

Winter Greenhouse Layout Sheet

Plan your passive solar setup for fresh salad while it snows.

Calculate your exact thermal mass and ventilation needs for freezing weather. This guide helps you position your structure to capture vital winter sun.

● Passive Solar Essentials

Long side faces south

True south to capture low-angle rays

Insulated north wall

Solid framing prevents massive heat loss

Barrels on night shift

Continuous row absorbing afternoon solar radiation

Wax-piston roof vent

Expands at 65-70°F to exhaust heat

Low inlet, high vent

Side wall intake creates chimney effect

Prevent freezing condensation

Water your interior beds only on bright, sunny mornings to let surface soil dry, and space mature lettuce heads at least six inches apart for natural airflow.



● Vent & Barrel Sizing Chart

Find your row: **Greenhouse floor size**

Greenhouse floor size	Your pick	Why
6x8 ft footprint	5 containers (260 gallons)	Balances ~130 sq ft glazing
8x10 ft footprint	8 containers (420 gallons)	Balances ~210 sq ft glazing
8x12 ft footprint	10 containers (500 gallons)	Balances ~250 sq ft glazing
10x14 ft footprint	13 containers (680 gallons)	Balances ~340 sq ft glazing

● Orientation & North-Wall Checklist

- ☐ Orient slightly southeast if winter evergreens block primary light.
- ☐ Pack the zero-sunlight rear boundary heavily with rigid foam.
- ☐ Paint the solid interior boundary bright white to reflect light.
- ☐ Install a basic wire mesh screen behind fresh oxygen intakes.
- ☐ Place black thermal mass directly underneath south-facing wooden benches.

● Site & Harvest Checks

- Track the lowest winter sun path to ensure maximum light energy absorption.
- Check manufacturer packaging for the exact temperature rating of your mechanical cylinder.
- Wait until the warmest early afternoon before opening doors for daily harvesting.
- Verify outer foliage is completely thawed and free of ice crystals.
- Squeegee the underside of roof glazing weekly to remove accumulated moisture.

● Layout & Sizing Notes

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Enjoy your sweet, crisp winter harvests straight through the snowy season!