

sturdi-built

GREENHOUSE MANUFACTURING CO.



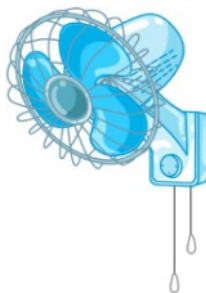
GREENHOUSE ACCESSORIES

Sturdi-Built Greenhouse Mfg. Co., 11304 SW Boones Ferry Rd., Portland, OR 97219

Sturdi-Built Greenhouse Manufacturing has specialized in the design, manufacture, and sale of hobby greenhouses for over 45 years. Quality accessories play an important role in successful and enjoyable greenhouse gardening. With the input of our customers, we have assembled high quality, dependable accessories that are important in setting up an effective greenhouse. Your location and the plants you are growing require different accessories to help your greenhouse function beautifully. Call us to discuss your specific greenhouse needs.

Ventilation and Circulation - Page 3

Proper ventilation provides air exchange for plants and helps prevent greenhouse overheating. Roof vents are best for ventilating residential size greenhouses because they provide natural, gentle venting, quiet operation, and are easily automated. They help preserve humidity in hot weather. Vents in the ends or side walls alone are not enough but work well in conjunction with roof vents. Exhaust fans are easy and economical to add and automate, but tend to dehumidify the greenhouse.



A greenhouse requires interior air circulation. We recommend continuous, 24/7 air movement, in winter to prevent mold and mildew, and in summer to prevent excessive heat build-up.

Propagation - Page 4



With good bottom heat, propagation is easy and fast. Propagation mats are great for supplying heat to plants in containers, seed flats, etc. Soil cables are another means of supplying heat in soil benches. The cable length

required will depend on the size of the bed to be heated and whether the bed is in a heated greenhouse. For large beds, consider two or more soil cables.

Heating - Page 5

Ways to heat a greenhouse include electric, natural gas, and L.P. Electric heaters are flexible, economical, easy to install, and require no venting. 240 volt heaters are more efficient than 120 volt and are available with moisture resistant thermostats.

Thermostats found in cheaper 240 volt heaters and most 120 volt heaters can't handle humid greenhouse conditions. A 120 volt heater usually can heat a small greenhouse but should have a separate heavy duty, moisture resistant thermostat. Remove portable heaters from the greenhouse in summer.

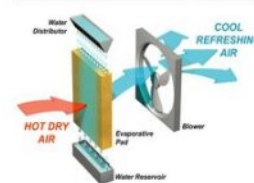
Natural Gas and LP gas heaters are available for larger greenhouses and often can heat even when there is no power. They should be properly vented and equipped with a good thermostat.



Evaporative Air Coolers - Page 5

Cooling through evaporation is efficient. Evaporative coolers draw hot air through wet pads. Water evaporates from the pads, supplying cool, clean, humid air to your greenhouse.

How EVAPORATIVE COOLING works



Thermostats - Page 4

High quality moisture resistant thermostats should be used in a humid greenhouse. Thermostats should control a wide temperature differential, turning the heat on at a set temperature and turning off 4° to 30° higher (or the reverse for cooling thermostats).

Humidity and Watering - Page 6



Every greenhouse needs water, usually a spigot with a coil hose and watering wand is sufficient, but needs will vary with the plants you are growing. Humidity is important for your plants and varies as seasons change. Warm weather requires higher relative humidity while cold, weather needs lower relative humidity. Often, simply wetting down the greenhouse floor

periodically is all that is needed to maintain adequate humidity. If additional humidity is needed consider adding humidifying equipment.

Shade Cloth - Page 6

Adequate shading is important. During sunny weather greenhouse plants must be protected from sunburn and overheating. Our shade cloth is hemmed with grommets, designed to go on the outside of your greenhouse. If you have a greenhouse other than a Sturdi-built please specify size when ordering.

