

Cat[®] SH630

ROOF SUPPORT CARRIER

FEATURES:

Capacity

- Lift and Carry Capacity*
 - Without Ballast – 32.6 tonnes (36 tons) at 1574.8 mm (62 in)

*Based on the use of 48×22 solid tires.

Drive Train

- Tram Motor
 - Two mine traction, direct current, dual field, laminated frame gear motors rated at 37.28 kW (50 hp) each (total of 74.56 kW [100 hp] per machine) at 1,500 rpm and 110V DC; foot mounted. Each 37.28 kW (50 hp) tram motor is coupled with a 5.77:1 ratio gearbox.
 - One motor is front frame mounted and drives the front axle and the rear axle tram motor is middle frame mounted. (Motor curves are furnished on request.)
- Drive Lines
 - 7C Series shafts with 127 mm (5 in) slip joints
- Axles
 - Front and rear rigid mounted outboard planetary axles with wet disc brakes.
- Motor Overspeed Protection
 - The motor overspeed system is designed to protect series wound DC tram motors from overspeed damage. Overspeed damage occurs only when the tram motor exceeds the nameplate speed rating (RPM) of the tram motor. Battery powered equipment is designed to operate within the speed rating of the tram motor, however, mine applications with severe downhill grades can lead to excessive motor speed and tram overspeed damage.

Brakes

- Service
 - Left foot-pedal actuated, wet disc brakes at all four wheels. Hydraulic power is supplied through a 3.78 L (1 gal) accumulator which continues to provide stopping power in the event of a power loss and is monitored by a charging/unloading valve.
 - Accumulator is not permitted to fall below a certain residual pressure to assure this continued availability. A dash mounted monitoring gauge keeps the operator constantly informed of the accumulator's status.

Automatic Emergency/Park Brake Release Hand Pump

- Wall mounted hand pump located to the right of operator. Activating this pump enables the operator to release the brake without power on the unit for towing a disabled vehicle.

Hydraulics

- Pump Motor
 - Mine duty, laminated frame, direct current motor rated at 7.8 kW (16 hp) for 1 hour or 11.9 kW (10.5 hp) continuous; 110V DC; MSHA totally enclosed explosion proof; non-ventilated cooling; and foot mounted.
 - NOTE: Tests of comparable standard gear pumps in comparable machines in the exact same environment, demonstrated that the helical designed gear pump is approximately 10 dB quieter.
- Filtration
 - A high pressure 25 micron filter with dirt indicator located beside the pump motor is provided as standard equipment along with a 25 micron low pressure return line filter located in the reservoir.
- Reservoir
 - A 151.4 L (40 gal) capacity, bolt-in reservoir equipped with a spin-on filter/breather, an end mounted drain plug, and a clean out plate to permit draining and cleaning while still mounted on the machine.
 - An oil level sight gauge is located at the side of the tank and is easily visible.
- Reservoir Fill System
 - Refill pump system located on opposite side from operator on the middle frame that allows refilling of reservoir through the return line oil filter that is located in the top of the oil reservoir.
- Valve Bank
 - Seven section, parallel (flow through) type with internal relief and a dash mounted, glycerin filled pressure gauge.
- Hydraulic PTO
 - Two (2) quick coupler connections, 8273 kPa (1,200 psi) maximum recommended operating pressure.
- Tilt Lift Cylinder
 - Two (2) 215.9 mm (8.5 in) bore, double acting cylinders with load locking valves mounted on both the up and down function.
- Bell-Crank Lift Cylinder
 - Two (2) 152.4 mm (6 in) bore, double acting cylinders with load locking valves mounted on both the up and down function.
- Steering Cylinder
 - Two (2) 127 mm (5 in) bore; double acting cylinders with dual relief setting at 11 031 kPa (1,600 psi)
- Battery Changer Cylinder
 - Two (2) 127 mm (5 in) bore, double acting cylinders with load locking valves mounted on both the up and down function.

