

SOP 174/04	Installation Environment Specification	
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History: Created by: JM Date: 16. January 2009 Replaces: SOP174/03 Date: 13. March 2008 Reviewed by DO (usa) Date: 16. January 2009 Approved by QC: JB Date: 09. February 2009		

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 Linomat 5, 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 360mm
	Depth 510mm (add space for cables approx. 100mm)
	Height 410mm
	Weight 12.5kg



*Add adequate space for a PC next to the instrument*

Operating temperature	The temperature should be within a range of 18 to 35 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.

### Further requirements:

- Do not place the instrument in a location where the temperature significantly changes (e.g. under an air conditioning duct or by a window). Significant changes in temperature will affect the performance of the unit.

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- Do not place the instrument in direct sunlight. Direct sunlight may create significant temperature changes which will affect the performance of the system.
- Do not use the instrument in an environment with moving ambient air (draft).
- 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 unit 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:	100 – 240VAC (see rating plate on instrument). The instrument is equipped with an auto range power supply.
Frequency:	50 / 60 Hz
Power capacity:	20 W
Ground terminal:	A grounded outlet should be within 2 meters of the instrument.
PC interface:	RS232 Serial port ( <i>see also winCATS Specifications</i> )

### Gas supply

N2 or compressed air	Required pressure 4 - 6 bar (58 -87 psi) Gas consumption 1 L/min
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**History:**

Version 4: *(16. January 2009)*

- SOP Header "Reviewed by" added

Version 3: *(13. March 2008)*

- New symbols & new format with Arial font

Version 2: *(15. October 2001)*

- Auto range power supply added
- PC interface info added

Version 1: *(23. May 2001)*

- New