

Gro-Mars

Rules and Violations

G1. Gro-bots may control only one (1) plant at any given time with the exception of controlling gro-beds which may contain multiple plants. This violation shall receive a FOUL.

G2. Gro-bots may not contact the fertilized gro-bed with anything other than bumpers. This violation shall receive a TECH FOUL.

G3. Gro-bots may not move the fertilized gro-bed or game pieces on it before endgame. This violation shall receive a TECH FOUL and the full point value of the gro-bed and plants on it shall be awarded to the opposing alliance.

G4. Gro-bots must not enter the opposing alliance's safe zones. This violation shall receive a FOUL.

G5. Plants may not be placed on gro-beds or fertilized gro-beds while they are inside the gro-bay. This violation shall receive a FOUL.

G6. Pins may only last five (5) seconds. Violation of this shall receive a FOUL.

G7. Gro-bots must not contact the opposing alliance's field pieces. This violation shall receive a TECH FOUL.

G8. Gro-bots must not contact, under their own power, an opposing alliance's gro-bot while the latter is intersecting one of its own safe zones. This violation shall receive a FOUL.

Gro-bot Design Rules

R1. Gro-bots may not exceed 100 lbs (~45.4kg) excluding bumpers and batteries.

R2. Gro-bots must be outfitted with bumpers in compliance with 2021 Infinite Recharge guidelines and regulations.

R3. Gro-bots may not contain devices that are likely to cause damage to field pieces or other gro-bots.

R4. Gro-bots must not extend more than 17" past the frame perimeter except for endgame where they may extend 26".

R5. Gro-bots may not extend vertically more than 7' during the match. Should this occur the gro-robot shall be disabled, and the alliance shall receive a TECH FOUL.

Gro-Mars

Scoring

Plants supported only by a gro-bed or fertilized gro-bed will be scored, regardless of their orientation.

Moving from the initiation line during the beginning autonomous period will result in five points. Moving from the initiation line after this time will not reward such points.

Plants on vertical hydroponic farms are scored immediately. If a scored plant is removed, the value of points will also be removed.

Gro-beds and their contents will only be scored if the gro-bed is contained entirely within the infinite vertical space of the gro-bay and supported by the floor.

Gro-bots will only be scored as sitting inside the gro-bay if they are contained entirely inside the infinite vertical space that is the gro-bay and are being supported by the ground.

Gro-bots will only be scored as hanging from the gro-bay if they are contained entirely inside the infinite vertical space that is the gro-bay and are supported entirely by the gro-bay structure and have bumpers below the gro-bay structure.

Gro-bots will only be scored as sitting atop the gro-bay, if and only if supported entirely by the gro-bay structure and all bumpers are above the gro-bay structure.

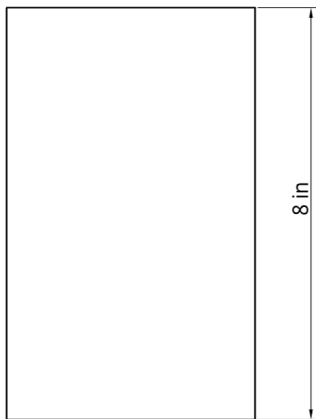
Point System

	Auto	TeleOp	TeleOp-end	Auto-end	Ranking point
Alliance gro-bed itself scored	16	15	15	20	n/a
Fertilized gro-bed itself scored	n/a	n/a	15	20	1
Plant on scored alliance gro-bed	4	3	3	5	n/a
Plant on scored fertilized gro-bed	n/a	n/a	4	6	n/a
Vertical hydroponic farm - bottom	4	2	2	3	n/a
Vertical hydroponic farm - middle	6	4	4	5	n/a
Vertical hydroponic farm - top	7	5	5	6	n/a
Fill vertical hydroponic farm	n/a	n/a	n/a	n/a	1
Park under gro-bay	n/a	n/a	5	10	n/a
Hang gro-bay	n/a	n/a	15	20	n/a
Park on gro-bay	n/a	n/a	20	25	n/a
Initiation line exit	5	n/a	n/a	n/a	n/a
Match tie	n/a	n/a	n/a	n/a	1
Match win	n/a	n/a	n/a	n/a	2
FOUL	15	15	15	15	n/a
TECH FOUL	30	30	30	30	n/a

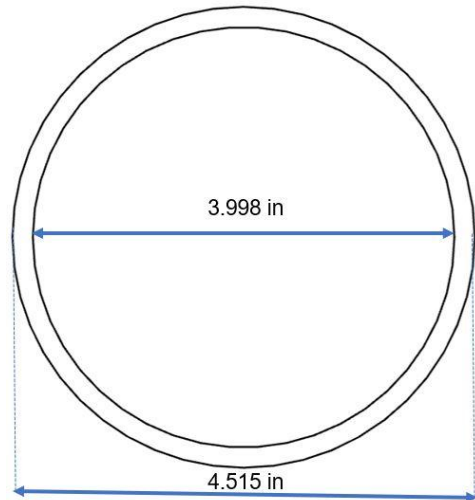
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Technical Drawings of Field Pieces

