Cat®
SH620

Roof Support Carrier

Features:

Capacity

- Lift and Carry Capacity* – 19.9 tonnes (22 tons) at 914.4 mm (36 in)

*Capacities based on 1117.6 mm (44 in) tires.

Drive Train

- Tram Motor
  - Two proprietary design, mine traction, direct current, gear motors rated at 37.28 kW (50 hp) (74.56 kW [100 hp] total) at 1,540 rpm and 110V; MSHA totally enclosed explosion proof; non-ventilated cooling; foot mounted. (Motor curves are furnished on request.)
- Drive Lines
  - Heavy duty off-highway type drive shafts and slip joints.
- Axles
  - Front/rear rigid mounted outboard planetary axles with wet disc spring applied, hydraulically released brakes.
- Motor Overspeed Protection
  - Motor system is designed to prevent tram motor from overspeeding.

Brakes

- Service and Emergency/Park
  - Spring applied hydraulic release SAHR
  - Four wheel wet disc
  - Left pedal activated
  - Controlled by reverse modulating valve

Hydraulics

- Pump Motor
  - Mine duty, laminated frame, direct current motor rated at 11.93 kW (16 hp) for one hour; 110V DC; MSHA totally enclosed explosion proof; non-ventilated cooling.
- Pump
  - The pump is a fixed displacement gear pump that is splined shaft fitted to the pump motor.
- Filtration
  - Standard – one 10 micron pressure filter and one 10 micron return filter.
- Reservoir
  - A 189.3 L (50 gal) capacity, integral reservoir.
- Reservoir Fill System
  - Fill cap assembly in top of reservoir tank.
- Valve Bank
  - Six section, parallel type with internal relief and a dash mounted glycerin filed pressure gauge.
- Hydraulic PTO
  - Two (2) quick coupler connections, 8273 kPa (1,200 psi) maximum recommended operating pressure.
- Tilt/Lift Cylinders
  - Two (2) 152.4 mm (6 in) bore, double acting cylinders with forged rods and self-aligning lift cylinders.
  - Two (2) 177.9 mm (7 in) bore, double acting cylinders with forged rods and self-aligning tilt cylinders.
- Steering Cylinder
  - Two (2) 127 mm (5 in) bore, double acting cylinders with forged rods and self-aligning bearings.

Standard Load Lift

- A combination bell crank arm and bell crank lifting cylinder, for vertical lifting and tilting cylinders for tilt lifting of a universal load lift frame that is provided as standard equipment. Heavy duty, pin on, forged alloy steel forks 114.3 mm × 203.2 mm × 2082.8 mm (4.5 in × 8 in × 82 in), are standard for 19.9 tonne (22 ton) lift capability.
- Winch
  - 15.9 kg/f (35,000 lbf), 2 speed, hydraulic driven, worm-style winch attached to lifting frame with three quick detach pins in a zero line stretch configuration.
- Winch Cable Assembly (Options)
  - 19 mm (¾ in) diameter cable equipped with a swaged-on thimble, connecting link and swivel hook and a swaged stud quick attachment.
  - Optional twelve strand braided synthetic rope with swivel hook.

Frame

- Tri-Section Frame
  - The tri-section frame design featuring multiple plate, modular construction for maximum strength and structural integrity and the design produces a maximum of stability while maneuvering with a heavy load. All high stressed areas are manufactured with T1 steel.
- Center Section
  - Center section is designed with hardened 76.2 mm (3 in) diameter pivot pins and spherical bearings to provide maximum load transfer and long component life. All high stressed areas are manufactured with T1 steel.
- Oscillation Section
  - A 666.75 mm (26.25 in) diameter bearing with 33.34 mm (1 5/16 in) diameter rolling elements provides 20 degrees of oscillation.
- Battery Change System
  - Ground level battery change system (GLBC) with self-leveling gathering arms and two (2) 127 mm (5 in) bore, double acting cylinders.

