Filling & Capping Instructions

Follow these steps to ensure consistent fills, proper seals, and zero leaks across all Finished Goods vape hardware.

01 PREPARATION

1. Follow your terpene supplier's SOPs for mixing and handling concentrates.
2. Start with a clean filling station, free of dust and debris.
3. Wear gloves and eye protection.

02 HEATING

> IMPORTANT
>
> Oil floods the atomizer if its viscosity is too low, which can cause clogs or leaks. If your oil runs like olive oil when hot (usually above 125°F / 52°C), flip the filled units upside down for 5 to 10 minutes so it cools and thickens before it saturates the atomizer.

1. Heat the oil to the lowest temperature that still lets it flow to the bottom of the device.
2. Use a temperature-controlled oven or hot plate. Never use a microwave or open flame.
3. Record both the reservoir and dispensing temperatures for each fill.
4. In a cold room (around 65°F / 18°C), thick oil can stall before it reaches the atomizer. If it pools at the top instead of flowing down, raise the temperature until it runs onto the atomizer.

03 FILLING

1. Match the needle gauge to the device:
   - **510 thread cartridges:** 14-gauge or smaller blunt-tip dispensing needle
   - **All-in-ones:** 18-gauge, or check the product spec sheet for your model
2. Insert the needle to the bottom of the tank and withdraw it slowly as you fill.
3. Leave 1–2mm of headspace at the top for oil expansion and proper capping.
4. For automated systems (Thompson Duke, DDS, ATG Pharma, Vape Jet), consult Finished Goods for machine-specific settings, then follow the manufacturer's SOPs.

04 CAPPING

1. Cap each unit within 2 minutes of filling to prevent oxidation and contamination.
2. When capping by hand, press the mouthpiece firmly and evenly until it clicks or seats flush.
3. Consult Finished Goods before using automated capping equipment. Pressure settings vary by machine, and the wrong setting can crack the tank or ruin the seal. Most setups need a custom jig, and we can help you design one.

05 POST-FILL HANDLING

> IMPORTANT
>
> Do not test-fire the units until the rest period is complete. Firing a dry atomizer will permanently ruin it.

1. If your dispensing temperature makes the oil run like olive oil (usually above 125°F / 52°C), store the units upside down for 10 minutes after capping so the thin oil cools and thickens before reaching the atomizer. You can leave them inverted indefinitely if your workflow requires it.
2. If your oil is more viscous (low dilution percentage), skip the flip and keep units right side up.
3. Postless devices (Supermini, Pod System, Pure 2) filled with low-terpene distillate or liquid diamond (around 2 to 3%) are the exception: do not flip them, even if the oil ran thin. This oil thickens as it cools, and inverting can keep it from reaching the atomizer. If it is too thick to flow, raise the temperature instead.
4. Once any flip is complete, rest units right side up for at least 36 hours before testing or packaging so the atomizer fully saturates.

06 STORAGE & ENVIRONMENT

1. Store filled units at 65–77°F (18–25°C) in a climate-controlled environment.
2. Keep them out of direct sunlight and away from large temperature swings.
3. In hot climates or warm warehouses, store units upside down to keep oil from oversaturating the atomizer.

07 DOCUMENTATION & QUALITY CONTROL

1. **Record any deviations from standard procedures for every batch.**
2. For every batch, record:
   - Oil temperature, PSI (if applicable), and fill time
   - Lot numbers, operator initials, and equipment used
   - Batch records for traceability and compliance

08 TESTING NEW FORMULATIONS

1. Always run a small test batch (10–25 units) the first time you fill a new formulation.
2. Give the batch the full 36-hour rest before evaluating performance.
3. If you see clogging, leaking, or inconsistent vapor, contact Finished Goods. We can tune the PrecisionFlow™ atomizer configuration for your specific oil.