Quick Start Operation for SPIN150-v3:

Before starting:
Please make sure the following items are connected at the rear of the SPIN150, and the system is switched on with the on/off switch on the rear side:

A) Main Power.
B) Vacuum, (if required for the vacuum chuck), is activated.
C) Drain Connection.
D) Clean Dry Air, and if required: the N₂ purge for the lid diffuser.

The SPIN150 should be placed horizontally on a stable surface, or built-in. Before starting, recipes must be programmed (see Quick Start Recipe Programming).

Quick Start:

1. Press **PROG** key, enter the desired Program Number, and confirm with the **<** key.
2. Open the lid and place a wafer or substrate on the chuck of the SPIN150.
   (Substrate should be exactly in the middle. The exact position can be found using the centering tool)
3. When using the vacuum chuck: Press "VAC" key to activate the vacuum.
4. Close the lid (click).
5. Press "I/O" key to start the first step of the chosen Program.
6. The SPIN150 will start the Program ("Run" appears in the display);
   wait till the last step has finished and the chuck stops turning.
   Display reads: Mode: "Stop".
7. Open the lid and press "VAC" to release the vacuum.
8. Substrate can be removed from the chuck.

(Further details can be obtained from the SPIN150 Manual)
Quick Start Recipe Programming: SPIN150-v3

"Easy recipe creation"

Relevant are:
1. Speed.
2. Step time
3. Acceleration.
4. Vacuum required.
5. Switching Contacts
   (#1 and #2 available)

Before Starting:
Ensure the system is switched on with the on/off switch at the rear side.

How to program:
1. Press the "MODE" key till "Programming" Mode is displayed. The last used program will be selected.

2. If program is password protected, enter password and confirm with ← key or press <ESC> to go back to RUN mode.

3. To select a different program press "PROG" key. Then enter the number of the recipe you want to edit, or a new value between 1 and 50 and confirm with the ← key.

4. Step 1: enter new value and accept the parameter value with the ← key or move the cursor through the fields with the ↓ key and ↑ key to the next position.

5. Next position should be the Chuck Speed in rpm. Enter the desired speed for Step 1 and confirm with the ← key. (Any value between 1 and 10000 rpm)

6. The cursor will go down to the Step Time: Enter the desired value in seconds for Step 1 and confirm with the ← key. (Any value between 1 and 6000 sec.)
7. Next, enter the Acceleration/Deceleration of the chuck motor in rpm/sec:
   any value between 0 and 2000 rpm/sec, and confirm with the ← key.

8. Use of Vacuum: Yes or No. (This can be switched on with the "VAC" key.)

9. Use the ↑↓ key to return to step number and enter "2", for Step 2, confirm with ← key.

10. Repeat 4 and 5, (6 and 7 only apply for Step 1), go to item 2 to edit the next step.

11. To create an End step, press the "I/O" key after the step nr. Display will show: "End".

12. Quit this program with the ↵ key.

13. Enter password to protect program by unauthorized access or press ↵ to leave unprotected.

14. System will enter automatically into RUN mode.

15. See Quick Start Operation to run the new program.

The table below summarizes all available parameters:

<table>
<thead>
<tr>
<th>Parameter name</th>
<th>Description</th>
<th>Available values</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>step</td>
<td>Actual step number</td>
<td>1...100</td>
<td></td>
</tr>
<tr>
<td>rpm</td>
<td>Maximum speed</td>
<td>0...10000</td>
<td></td>
</tr>
<tr>
<td>time</td>
<td>Step time</td>
<td>0...6000</td>
<td>999= timer inactive and waiting for key-pressing</td>
</tr>
<tr>
<td>R/sec2</td>
<td>Acceleration</td>
<td>1...2000</td>
<td>Available only in 1st step</td>
</tr>
<tr>
<td>Vacuum</td>
<td>Use of vacuum</td>
<td>yes/no</td>
<td>Press &lt;VAC&gt; to activate/deactivate, available only in 1st step</td>
</tr>
<tr>
<td>Relay</td>
<td>Program activation of external contact</td>
<td>1,2</td>
<td>Press relay number to activate/deactivate, an asterisk will be displayed under the activated relays</td>
</tr>
</tbody>
</table>