

T2 Stirrer/Hot Plate

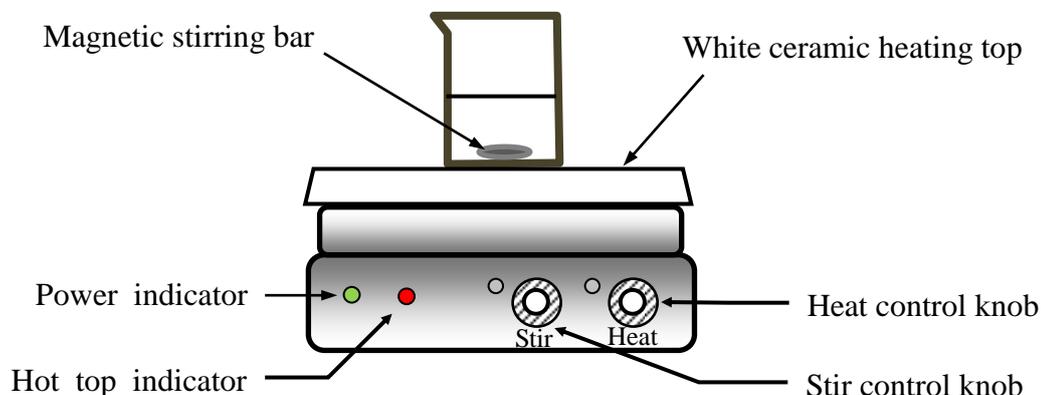


Figure T2-1 Controls and indicators of Corning PC-420

Hot plate is used as a general heating device in the lab. Some hot plate has a built-in magnetic stirrer whose rotation speed can be adjusted. The rotating magnet underneath the glass container rotates the Teflon-coated magnetic stirrer inside as Fig. T2-1 shown.

Operation

1. Connect stirrer/hot plate to a grounded power outlet with correct voltage.
2. Never leave a gap between plug and outlet, replace damaged power cord immediately.
3. Keep power cord away from white heating top to avoid burns and damaged.
4. Always wear safety goggles and other protective equipment to avoid spillage while operating stirrer/hot plate.
5. Place vessel in the center of white top with proper stirring speed. If stirring bar jumps irregularly, turn off stirrer/hot plate to adjust vessel's position, then restart.
6. Clean up white top before and after use or when liquid spills. Use non-corrosive cleaning agents and do not immerse stirrer/hot plate in water for cleaning.
7. Replace stirrer/hot plate once white ceramic heating top is broken or scratched.
8. Never heat large amount of volatile, flammable materials (such as ether, acetone, *n*-hexane, etc.) directly by a stirrer/hot plate.
9. Insulating objects, aluminum foil, thick-walled glassware cannot be heated by a hot plate.
10. Take out stirring bar in solution with a Teflon-coated magnetic rod; do not grab it

by hand to avoid corrosive chemicals and burns.

Controls and indicators of CORNING-420 Stirrer/Hot Plate in lab

1. Power Indicator: green light illuminates when stirrer/hot plate is properly connected to input power.
2. White ceramic heating top with loading capacity 34 kg.
3. Stir Control Knob: turn it counterclockwise all the way to turn off stirring function; turn it clockwise to set desired stirring speed.
4. Heat Control Knob: turn it counterclockwise all the way to turn off heating function; turn it clockwise to set desired heating temperature.
5. Hot Top Indicator: illuminates when the temperature of the top is too hot to touch (greater than 60°C). When heating top is more than 550°C, stirrer/hot plate will automatically power off and indicator starts to flash until the temperature is less than 60°C.

Table T2-1 CORNING-420 Stirrer/Hot Plate set values for heating temperature

Scale	Temperature (°C)	Scale	Temperature (°C)
0	off	6	300
1-2	25	7	410
3*	90	8	460
4	170	9	480
5	230		

* For example: when scale is 3, the heating temperature will be 90°C

Table T2-2 CORNING-420 Stirrer/Hot Plate set values for stirring speed

Scale	Speed (rpm)	Scale	Speed (rpm)
0	off	6	380
1-2	60	7	550
3*	100	8	870
4	155	9-10	1100
5	250		

* For example: when scale is 3, the speed will be 100 revolutions per minute.

References

1. Shugar, G. J.; Shugar, R. A.; Bauman, L.; Bauman, R. S. *Chemical Technicians' Ready Reference Handbook*; 2nd ed.; McGraw-Hill Book Co.: New York, 1981.
2. Corning Instruction Manual-120V.