Lighting - Page 7

Sturdi-built offers complete, ready to use lighting systems, including lamps, designed for you to hang, plug in and turn on. If you need a more custom solution with higher power options call us. See more details on the lighting page.



Plant Benches and Shelves - Page 8

Create an arrangement of plant benches and shelves that will function perfectly for your needs. Double tier, single tier, and soil benches are all available.

VENTILATION

SOLAR POWERED ROOF VENT CONTROLS

Solar powered vent openers are ideal for roof vents. They automatically adjust ventilation according to temperature. No electricity required. The vent can be set to open between 60° and 75°F. The vent becomes fully open about 20°F above the starting temperature. Operation is completely silent. Designed for hinged vents weighing up to 32 lbs. Cylinder warranty is 1 year. Black wind strap included.



BAYLISS MK7-S . . . \$70.00

BAYLISS MK7 -S Triple Spring . . . \$75.00

Replacement power cylinder . . . \$34.00

ROOF VENT SCREEN KIT

This redwood roof vent screen kit is designed to fit all Sturdi-built greenhouse roof vent openings. Mounted from the inside, it allows vents to operate freely, yet keeps unwanted pests out. Accommodates installed automatic vent controls. Does not work with manual vent openers.



Vent Screen.....\$98.00

JALOUSIE LOUVERED WINDOW

This factory assembled window installs easily in greenhouse end walls. Provides extra ventilation. Works best in conjunction with roof vents. 20" W x 30"H. Includes screen and acrylic "storm widow"



JALOUSIE WINDOW KIT FOR DOOR

Replaces glazing in the upper part of your greenhouse door. Helps provide extra summer venting without having to open the door. Can be installed in existing greenhouse doors. (Specify net opening when ordering.)

Jalousie Window... \$225.00

Jalousie Window Kit for Doors... \$225.00



CIRCULATION

TO ORDER CALL 800-334-4115

WALL MOUNT, THREE SPEED OSCILLATING FAN

Quiet, 12" oscillating fan mounts on the wall of your greenhouse. Fan head rotates 90 degrees or can be locked in non-oscillating position. Tilt head to direct gentle air flow up or down. Knob and pull cord for on/off. Three speeds. Up to 930 CFM. Motor warranted for 1 year.



12" Oscillating Fan . . . \$80.00

AUTOMATIC EXHAUST FAN VENTING SYSTEM This economical fan venting system exhausts warm air from the greenhouse and pulls in cooler, outside air. System includes a shuttered fan (to be mounted in one end of your greenhouse), an air intake shutter (mounted in the other end), and a thermostat for automatic control. Starting temperature range is 30° to 90°F. For approximate CFM requirement, divide total greenhouse cubic foot volume by 1.5. For larger greenhouses, consider two or more fans. NOTE: for fans and shutters, frame square opening 1/2" larger than fan size. For Sturdi-built greenhouse customers, redwood mounting frames are furnished without extra charge.

FAN INTAKE SHUTTER THERMOSTAT



Stock No.	CFM	Fan/Size	Price
2C819	520	10"	\$355.00
2C710	650	12"	\$380.00
2C713	870	16"	\$460.00

SHUTTER MOTOR

Add this to your air intake shutter. Opens the shutter when the fan clicks on. Relieves the starting load on the fan. Holds the shutter firmly closed during the winter.

Optional Shutter Motor....\$140.00

Variable Fan Speed Control, 3 AMP ... \$35.00



PROPAGATION

SUPER SPROUTER SEEDLING HEATING MAT

Warms root area approximately 10° to 20°F over ambient temperature to improve germination process for seeds and cuttings. Heavy-duty construction makes these mats very durable.

Small mat holds 1 standard 10"x20" propagation tray.

Larger mat holds 2 trays, end-to-end.

Larger mat can be daisy-chained together.



