# Can you run a 3D printer in a cold garage?

Asked 3D Content Team
Published September 23, 2026 · Last verified September 23, 2026

**Abstract.** Bambu Lab and Creality rate their printers for 10 to 30 °C ambient, and Prusa calls 20 to 30 °C ideal. What fails in a cold garage, and how to check yours.

**Keywords:** enclosures, chamber-heating, abs

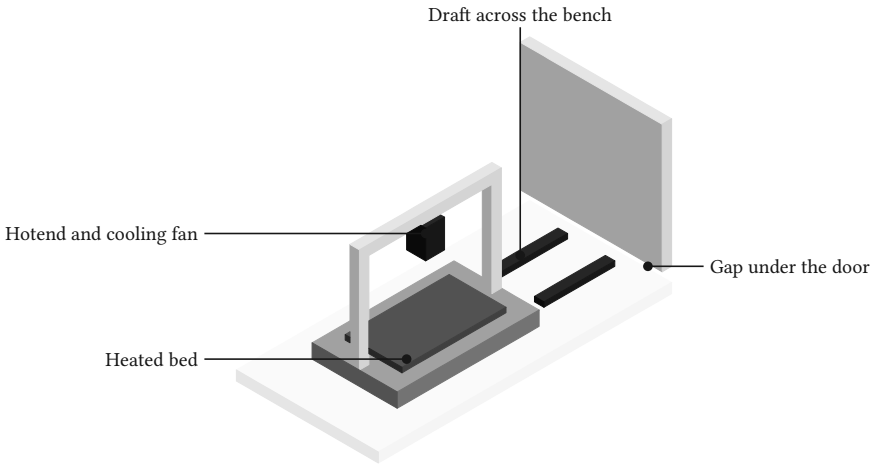



**Figure 1.** Prusa's advice is to keep a printer away from an open window, air conditioning or any breeze that causes a sudden temperature swing.

## 1 Can you run a 3D printer in a cold garage?

Yes, if you warm the garage or the printer first. Bambu Lab and Creality rate their printers for 10 to 30 °C ambient, and Prusa calls 20 to 30 °C ideal. Colder than that, a Prusa can refuse to start heating, the hotend or bed can trip thermal runaway, and a heated chamber may never reach its target.

### 1.1 The stated ranges

Each row is the operating range a maker publishes for its own printers. None of them mention garages. The number to hold them against is a thermometer reading next to your printer, taken at the coldest hour you print.

Bambu Lab's figures come from the A1 and P1 series FAQ pages on its wiki, and Creality's from the device specifications table in the K1 manual. Prusa's come from three of its Knowledge Base articles, and they don't agree on a floor. The thermal runaway article suggests 16 °C, while the MINTEMP article says 20 °C.

### 1.2 Why the cold causes failures

In a freezing garage, safety firmware can mistake a healthy printer for a broken one. Prusa's MINTEMP (minimum temperature) error stops the printer when a thermistor, the temperature sensor in the hotend or bed, reads too low to trust. The limit is 10 °C for both on the MK3 series, and 22 °C for the hotend and 15 °C for the bed on the older MK2 and MK2.5 series. Prusa says the check exists "for the firmware to accurately detect a damaged or disconnected thermistor".

Once a print starts, the heaters have to keep up with the room. Prusa's firmware shuts the printer down when a tem-

**Table 1.** The stated ranges

| Maker and printers | Stated ambient temperature | Stated humidity | Where it is published |
|---|---|---|---|
| Bambu Lab A1 and P1 series | 10 to 30 °C (50 to 86 °F), recommended | Under 85 percent | Bambu Lab Wiki FAQ pages |
| Creality K1 | 10 to 30 °C (50 to 86 °F) | Not stated | K1 user manual, device specifications |
| Prusa printers | 20 to 30 °C (68 to 86 °F), "ideal" | 25 percent, "ideal" | Prusa Knowledge Base FAQ |
| Prusa i3 series, thermal runaway advice | 16 °C or more, "suggested" | Not stated | Prusa Knowledge Base, thermal runaway article |
| Prusa, MINTEMP advice | Room "not below 20 °C" | Not stated | Prusa Knowledge Base, MINTEMP article |

perature drops by more than 15 °C for more than 45 seconds. Its thermal runaway article names the garage case outright: “An unheated garage in winter might cause thermal runaway as the heater doesn’t have enough power once the print cooling fan kicks in.” The bed can trip for the same reason, the article adds.

