

SOP 147/07	Installation Environment Specification		
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Purpose of this document: To ensure that all key aspects of the installation adhere to the manufacturer's recommendations, codes, safety parameters and design parameters.

Responsibility: Customer or CAMAG Approved Product Specialist or Service Engineer.





1 Introduction

This document describes the laboratory environment necessary for the Automated Multiple Development System AMD2, which has to be available at installation to ensure reliable operation of the instrument.

2 Installation environment

The place for installation should meet the following requirements:

Bench space Width 500mm
 Depth 550mm (add space for cables and tubes approx. 200mm)
 Height 60mm
 Weight 31kg

-  *Add adequate space for a PC next to the instrument.*
-  *Check the PC for minimum specification according to section 2.2.*
-  *Add adequate space for the vacuum pump, preferably underneath the bench of the AMD2. Note that the default length of the metal hose supplied by CAMAG with the pump is 1m. Order the additional metal hose kit (CAMAG #140.8880) if 1m is not sufficient!*
-  *Make sure the exhaust tube (not supplied) of the vacuum pump can be placed in a fume hood or similar.*

Operating temperature The temperature should be within a range of 15 to 30 degrees centigrade and free from significant variations.

Humidity Humidity and temperature conditions must not cause condensation.

Atmospheric conditions Adequate ventilation free from acidic, alkaline or other gas that may corrode metal or painted surfaces must be secured.

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Other requirements:

- Do not place the instrument in a location where the temperature undergoes significant changes (e.g. under an air conditioning duct or by a window). Significant changes in temperature may affect the performance of the unit.
- Do not place the instrument in direct sunlight. Direct sunlight may create significant temperature changes which will affect the performance of the system. Direct sunlight may discolor the instrument paint surfaces.
- Do not expose the instrument to any strong vibration or shock.
- Avoid placing the instrument near equipment that radiates heat. Do not place the instrument near gas burners, electric heaters or ovens.
- Do not place the instrument near equipment that generates intense magnetic fields such as electric welding equipment, high frequency furnaces, pole transformers, etc.
- Protect the instrument from excessive dust.
- Connect the instrument to power lines that are free from sudden changes or voltage fluctuations.
- If you must use power motor driven equipment (such as a stirrer or shaker) in the same line as your instrument, ensure that a noise reduction device is in the same power line

2.1 Conditions for the installation

Confirm that the following requirements exist before installing the instrument:

Power supply and ground

Line voltage: 115V (90 - 130V) or 230V (180 - 260V) AC. Fluctuation should be within $\pm 10\%$ of the rated voltage.

Frequency: 50 or 60 Hz

Power capacity: 60 W AMD2 & approx. 250W Vacuum pump

Ground terminal: A grounded outlet should be within 2 meters of the instrument.

Gas supply: N₂ or compressed air

Pressure: 4.5 - 6 bar (60-90 psi)