Single Tray Size



Two Tray Size

726695 Size: 10"x21", 20 watts ... \$29

726685 Size: 12"x48", 60 watts ... \$52

VINYL COVERED SOIL CABLES - Inexpensive, fully automatic cables for easy control of soil temperature. Comes with built-in thermostat preset to 70° F. Ready to plug into any 120 volt outlet. All cables listed are less than 4 amps.



Stock No.	Length	Area to heat	Watts	Price
51024	24'	6 sq. ft.	84	\$40.00
51036	36'	9 sq. ft.	126	\$45.00
51048	48'	12 sq. ft.	168	\$50.00

INSTRUMENTS

TO ORDER CALL 800-334-4115

THERMOMETER WITH INDOOR HUMIDITY

Displays indoor or outdoor temperature & indoor humidity with large 1 1/8" tall numbers. Memory stores minimum & maximum temperature and humidity readings. Includes 1 AAA battery. Ten foot long weatherproof sensor wire for outdoor temperature.



716560 Digital Thermometer ... \$26.00

WIRELESS, REMOTE SENSING THERMOMETER-HYGROMETER

This system monitors and displays digital indoor and outdoor temperatures and relative humidity. One remote sensor is included. Put a remote sensor in your greenhouse and the base station in your house.



Expandable to 3 remote sensors. Wireless, simple to set up. Displays degrees in F or C. Base station, 1 remote sensor and batteries included. 50 ft range. Large digital readout.

716555 Wireless Thermometer/Hygrometer...\$45.00

716557 Additional sensors ... \$25.00

THERMOSTATS

THERMOSTAT FOR HEATING OR COOLING CONTROL

No finer thermostat for greenhouse heating or cooling control.

♦ Moisture-resistant, hydraulic type control with -30° to 90°F temperature range and 5° to 40°F adjustable differential.

♦ Energy efficient. Great for the smaller 120V heaters because it allows for precise temperature control.

♦ Mount thermostat in any convenient location with temperature sensor up to 8ft. away.

♦ Can be direct wired or add a pre-wired cord for plug-in 120V appliances.

This thermostat works for either heating or cooling but it must be wired for the particular use by us (the factory installed prewired cord) or by your electrician. Please specify when ordering.

W/R 1687-9 Heating/cooling thermostat \$80.00

W/R 1687-9P Heating/Cooling Thermostat with pre-wired cord (120V only) . . \$95.00



SET BACK THERMOSTAT

For separate day and night temperatures using your Southern Burner or Empire Gas Heaters. Millivolt control. 50° to 90°F temperature range.

W/R Millivolt Setback \$60.00

EMPIRE DIRECT VENT GAS HEATERS

Very suitable for greenhouse heating. Fully automatic-thermostat included. Non-Electric. Heats even if power is lost. Dependable pilot light ignition system. Space saving wall mount design. Vents through wall. Available for Natural Gas or L.P. (Please specify when ordering.)

DV210 or 215

Model	BTU Output	Dimensions WxHxD	Price
DV-210	7,000	16¼" x 21¾" x 9¾"	\$ 750.00
DV-215	10,500	20¼" x 24¾" x 9¾"	\$ 850.00
DV-25	17,500	37" x 27¾" x 11½"	\$1025.00
DV-35	24,500	37" x 27¾" x 11½"	\$1225.00



Optional thermostat may be used for better temperature control. See W/R Millivolt setback on page 4

DV 25 or 35

UTILITY HEATER (120V)

For heating the small greenhouse. Durable metal casing, painted beige. Built in thermostat for automatic operation. Two heat output settings, 750 & 1500 watts-plus fan only. 5100 BTU's maximum. Tip over switch and safety cut off if it gets too hot. 6' heavy duty grounded cord. We recommend adding our heavy duty thermostat with pre-wired cord for more precise temperature control.

