INTRODUCTION

In the software there is an option called Overshoot which is sometimes difficult to understand so this document describes the process. Please refer to the diagram.

EXPLANATION

Description of parts:

> **Z-Axis** – this is the column that moves up and down in the ROTOR, including the Gripper Head and cylinder.

> **Cylinder** - the part that, using internal air pressure applies the required force to the surface of the agar.

> **Cylinder Shaft** – this part moves within the cylinder. Pressure above the cylinder shaft inside the cylinder causes this to apply the force to the agar.

> **Gripper Head** – this is the head that picks up the pad

> **Plate with agar** – self-explanatory.

1. First Stage of the process:
    - When the Z Axis is over the top of the plate to be pinned it decreases the internal pressure to almost zero which in effect makes the gripper head very light.
    - The Z axis drives down until the gripper head touches the surface of the agar.
        o This signals the Z axis to stop travel

2. Applying Overshoot :
    - If the overshoot in the program is set to 2mm the Z axis and cylinder will continue to travel down 2mm while the gripper head and cylinder shaft stay still (laying on the agar with almost zero pressure)
    - When it has travelled this distance the pinning pressure set in the software is then applied.
    - By reducing the value of the overshoot this prevents the gripper head pushing too far into the agar as the travel will be restricted by the cylinder shaft reaching the limit of its travel.
        o ie. If the overshoot was set to zero the Z axis and gripper head would be in the position shown in diagram 2. If pressure was applied no force would be applied to the agar.
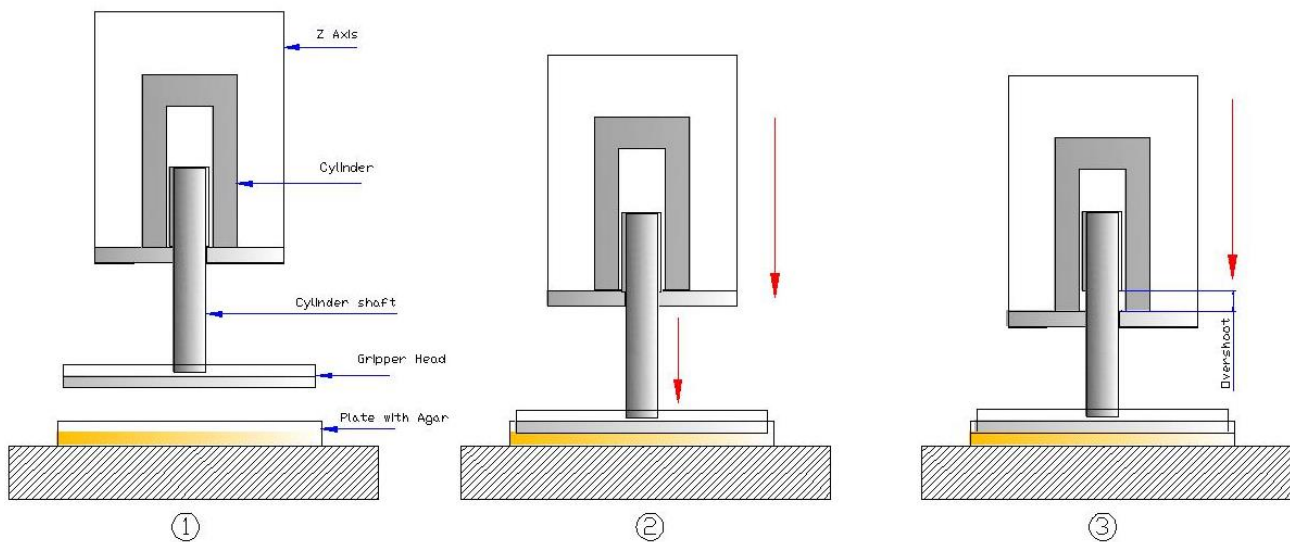
CONCLUSION

We hope that this explanation will help you to understand Overshoot. If you need further assistance do not hesitate to contact the Technical Support Team at Singer Instruments.

CONTACT INFORMATION

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