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Dual Lift System

- Standard Load Lift Face Plate
 - 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.
 - This ultra-heavy duty welded and machined plate can accommodate many optional devices. Using crib blocks under optionally mounted forks allows the front axle to be lifted off the ground for tire and axle servicing if necessary.
- Winch
 - A fully hydraulically operated, two speed, load sensing 20 411.6 kg/f (45,000 lbf) – bare drum pull winch is mounted on the front frame.
- Winch Cable Assembly
 - The standard winch cable is 25.4 mm (1 in) diameter, 6 × 37, IWRC, EIPS, class bright cable equipped with a swaged-on thimble, connecting link and swivel hook.
- 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 101.6 mm (4 in) diameter pivot pins and spherical bearings to provide maximum load transfer and long component life. Entire center section area manufactured with T1 steel.
- Oscillation Section
 - A 812.8 mm (32 in) diameter ball bearing provides ±20° oscillation while maintaining a maximum of load transfer.
- Battery Change System
 - Uniquely designed, hydraulically operated, bell-crank, forklift battery changer to pick up battery from grade. The battery/battery tray assembly can be further raised to increase the rear approach clearance up to 457.2 mm (18 in).
 - With the use of crib blocks, the rear axle can be raised off the ground for tire and/or axle maintenance.

Operator's Compartment

- Side Egress Access
- Off-Park-Forward-Reverse Master Switch
- Front-Off-Rear Headlight Switch
- Panic Strip Switch – de-energizes electrical system and applies the automatic park brake
- Interlocked Push Button Pump Motor Start Switch
- Left Hand Steering Control Lever
- Dash Mounted Power Disconnect Switch
- Dash Mounted Fire Suppression Actuator
- Dash Mounted Glycerin Filled Hydraulic Gauges for accumulator, system pressure and emergency brake
- Push Button Electric Park Brake Release
- Winch Operations Control Valve
- Warning Gong
- Right Hand Tilt-Lift Control Lever
- Right Hand Bell-Crank Lift Control Lever
- Hydraulic Winch (In-Out) Control Lever
- Hydraulic PTO Control Lever
- Battery Changer Control Lever
- Manual Circuit Breaker Reset Lever Control Handle
- Emergency/Park Brake Release Hand Pump
- Right Foot Accelerator Pedal
- Left Foot Brake Pedal