120 volt Utility Heater . . . \$70

W/R 1687-9P Heating/Cooling Thermostat with pre-wired cord (120V only) . . . \$95.00 See page 4

**KING 240V ELECTRIC HEATER**

A rugged heater that moves air efficiently. Has a cast iron motor, aluminum fan blade and built-in thermostat. Automatic shut off in case of over heating. Durable finish in almond color. Available with 3800W (20amp) or 4750W (30amp) versions. Please specify when ordering.



KBP2406 King heater, 3800W or 4750W . . . \$465

SOUTHERN BURNER GAS HEATERS**NON-VENTED GAS HEATER**

♦ Non-electric, Fully Automatic

♦ No Venting Required

♦ Adds CO₂ While it Heats

♦ 17,500 BTU output

Will fit under standard benches, only 22" high. Use one or more units depending on your greenhouse size. Comes with a wall mount millivolt thermostat.

Specify LP or Natural Gas

Model C-1 MV . . . \$490.00

SOUTHERN BURNER VENTED ORCHID HEATER

Slightly larger unit, but still fits under the bench. 25,000 BTU output. A Tee and rain cap are furnished for your 3" vent pipe. Specify LP or Natural Gas

Model A-1 MV . . . \$650.00

For setback thermostat see page 4.

**EVAPORATIVE AIR COOLERS**

These coolers are installed just outside the greenhouse. Cool air is ducted in through an opening framed in the base wall or greenhouse wall. Attractive, adjustable, interior grille (plastic or metal depending on model). Durable finish combines the strength of metal with an epoxy coating.

EWCM 28 - 2 speed, 2800 CFM . . . \$595.00

EWC 35 - 2 speed, 3300 CFM . . . \$725.00

EWC 44 - 2 speed, 4000 CFM . . . \$805.00

EWC 50 - 2 speed, 4700 CFM . . . \$920.00

W/R 1687-C Cooling Thermostat with pre-wired cord . . . \$95.00



COMBINATION WATERING WAND & RECOIL HOSE

Quality chrome-plated watering/misting wand with easy on/off thumb trigger. The aerator head dissipates pressure to allow a full flow of water



without the normal hard force. Comes with an interchangeable Mist Spray head perfect when fog or mist is desired. Available in 14" or 24" lengths. Pair either wand with a 25ft. Recoil hose. This lightweight, durable, easy-to-use hose has a 1/4" ID and all-brass garden hose fittings. Hose coils and stores like a telephone cord. Swivel fittings on both ends prevent twisting and kinking Perfect for greenhouse use.

- Fogg-it 14" Watering/Misting Wand . . . \$24.00
- Fogg-it 24" Watering/Misting Wand . . . \$28.00
- 25 ft. Recoil Hose. \$40.00

OREGON MISTER FOGGER

This misting/fogging system is ideal for the small greenhouse. A high quality brass nozzle delivers fine mist at a rate of approx. 1 gallon per hour (rate varies with water pressure). Mist is circulated with a powerful, quiet blower. The system is automated with a humidistat. Blower speed is adjustable. The system can be set up to have the mister and blower turn off and on together or you can leave the blower running for full time circulation, with the mister turning on and off as humidity is needed. Comes with 1/4" water supply tube and saddle valve for easy installation. Requires 120V power & water. A great system for creating a tropical growing environment. Made exclusively by Sturdi-built.

Mister/Fogger.....\$450.00



Made of long lasting polypropylene, shading cloth provides flexible, economical protection from those hot summer days. Easy to attach over the greenhouse roof and/or walls. Available in custom sizes, 3' to 20' wide up to 30' long. All edges are factory hemmed and grommeted (approx. 2' on center) for easy installation.



Stock No.	Shade	Density	Price*
CSC-47	47%		\$0.80/sq.ft.
CSC-55	55%		\$0.85/sq. ft.
CSC-63	63%		\$0.90/sq. ft.
CSC-73	73%		\$0.95/sq. ft.
CSC-80	80%		\$1.00/sq. ft.

