

TUG Model GT110 Pushback

The GT-110's coordinated, track or crab steering can be selected to provide optimum maneuverability in tight places and ensure aircraft safety.



Standard Features

- PLC Controlled 3-Mode steering (coordinated, track, crab)
- Downshift inhibitor
- LCD user interface
- Out of neutral, parking brake "ON" alarm
- Upper-surface access steps
- Sealed-beam halogen headlights
- LED Backup lights
- Backup Alarm
- Turn signals/ LED Emergency flashing lights
- Automatic lube system
- 3 man seating in all cab configurations
- Rear view camera

Optional Features

- Full-width elevating cab with front hitch mirror or stationary front cab
- Open front operator compartment
- Rear operator compartment with GPU platform
- Amber safety beacon
- Cold-weather options
- Fire extinguisher
- Fire suppression system

General Information

With over 20 years of airline service, TUG's tractors are proven performers. The GT-110 is the largest tractor available and it is the ideal tractor to handle pushback and towing requirements for all wide-body aircraft (except A380).



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GENERAL

Gross Vehicle Weight (gvw)	Maximum Drawbar Pull*
At gvw 90,000 lb (40,824 kg)	72,000 lb (32,659 kg)
At gvw 100,000 lb (45,360 kg)	78,000 lb (35,380 kg)
At gvw 110,000lb (49,895 kg)	78,000 lb (35,380 kg)
At gvw 120,000lb (54,432 kg)	78,000 lb (35,380 kg)

* At 0.8 traction coefficient. ±3% variation on published drawbar pull and weight, owing to manufacturing tolerances.

SPEED

Forward	
1st	2.1 mph (3.4 km/h)
2nd	5.2 mph (8.4 km/h)
3rd	12.4 mph (20 km/h)
4th	15 mph (24.1 km/h)

Reverse - same as above, but without 3rd and 4th gear.

OVERALL DIMENSION

Length* w/o Hitches	258" (6,553 mm)
w/Standard Hitches	285" (7,239 mm)
w/Platform and Standard Hitches	342" (8,687 mm)
Width	110" (2,794 mm)
Height Over frame	68" (1,727 mm)
Standard Stationary Cab	81.5" (2,070 mm)
Lifting Cab	65.5" to 93" (1,664 mm to 2,362 mm)
Wheelbase	124" (3,150 mm)
Ground Clearance (Nominal)	8.5" (216 mm)

*Length will vary with hitch selection.

Turning Radius (Four-Wheel Coordinated Steer)	
Minimum Inside	96" (2,438 mm)
Minimum Outside	260" (6,604 mm)

RAMP ANGLES

Approach Angle	7.0°
Breakover Angle	12.0°
Departure Angle	17.0°
Departure Angle w/GPU/RO platform	8.0°

ENGINE - CERTIFIED TIER III

Manufacturer	Deutz Model TCD 2013 L6 2V
Type	Water-cooled, diesel, four-cycle
Number of Cylinders	Six (6)-cylinder; in-line
Displacement	433 C.I.D. (7.1L)
Horsepower@ Flywheel	268 hp (200 kW) @ 2300 rpm
Maximum Torque	774 lb ft @ 1500 rpm
Fuel Injection	Common Rail
Aspiration	Turbocharged, charge air-cooled

ENGINE - CERTIFIED TIER 4i

Manufacturer	Cummins Model QSB6.7
Type	Water-cooled, diesel, four-cycle
Number of Cylinders	Six (6)-cylinder; in-line
Displacement	409 C.I.D. (6.7L)
Horsepower@ Flywheel	275 hp (205 kW) @ 2500 rpm
Maximum Torque	728 lb-ft @ 1500 rpm
Fuel Injection	Common Rail
Aspiration	Turbocharged, charge air-cooled

TRANSMISSION

Manufacturer	ZF
Type	Torque Converter/Powershift
Speeds	Four (4) forward; two (2) reverse
Control	Electric shift with downshift inhibitor

AXLES

Manufacturer	Meritor (Rockwell International)
Type (Front and Rear)	Planetary-drive and steering w/high traction differential
Tires	16.00x25
Suspension	Front, rigid; Rear, trunnion
Interaxle	Differential Integral with transmission
Type	Bias (proportional)

BRAKES

Service Brakes	Hydraulic power braking system w/ dual accumulator backup. Disk brakes on the four wheels.
Brakes on each axle	are actuated through 1 of the 2 independent service brake circuits.
Parking Brakes	Spring-applied, hydraulically released calipers on each axle pinion.