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

Specifications

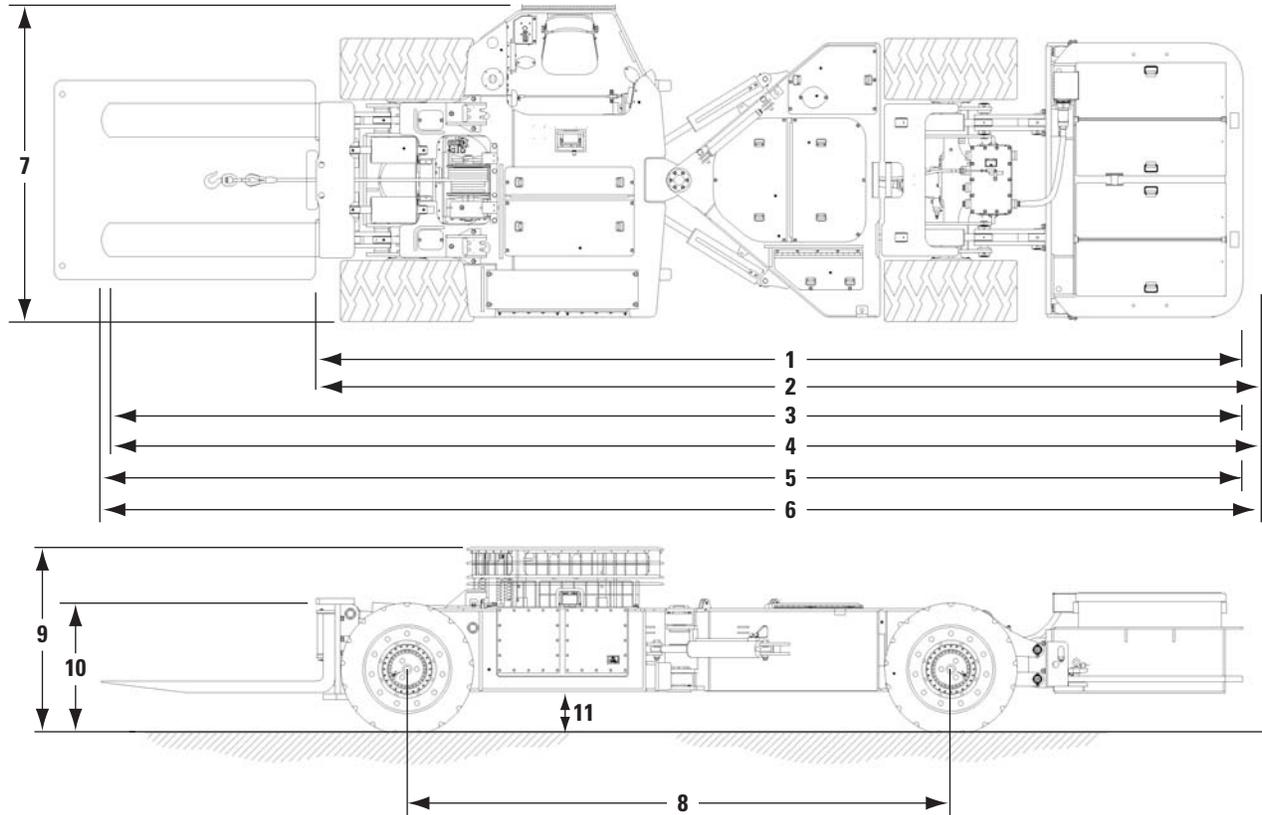
Weights

Empty Weights			
Less Battery	22 452.8 kg	49,500 lb	
With 64-125-25 Battery	33 565.8 kg	74,000 lb	
With 64-125-25 Battery and Rear Ballast	36 287.4 kg	80,000 lb	

Speed

Tram Speed (calculated based on 2% rolling resistance)			
Level and Empty on 0% Grade	5.79 km/h	3.6 mph	
Level and Loaded on 0% Grade	5.14 km/h	3.2 mph	

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Dimensions (All dimensions are approximate.)*

1 Overall Length without Attachments	8483.6 mm	27 ft 10 in
2 Length without Attachments and with Rear Ballast	8737.6 mm	28 ft 8 in
3 Length with 2133.6 mm (84 in) Lifting Fork	10464.8 mm	34 ft 4 in
4 Length with 2133.6 mm (84 in) Lifting Fork and Rear Ballast	10718.8 mm	35 ft 2 in
5 Length with Lift Plate Attachment	10896.6 mm	35 ft 9 in
6 Length with Lift Plate Attachment and Rear Ballast	11150.6 mm	36 ft 7 in
7 Overall Width with Attachments	2819.4 mm	9 ft 3 in
8 Wheelbase	4978.4 mm	16 ft 4 in
9 Cab Height with 508 mm (20 in) Cab** – with 1219.4 mm (48 in) Tires	1727.2 mm	68 in
10 Chassis Height with 1219.4 mm (48 in) Tires	1219.4 mm	48 in
11 Ground Clearance with 1219.4 mm (48 in) Tires	406.4 mm	16 in
Inside Turn Radius	4140.2 mm	13 ft 7 in
Outside Turn Radius	7213.6 mm	23 ft 8 in
Steering Articulation	100 Degrees Total	
Frame Oscillation	40 Degrees Total	

*Detailed GA drawings available for specific dimensions and component locations.

**Lower cab heights available on request.

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