagnetic Compatibility.

2014/68/UE Pressure equipment.



+ info

YouTube



CLICK!
ACCESS
THE AE-MP
SERIES
VIDEO

Find out more about our **AE-MP Series** media preparator on our **Youtube Channel**



Installation guide available for download on our website.



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