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Operator's Compartment

- Equipped with control handle on the left hand steering lever. The functions on the control handle are:
  - Direction control
  - Pump start
  - Light direction selection
  - Park brake release
  - Traction assist
  - Stop
- Right Foot Accelerator Pedal
- Left Foot Brake Pedal
- Panic Strip Switch – de-energizes the electrical system and applies the automatic park brake
- Warning Gong
- Manual Disconnect Switch
- Manual Breaker Lever Re-Set Handle
- Valve Bank Hydraulic Functions
  - Steering
  - Bucket
  - Bucket eject
  - Winch/power take off
  - Battery changer
  - Optional hydraulic cab
- System Pressure Gauge
- Accumulator Pressure Gauge
- Park Brake Release Pressure Gauge

Manuals

- Two Parts Manuals
- Two Operation and Preventive Maintenance Manuals
- Two Electrical Troubleshooting Guides
- Two Battery Maintenance Manuals
- Two Battery Maintenance Charts
- One LinkOne CD includes all above manuals in electronic format

Hydraulic Installation (Standard)

- JIC fittings with 373.8 kPa (5,000 psi) hosing; MSHA 2G flame resistant approved

Electrical Controller (Options)

- Model BUC2000, microprocessor controlled, IGBT, contactorless, 128V DC, 1,200 amp traction motor controller (one per electric motor), with infinitely variable, step less, machine speed control, equipped with on-board dashboard display for machine information of battery capacity, battery voltage, motor currents, elapsed time hour meter, and troubleshooting diagnostics information.
- Microprocessor controlled, IGBT, contactorless, 128V DC, 350 amp, pump motor controller, limits starting current, and provides LED based diagnostics.
- Mine duty, 600 amp frame circuit breaker, with UVR (under voltage release) trip unit.

Circuit Breaker Options

- Magnetic, UVR Trip – controller enclosure equipped with UVR trip circuit breaker rated mine duty 800 amp frame, 600V.
- Standard Cab mounted breaker reset using a single high capacity, swivel end style push/pull cable.
- Optional Cab mounted hydraulic breaker reset with single push breaker trip function. System equipped with a hand pump and reservoir for resetting the tripped breaker.

Cab Options

- Manual Adjustable Cab Assembly – MSHA certified cab
- Hydraulically Adjustable Cab Assembly – MSHA certified cab

Tire/Wheel Options

- 38 × 16-15 Filled Tires – 36 ply, maximum filled tires and wheels
- 44 × 18-20 Filled Tires – 36 ply, maximum filled tires and wheels

Lift Attachments

- Quick Attach Lift Plate, (fork assembly required) – designed to lift and carry 19.9 tonnes (22 tons) at 914.4 mm (36 in) from the face of the load lift frame. The plate mounts directly to the forks through two parallel pockets and is held in place with two drop pins chained to the lift plate.

Lighting System Options

- MCI 12V (Blue Lamp) Halogen 50 watt
- Ocenco, Halogen, 12V DC, 50 watt
- Standard two front headlights with protective guard, and two rear headlights with protective guard

Fire Suppression

- Automatic or Manual with NPT Fittings, Four Point (two on the front frame and two on the rear)

Machine Accessories (Optional)

- Schroeder Testmate
- PA Approval Plate
- Park Brake Pressure Sensitive Switch – prevents operator from driving through park brake
- Automatic Fire Suppression – automatically activated by heat sensors and including one manual
- Venturi Jet Fill
- BUC2000 Hand Held Calibrator
- RPM Monitoring – protection tram motor over-speed
- Extra Parts Manual
- Extra Operations and Maintenance Manual
- Bucket – 3.7 m^3 (130 ft^3)

Machine Battery

- Battery Tray
- Battery with Plastisol Coated Tray (Single Connector)
- Battery Receptacle Kit
- Battery Filling System