**Table 2.** Why the cold causes failures

| What goes wrong | When the maker says it happens | Maker’s source |
|---|---|---|
| MINTEMP error, printer will not start heating | Thermistor below 10 °C (MK3 series), below 22 °C hotend or 15 °C bed (MK2 and MK2.5 series) | Prusa MINTEMP article |
| Hotend or bed thermal runaway | Temperature drops more than 15 °C for more than 45 seconds, for example when the fan starts in an unheated winter garage | Prusa thermal runaway article |
| Heated chamber does not reach 60 °C | Ambient below 15 °C on a 110 V supply (K2 Pro and K2 Plus) | Creality K2 chamber guide |
| “Chamber heating failed” error | “When the outside temperature is too low or the chamber is not closed” | Bambu Lab error-code page |
| ABS and ASA misbehave | “Printed in a cold ambient temperature without an enclosure” | Prusa MINTEMP article |

A heated chamber runs into the same wall. Creality says the K2 Pro and K2 Plus chamber tops out at 60 °C and may not get there on 110 V when the room is below 15 °C. Bambu Lab’s chamber-heating error page just tells owners to “avoid using the printer in an environment that is too cold.”

Drafts make it worse, because they swing the temperature fast. Prusa’s MINTEMP article says to keep the printer away from “an opened window, air conditioning, or in a way of a breeze”. In a garage, that includes the gap under the door.

Don’t edit the firmware to make the errors go away. Prusa warns that adjusting the MINTEMP limits “is NOT RECOMMENDED and might lead to damage to the printer and a possible fire hazard!”

### 1.3 How to check your own garage

1. **Measure at the printer, at the coldest hour you print.** Leave a thermometer on the bench beside the printer overnight. Compare the lowest reading with your printer’s range in the table.
2. **Warm the printer before a print starts.** Prusa’s fix for a cold MINTEMP is a hairdryer on the bed and hotend “until it reaches a temperature above 18C”. The same article says a printer delivered in winter should sit until it reaches room temperature before its first use.
3. **Watch the second layer.** Prusa calls a 5 to 10 °C hotend drop normal when the print fan kicks on, which often happens between the first and second layer. The temperature should climb straight back. If it keeps falling, the heater is losing to the cold and the fan.
4. **Block the drafts.** Move the printer away from the door, windows and vents, or put it in an enclosure. Prusa links cold-room trouble with ABS and ASA to printing without an enclosure.
5. **Check the chamber, if the printer has one.** Set a target and see if it gets there. If it stalls, the Bambu Lab and Creality pages both point at the room first.
6. **Log the humidity too.** Bambu Lab recommends under 85 percent. Put a hygrometer next to the thermometer and you’ll know whether the garage passes.

## References

[1] P1 Series FAQ, Bambu Lab Wiki. https://wiki.bambulab.com/en/p1/manual/faq. Accessed September 23, 2026.
[2] A1 FAQ, Bambu Lab Wiki. https://wiki.bambulab.com/en/a1/manual/faq. Accessed September 23, 2026.
[3] HMS_0300-9000-0001-0002: Chamber heating failed, Bambu Lab Wiki. https://wiki.bambulab.com/en/x1/troubleshooting/hmscode/0300_9000_0001_0002. Accessed September 23, 2026.
[4] Creality K1 User Manual, Device Specifications. https://www.manualslib.com/manual/3113724/Creality-K1.html?page=5. Accessed September 23, 2026.
[5] K2 Pro & K2 Plus Chamber Temperature Setting Guide, Creality Wiki. https://wiki.creality.com/en/k2-flagship-series/k2-pro-k2-plus-chamber-temp. Accessed September 23, 2026.
[6] FAQ: Frequently Asked Questions, Prusa Knowledge Base. https://help.prusa3d.com/article/faq-frequently-asked-questions_1932. Accessed September 23, 2026.
[7] MINTEMP error and MINTEMP BED, Prusa Knowledge Base. https://help.prusa3d.com/article/mintemp-error-and-mintemp-bed_2169. Accessed September 23, 2026.
[8] Thermal Runaway (i3 series), Prusa Knowledge Base. https://help.prusa3d.com/article/thermal-runaway-i3-series_2131. Accessed September 23, 2026.

**Cite as:** Asked 3D. “Can you run a 3D printer in a cold garage?.” September 23, 2026. https://asked3d.com/answers/3d-printer-in-cold-garage. Last verified September 23, 2026.