HYDRAULIC SYSTEM

Hydraulic Pump	Engine-driven, providing hydraulic power for steering & braking
Type	Piston
Capacity	40 gpm (152 L/min) @ 2300 rpm
Hydraulic Oil Tank	
Type	Removable
Capacity	30 U.S. gallons (113 L)
Steering Type	Closed center hydraulic power steering system. Three mode steering with electrical selection of front 2-wheel, 4-wheel coordinated or 4-wheel crab.
Emergency Steering Provided	by 24VDC motor-driven hydraulic pump

ELECTRICAL SYSTEM

Voltage	24V
Alternator	80A
Batteries (2)	
Type	Heavy-duty diesel starting
Cranking Capacity (ea.)	925A

FUEL SYSTEM

Capacity	65 U.S.-gallons (246 L)
Deutz Engine	
Fuel	No. 2 Diesel (Jet-A approved)
Cummins Engine	
Fuel	ULSD (ultra low sulfur diesel)

HITCHES

Front and Rear	Standard
Type	Pin coupler
Height	16" (406mm)
Pin diameter	2.5" (63.5 mm)

*Hitches include automatic pin retainers.

CAPACITIES

Hydraulic Oil	30 U.S. gallons
Engine Coolant	25.4 quarts
Engine Oil	22.2 quarts
Transmission Fluid	8 gallons
Fuel	65 U.S. gallons

STANDARD FRONT OPERATOR INSTRUMENT PANEL AND CONSOLE

LCD user interface which includes all gauges (speedometer/odometer, engine tachometer/hour meter, engine oil pressure gauge, engine coolant temperature gauge, voltmeter, fuel level indicator, transmission oil temperature indicator, engine hours indicator, gears indicator); keyless, anti-restart ignition/shutdown switch; emergency engine shutdown switch; light switches; blue high beam indicator light; red parking brake "ON" warning light; turn signal/hazard indicator lights; glow plug "ON" indicator light; alternator "NO CHARGE" indicator light; warning lights for engine L.O.P., H.C.T. and transmission fault; parking brake switch, steering mode selector switch, system pressure gauge, emergency steering switch, intercom jacks · automatic lube system · battery disconnect · 3 man seating in all cab configurations

OPTIONAL EQUIPMENT

Full-width elevating cab with front hitch mirror or stationary front cab · open front operator compartment · rear operator compartment with GPU platform · amber safety beacon · cold-weather options · fire extinguisher · fire suppression system · front and rear hitch lights · hydraulic self-jacking system · spare tire and wheel assembly · tire chains · custom paint schemes · cab air conditioning · other options available

FEATURES OF OPTIONAL FRONT CAB

Removable doors with door retainers · sliding door windows/rear windows · roof windows with driver's side wiper · ventilating fans (2) · front windshield wipers and washers · adjustable, padded driver's seat · two-man, padded passenger seat with storage compartment · heater-defroster · dome light · audible alarm while raising/lowering cab

FEATURES OF OPTIONAL REAR OPERATOR COMPARTMENT

Operator station selection switch · dual rearview mirrors · (if open cab) standing position driver's seat · (if closed cab) driver's bucket seat and passenger bench seat · electric shift control with downshift inhibitor and out of neutral · park brake, "ON" alarm · park brake switch · rear headlight switch · emergency engine shutdown switch · steering mode selector switch · emergency steering switch · alternator, "NO CHARGE" indicator light · warning light for engine and transmission faults

Specifications are subject to change without notice. Models shown may include optional features. GT110/BRO-008, Rev. 2/16