Battery Charger Options

- Single Output for One Battery
- Dual Output for Two Batteries

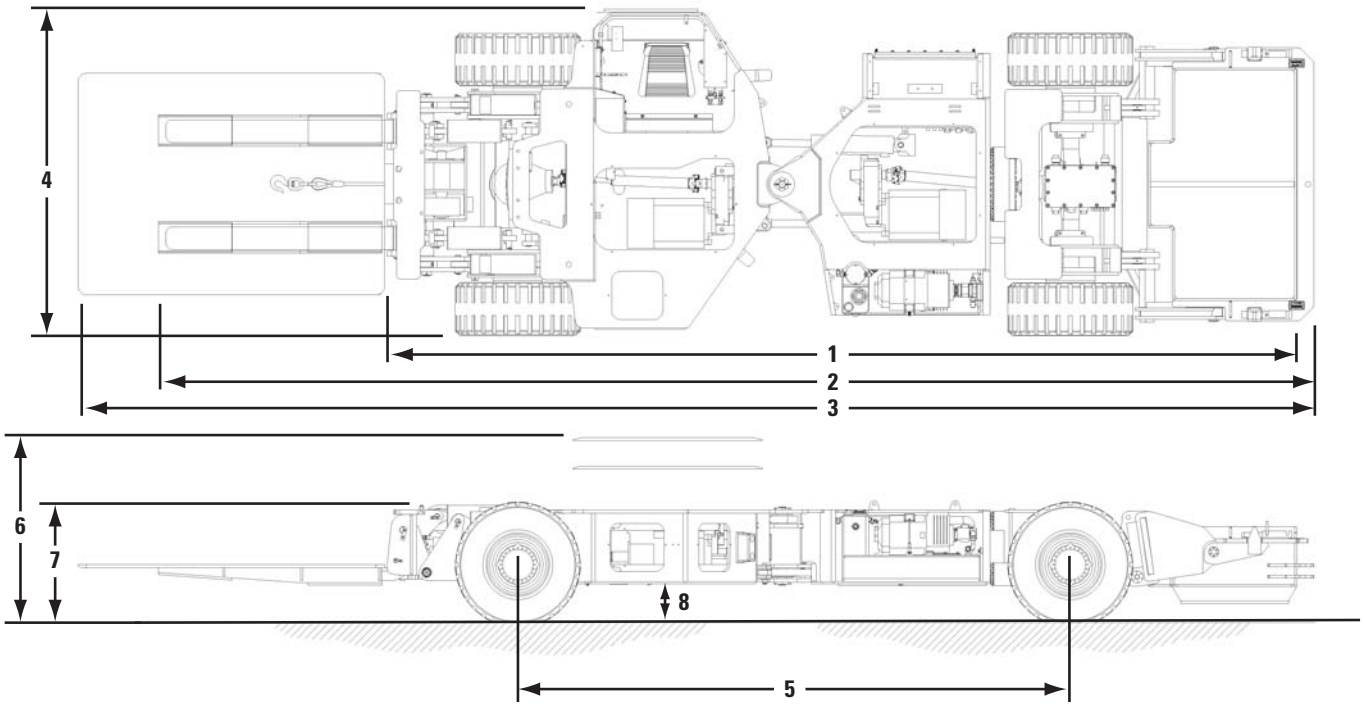
Specifications

Weights

Empty Weights		
Less Battery	21 046.7 kg	46,400 lb
With 64SS125-21 Battery	28 122.7 kg	62,000 lb

Speed

Tram Speed	8 km/h	5 mph



Dimensions (All dimensions are approximate.)*

1 Length Less Load Lifting and Battery Tray		7874 mm	25 ft 10 in
2 Length with 2082.8 mm (82 in) Lifting Fork		10 261.6 mm	33 ft 8 in
3 Length with Lift Plate Attachment		11 049 mm	36 ft 3 in
4 Overall Width			
	With Attachments and 965.2 mm (38 in) Tires	2844.8 mm	9 ft 4 in
	With Attachments and 1117.6 mm (44 in) Tires	2896.6 mm	9 ft 6 in
5 Wheelbase		4953 mm	16 ft 3 in
6 Cab Height**			
	Standard Cabs with 965.2 mm (38 in) Tires	Adjust from 1320.8 mm-1574.8 mm	Adjust from 52 in-62 in
	Standard Cabs with 1117.6 mm (44 in) Tires	Adjust from 1397 mm-1651 mm	Adjust from 55 in-65 in

7 Chassis Height (Nominal)		
With 965.2 mm (38 in) Tires	939.8 mm	3 ft 1 in
With 1117.2 mm (44 in) Tires	1016 mm	3 ft 4 in
8 Ground Clearance (Nominal)***		
With 965.2 mm (38 in) Tires	279.4 mm	11 in
With 1117.2 mm (44 in) Tires	355.6 mm	14 in
Inside Turn Radius	4013.2 mm	13 ft 2 in
Outside Turn Radius	7061.2 mm	23 ft 2 in
Steering Articulation	110 Degrees Total	
Frame Oscillation	40 Degrees Total	

*Detailed GA drawings available for specific dimensions and component locations.
**Other cab heights available on request.
***Please reference sales drawing for Ground Clearance profile.

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