

SPECIFICATIONS

GENERAL DESCRIPTION

This crane is an electrically controlled hydraulic crane. The crane is powered using commercial 120 volts AC power via an electric cable, located on the back of the turret. Twenty five (25) feet of cable has been supplied to allow reach to the power source. The controls are hand held trigger style with eight (8) control buttons. The hand held control comes with twenty five (25) feet of cable so the operator may stand well away from the crane. The cable can be wrapped and stored with the control in place, on the back of the turret, on the hooks provided.

From the cord power is transmitted through the electrical box to the controls. The hydraulic pump is direct driven by the electric motor. The oil is then delivered through the control valve through hydraulic lines to crane functions. The control valves are operated by the hand held electric controller which directs the oil to the respective crane systems.

A telescoping two (2) section boom is supplied with the crane. The boom is controlled through the use of boom lift and extension cylinders and swing drive system.

CARRIER

The carrier is meant to be a customer supplied flat rail car. A specially designed mounting pocket must be properly installed onto the rail car to support the crane.

MOUNTING

The crane turret is mounted on the swing bearing. The Turret to swing bearing bolts are in a circular pattern numbering 10 and swing bearing bolt to pedestal from underside numbering 12. The pedestal then slides into the mounting pocket on the carrier, secured by a large bolt.

BOOM ASSEMBLY

The boom is a two (2) section telescopic full power hydraulic.

The two (2) boom sections are fabricated utilizing a structural steel rectangular design. The steel used in fabrication is designed for operation in cold ambient temperatures of -40°C.

The boom sections are arranged as a package with the fly section and base section extended and retracted by an extension cylinder.

The boom extension system is fitted with dual counterbalance valving to hold the boom in the extended positions above horizontal and prevent extension when in positions below horizontal.

The boom extension cylinder is sized to permit telescoping with rated load to maximum extension. Replaceable nylatron wear pads are used on the top and bottom of boom section.

BOOM LIFT

The boom lift function is powered by one (1) cylinder, positioned to give maximum clearance, when handling loads with a fully retracted boom.

Boom lift cylinder has holding valve for positioning of boom between minus 30 degrees and plus 50 degrees. A holding valve is bolted to the cylinder to prevent accidental boom lowering due to hose or tube damage.

SWING

The swing function utilizes a shear ball type swing bearing. A high torque style motor driving through a worm gear provides smooth positive swing operation.

High strength bolts hold the upper turret structure to the shear ball bearing and to the base pedestal.

Swing rotation is 320 degrees at a swing speed of 2.0 rpm. Hydraulic hoses in the pedestal have additional length to allow for 320 degree swing rotation.

OVERLOAD or ATB SYSTEM

There is no overload system provided with this crane. Operator must be aware of the capacity of the crane (see markings on boom base). An anti-two block switch is provided to prevent the hook from connecting with the sheave. Do Not operate crane without ATB functioning, permitting load hook to contact boom sheave as injury or death to personnel could result if load hook is pulled into boom sheave.

CONTROLS

The crane is operated by hand held remote controls, with ON/OFF push buttons for function controls and with finger trigger for safety.

Directional control valve is solenoid operated with solenoid operated dump (safety) and system relief.

POWER SOURCE

The hydraulic power for the machine is provided by the one and half (1 ½) H.P. 115/230 volt, 18 amp electric motor powering 1.4 gpm pump with a rated pressure of 2250 psi with 2400 psi relief setting.

WINCH AND CABLE

The winch is rated for 2,000 pounds single line pull on bare drum. The hoist has a single line speed of 10 fpm down, 19 fpm up (no load).

Cable supplied is 30 ft of 5/16" 6 x 19 IWRC with an open swage socket.

HYDRAULIC SYSTEM

The hydraulic system consists of a pump with a capacity of 1.4 GPM. Pump is driven by an electric motor. The pump supplies oil flow to a directional control valve stack located on the back of the turret. It provides function and direction for the following; Swing, Boom extend retract, Boom lift, and hoist. These functions may only be operated with the system attached to an externally provided electrical power source.

ELECTRICAL SYSTEM

The electrical control system is 24 volts DC. Main power is 120 Volt AC. There is a pull start /stop button on the electrical panel on the side of the turret, which starts the hydraulic pump motor and transformer for 24 volt DC control power.

WARNING
ELECTRICAL PANEL HAS DUAL VOLTAGE.

SPEC LIST

Capacity: 2000 lbs to 8 ft radius

Boom Length:

Retracted: 66"

Extended: 102"

Boom Angle: Minus 30° to plus 50°

Working Radius:

Min 41"

Max 96"

Boom Tip Height (max.): 110 " above car deck

Length Overall:

Boom Horiz. 74"

Height Overall:

42"

Hydraulic Pump:

1.4 gpm

Hydraulic Oil Reservoir:

4.2 US quarts

Function speeds and times based on

1.75 gpm system flow:

Swing speed: for 2.0 rpm

Boom luffing (-30° to +50°)

Up: 30 sec

Dn: 26 sec

Boom extension speed:

Extend: 24 sec

Retract: 16 sec

Hoist Speed: 8 fpm down

19 fpm up

(no load)

Controls:

Hand held cable remote with ON/OFF push buttons and finger trigger for safety.

Wire Rope:

5/16 inch 6 x 19 IWRC

breaking strength with open

swage socket

length:30 ft

Sheave: 5 inch diameter

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CONFIGURATION