*Approximate square foot cost for rectangular pieces. Custom sizes & shapes extra. There is a \$45.00 minimum order for shade cloth.



Sun Blaze T5 High Output Fluorescent Fixture

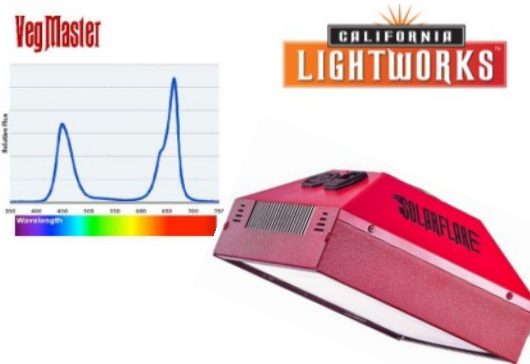
- ◆ 95% reflective Aluminum reflector- Light output is 300% higher than a lamp with no reflector
- ◆ 12 ft power cord; Fixtures may be daisy chained together
- ◆ 5 year factory warranty on fixture
- ◆ Wire cable hangers-can hang vertically or horizontally
- ◆ Comes standard with Spectralux 6500°K (blue) lamps.
3000°K (red) lamps may be purchased separately.
- Also available in 8-bulb widths. Call for prices
- Optional "red" Spectralux lamps: \$8 ea -2ft, \$12 ea - 4ft.
- Optional T5 White 5,500°K 4ft White LED replaces T5 fluorescent bulbs - \$25.00



Sun Blaze T5-22	2ft-2 lamp	\$105
Sun Blaze T5-24	2ft-4 lamp	\$140
Sun Blaze T5-42	4ft-2 lamp	\$135
Sun Blaze T5-44	4ft-4 lamp	\$180

SolarFlare 110 by California Lightworks - 110 Watt LED Grow Light

LED (Light Emitting Diode) technology is the wave of the future and can significantly outperform more traditional grow lights. To be effective, LED grow lights need to target the correct parts of the light spectrum at the right intensity. Many LED grow lights come from overseas and don't work effectively. California Lightworks designs and manufactures products in the USA that work well, targeting the light spectrum where absorption by plants is highest. We recommend the SolarFlare 110 VegMaster as a good all-purpose light with spectrums to encourage both vegetative growth and flowers. The light it emits is a pink/purple color. Chainable design allows multiple SolarFlare 110 units to be powered by the same plug with a single timer. A compact light with 36 diodes. Consumes 90 Watts. 3 year warranty. Lights a 3'x3' area.



SolarFlare 110 VegMaster... \$309

Sun System HPS 150 -Compact, easy to use light fixture.

- ◆ 150 watt high pressure sodium bulb **included**-delivers 16,000 lumens.
- ◆ Highly reflective aluminum interior
- ◆ 7ft grounded 120V power cord
- ◆ Chrome wire mounting hangers
- ◆ 22½" L x 12¾" W x 7½" H
- ◆ 2 year warranty

Sun System HPS 150 . . \$100

Replacement lamps:

150W High Pressure Sodium . . \$19



DIGITAL, TWO OUTLET, 24 HOUR TIMER

Dual timer, 1 minute intervals, up to 8 separate schedules, large digital display, 15 amp capacity, battery backup, easy to use.

734105 Digital timer.....\$24.00



ANALOG, TWO OUTLET, 24 HOUR TIMER

Dual timer, easy to use, large display 15 minute intervals, rated at 15 amps which works for 2 - 400 watt lights.

734100 Manual timer.....\$19.00



SUPPLEMENTAL GREENHOUSE LIGHTING Plants need light for proper growth. The light spectrum range produced by High Intensity Discharge (H.I.D.) light enhances natural light. The result, with the proper nutrients, is healthier seed starts, more flowers and vigorous plants. H.I.D. lights are especially useful during long winters with little sunlight - at a cost comparable to a kitchen appliance.

