



STANDARD FEATURES AND EQUIPMENT

DRIVE

- Solid rubber tires
- Rear wheel drive steering in a tricycle configuration
- 36 VDC battery electric drive
- Pulse width modulation (PWM) solid state digital speed and directional control
- Electric chassis drive includes transmission and automatic brakes
- Steering tiller includes directional and speed controls, E-Stop, and a belly button switch

CHASSIS

- Counterbalanced fixed boom assembly
- Removable modular counterweight chassis mounted with power lift installation system
- Manual screw jack load compensator outriggers
- · Built in 25 Amp battery charger with linear rate control, 110 volt, 60 hz. single phase
- Electrical circuit breakers

CONTROL

- 14 direction manipulator motions, standard
- Forward reach to 7" frame/mullion depth
- Electronic proportional dual mode control all function for micro motion operation

HYDRAULICS

- 2.8 HP, DC drive motor direct coupled to hydraulic
- All hydraulic functions are proportionally controlled, with valves for each boom or manipulator function

VACUUM

- Redundant vacuum pumps, non-lubricated positive displacement, automatic start-stop control
- · Vacuum frame accepts variety of cup sizes, fully adjustable
- Vacuum cartridges include bi-directional coil spring loaded mounts
- Includes 4 standard 20" x 12" rectangular suction cups, 550 lbs. lift per cup in shear at 100% safety factor

CONSOLE

- Control panel mounted on a two link pendant arm to enable machine operation from the side or front of unit
- Console items include:
 - Hydraulic power On/Off switch
 - · Operating mode selector: normal vs. micro-motion
 - · Multi function controls for all manipulator end effector functions
 - Vacuum release switches
 - · Emergency stop
 - Vacuum gauge

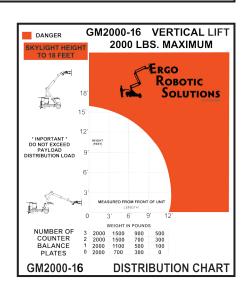
SAFETY

- Speed and directional controls handlebar mounted separate from boom/manipulator controls
- Strobe light operates with master battery switch
- Low vacuum level alarm, audible horn
- Safety vacuum check valves
- · Console-mounted two button safety vacuum release valve
- Anti-tipping mechanism automatically prevents forward extension of load prior to unbalanced situation; forward tipping is prevented.

GM2000-16-WINCH1950 DIMENSIONS

GM2000-16-WINCH1950 Characteristic	Specification
Lift Capacity	2000 lbs.
Closed Chassis Length	116"
Width	34"
Height: Retracted Clearance	79"
Height: Center of Lift Hub	192"
Turning Radius	0"
Unladen Weight (without Counterbalance)	3100 lbs.
Counter Balance	1400 lbs.





POWERED MANIPULATION FUNCTIONS

Control	Assembly	Direction	Viewed from
1	Boom	Raise-Lower	Side Elevation
2	Boom	Telescoping Extend - Retract	Side Elevation
3	Boom Camber	Pivots forward and backward	Side Elevation
4	Manipulator - vacuum cup frame	First and second stage vertical angular tilt	Side Elevation
5	Manipulator - vacuum cup frame	Horizontal angular tilt	Top Plan
6	Manipulator - vacuum cup frame	Lateral side shift, 2" left & 2" right; 4" total	Front Elevation
7*	Manipulator - vacuum cup frame	EZ Pick: 11" reach, out & down / up & in	Front Elevation
8	Manipulator - vacuum cup frame	Rotate - CW and CCW 180°	Front Elevation

* Optional add-on feature

- All hydraulic controls use fine metering valves.
- The hydraulic circuits are equipped with counterbalance valves to prevent leak down and droop under load.
- Dual mode provides console mounted switch selection for micro motion control.









WINCH FEATURES

Winch

- Planetary hydraulic winch
- Hoist features single lubricant for all temperature ranges
- Light weight
- Spring applied hydraulic released brake

- Compact design
- Meets ANSI B30.5 standards
- · Made in the USA
- Overall Dimensions 21.11 in. x 11.86 in. x 10.81 in.
- Drum size 6.5 in.
- 12 cubic inch motor

CAUTION: The last 5 wraps of cable must be left on the drum to assist the cable clamp in holding the load.

SPECIFICATIONS

Winch Characteristics	Specification	
Gear Reduction	5.1:1	
Line Speed at 8 GPM, first layer	48 fpm	
Line Speed at 8 GPM, second layer	52 fpm	
Line Speed at 8 GPM, third layer	56 fpm	
Line Speed at 8 GPM, fourth layer	60 fpm	
Cable Included	120 feet	
Weight without cable	120 lbs.	
These specifications are based on recommended 3/8 in. (9.5 mm) EIPS wire rope, supplied.		
GM 2000-16 lift capacity, via winch	1.950 lbs.	