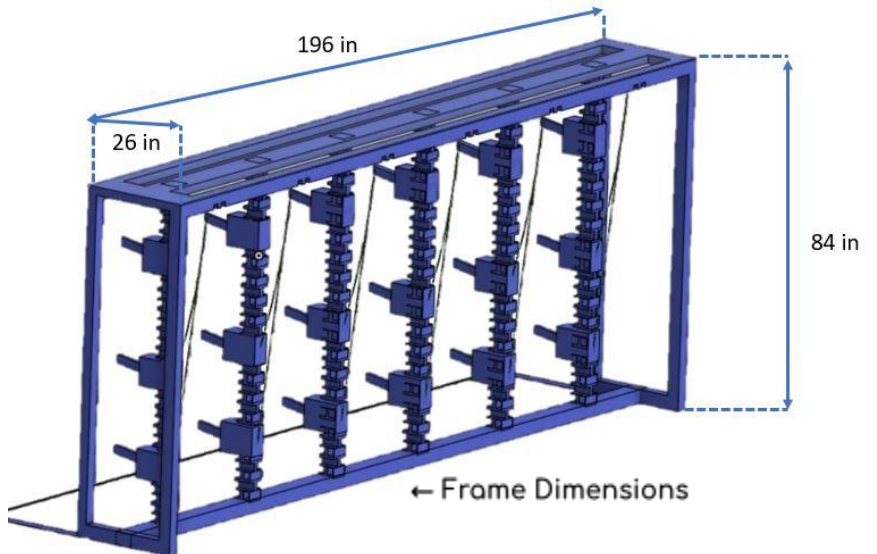
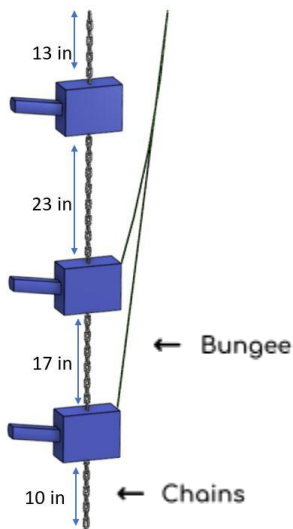
Plant



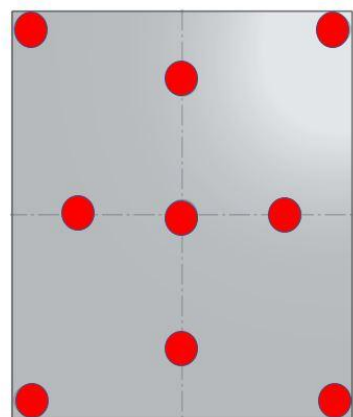
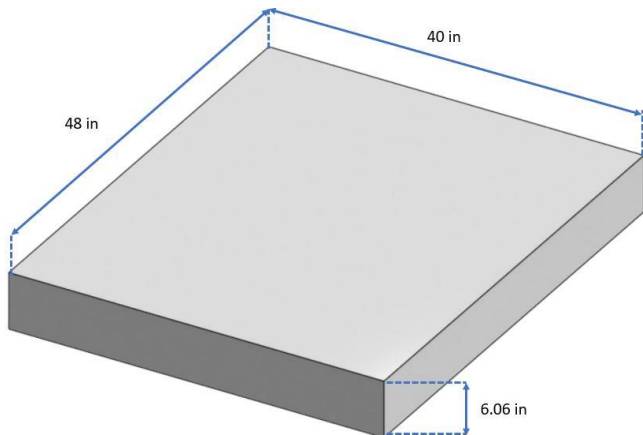
← Height Diameters →
(external+internal)



Vertical Hydroponic Farm

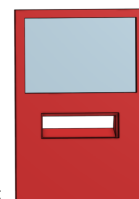
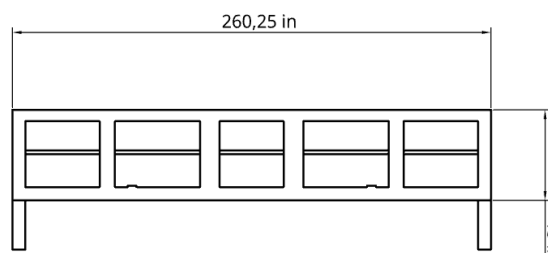
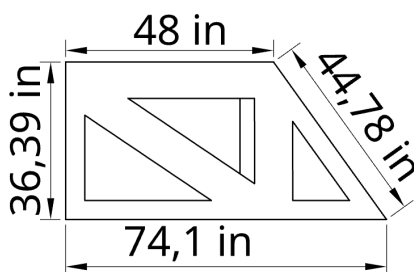


Gro-bed + Fertilized Gro-bed



Red circles show the locations of the friction reducing furniture movers on the Fertilized Gro-bed.

Gro-bay + Cargo Drop



Height 84 in
Width 57 in
Chute 28 in from floor
Chute Height 10 in
Chute Width 34 in

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Field Areas Layout