High Output T5 fluorescent fixtures put out 92.6 lumens per watt, far more than traditional fluorescent bulbs. T5s are excellent for starting seeds, cuttings, and full term growth. Available in blue and red spectrums. Cool burning, they can be placed very close to your plants.

High Pressure Sodium lamps emit red/orange light, ideal for the fruiting and flowering stage of plant development.

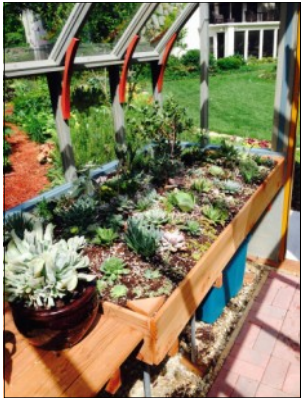
Light Emitting Diodes(LEDs) are the newest technology in grow lights, using much less energy. Available in blue and red spectrums.

Generally a light system will increase your electricity cost from \$10 to \$30 per month, depending on the size of the system, hours operated and electricity cost. **Important:** make sure your circuit can handle the power draw. Do not exceed 75% of the breaker's rated ability.

Sturdi-built offers complete, ready to use lighting systems, including lamps, designed for you to hang, plug in and turn on. If you need a more custom solution with higher power options call us.

STURDI-BUILT STANDARD BENCHES

Made of all Heart construction grade Redwood or select Western Red Cedar. Easy to install. Come ready for you to assemble and complete with galvanized metal legs. Standard benches are available in 3 types:



Soil Type (for propagating) - extra deep 8" sides, 1" bottom boards.



Slat Type - narrow spaced boards. Strong, good for potted plants.

Combination - part slat, part soil (you specify split)

PRICE PER BENCH

	Length			
Width	6'	8'	10'	12'
27½"	\$191	\$216	\$293	\$337
32"	\$212	\$240	\$324	\$376
37"	\$234	\$264	\$356	\$412

Note: Number & width of benches depends on greenhouse model. Shorter and longer lengths are available. Call for prices. Due to size and weight, extra shipping charges will apply to benches.

SLAT BENCH COVERS FOR SOIL BENCHES

Make your bench space more versatile with these soil bench tops. When your soil bench is not being used, convert it to a slat bench with these panels. 3 panels will cover a 6'-6" long soil bench.



Custom sizes are available.

26" panel for 27" wide bench . . . \$37.00

26" panel for 32" wide bench . . . \$42.00

26" panel for 37" wide bench . . . \$48.00

SPECIAL ALL-WOOD BENCHES

Available in one (single) or two (double) levels in a wide variety of sizes. Can be custom made for your greenhouse. Come ready for you to assemble.



Length	6'	8'	10'	12'
27" wide single	\$239	\$271	\$366	\$422
27" wide double	\$357	\$405	\$548	\$633
32" wide single	\$264	\$300	\$405	\$470
32" wide double	\$398	\$450	\$608	\$705
36" wide single	\$291	\$330	\$446	\$515
36" wide double	\$438	\$495	\$668	\$772

WOOD SHELVES

Beautiful wood shelves and supports made of top quality redwood or cedar. Attractive and strong.



Will fit any Sturdi-built greenhouse. Shelves are 11" wide and extend wider than the glass bay by 9" on each side. Please specify the greenhouse model when ordering and whether shelves are for side wall or end wall.

Note: shelves cannot be full length of the greenhouse, they must stop at least one bay from the corner.

One standard bay length (approx. 40") . . . \$36.00

Each additional bay length. . . \$26.00

RIDGE SCALLOPS AND FINIALS

Dress up your greenhouse with our handmade ridge scallop and finials. A nice addition to any freestanding greenhouse and a great look for your garden! Shown is our basic finial style. Each is individually made so inventory varies slightly.



Ridge Scallop . . . \$14/ft

Finial with Base . . . \$195 each