

Overview

BURRO Grande 15 is a heavy-duty, indoor/outdoor collaborative robot, designed to help laborers work more productively. To date, Grande 15 has primarily been deployed in towing applications for nursery and greenhouse customers. However, Grande 15 is well-suited for countless other carrying and towing applications.

No matter how complex Grande 15 may be under the hood, we know that it must be practical, durable, and easy-to-use.



Dimensions & Weight

LENGTH

58.75 in (149.2 cm)

HEIGHT

56 in (142.2 cm) (To Top of Beacon);
23.5 in (59.7 cm) (To Payload Area)

WIDTH

48 in (121.9 cm)

PAYLOAD AREA

50 in (127 cm) x 48 in (121.9 cm)
Solid Steel Tray

WEIGHT

1081 lbs (490 kg)

Carrying & Towing Capacity

MAX CARRYING PAYLOAD¹

1000 lbs (454 kg)

MAX TOWING PAYLOAD²

5000 lbs (2268 kg)

¹Rated for flat asphalt/concrete. Rated up to 1500 lbs (680 kg) on dirt/gravel

²Will vary based on speed, terrain, and payload

Power & Range

MOTORS

4x Ruggedized heavy-duty dual-stage helical wheel drive with high-capacity output shaft

POWER SOURCE

System: 48VDC, 2 x 51.2V 100Ah Lithium Iron Phosphate (LFP) battery

CHARGING OUTPUT

Onboard: 48VDC, 20A

PEAK POWER

12.6 hp (9.4 kW)

BATTERY RANGE⁵

Min. 15 mi (24 km)

CHARGING TEMPERATURE

32°F to 122°F (0°C to 50°C)

CONTINUOUS TORQUE

221 ft·lb (300 N·m)

OPERATING TEMPERATURE

-4°F to 113°F (-20°C to 45°C)

⁴ BURRO Grande 15 can go up to this speed. Autonomy, load, and field conditions can will reduce its maximum speed

PEAK TORQUE

1124 ft·lb (1524 N·m)

CHARGE TIME

11 hours

⁵ Will vary based on average speed, carrying/towing payload, and terrain (type & grade). Additional batteries can be added for extended range.

MAX SPEED⁴

5.8 mph output shaft

CHARGING INPUT

100-240 VAC, 50-60Hz: 8-10A at 120 VAC, 4-5A at 240 VAC

Wheels & Tires

WHEELS⁶

10 x 7, 1.5 in offset

TIRES⁶

R4, 18 x 8.5-10 in (tubeless)

⁶Current standard wheel and tire configurations for BURRO Grande 15. Alternative options may be available in the future.

Computing & Sensors

CAMERA SYSTEM

4 x Stereo Camera (12 Cameras in Total)

GPS

RTK (NTRIP Compatible)

LIDAR

3D LiDAR

MODEM

4G LTE Modem

CPU & GPU

All Computing Onboard/Local

RAM

32 GB

STORAGE

256 GB SSD

COOLING

Zero-ingress Forced-Air Cooling System

Interface & Safety Features

SCREEN

7" LCD Touch Monitor

BRIGHTNESS

1000 nits

RESOLUTION

1024 x 600

BUMPER BAR/SAFETY EDGE

Front & Rear

REMOTE VIEW

Online dashboard view: See robot on map, what it's doing, and what it's seeing

VISUAL

Strobe safety running light (LED; hard-wired); Front & Rear LEDs provide cues & safety/area lighting

AUDIO

Cues inform users of Burro's autonomy & when it's in motion; Adaptive Horn: Volume adjusted based on ambient noise when in motion

Autonomy

PERSON FOLLOWING

Vision Based

AUTONOMOUS ROUTES (TEACH & REPEAT)

Vision + GPS + LiDAR

ROW NAVIGATION + ROW TO ROW

Vision Based

ATLAS (ONLINE ROUTE CREATION & MANAGEMENT + DESTINATION BASED NAVIGATION)

GPS + LiDAR

OBSTACLE HANDLING (STOPPING & AVOIDANCE/PATH PLANNING)

Vision + LiDAR

DATA COLLECTION

Up to 1 TB/hour

