

SPECIFICATIONS

BOOM

The boom is three section telescopic full power hydraulic.

The three (3) boom sections are fabricated utilizing a rectangular box section design. The steel used in fabrication is designed for operation in cold ambient temperatures of -40°C.

The boom extension cylinders are sized to permit telescoping with rated load to maximum extension. Replaceable nylatron wear pads are used on the top and bottom of each boom section. Adjustable, replaceable, nylatron, side thrust wear pads are used on the outer end of the base, and mid sections.

The tip section has three fixed, bearing mounted, drop sheaves for either single or up to six part reeving.

BOOM LIFT

The boom lift function is controlled by two (2) double acting cylinders, existing on Caterpillar 245 Carrier.

Holding valves are bolted to each cylinder hard line to prevent accidental boom lowering due to hose or tube damage.

SWING

The swing function is part of the Caterpillar 245 Carrier.

Swing function is 360 degrees continuous due to the design of Caterpillar 245 Carrier

CONTROLS

The ARA4000 boom utilizes existing controls in the Caterpillar 245 Carrier, with some modifications due to direction and position of control.

CONTROL VALVE

The directional control valves utilized are standard on the Caterpillar 245 Carrier.

POWER SOURCE

The hydraulic pressure required from the Caterpillar 245 Carrier engine is 4500 psi for crane main lift operations. The existing pressure lines and return lines leading to the valving are used to supply oil flow to the crane.

MOUNTING

The boom mounts to the Caterpillar 245 Carrier utilizing existing excavator boom supports and pins.

HOIST

The hoist is a Braden model PD15B-41064-04 with planetary reductions and fail safe brake. The hoist has 15,000 lb single line pull @ 360 fpm line speed based on 110 gpm system flow. The crane is reeved 6 part providing 80,000 lb hoisting capability from 0 to 60 fpm hook speed.

HOOK BLOCK

A hook block for six part reeving with swivel hook is not supplied. Hook block should be rated for 80,000 lbs lift capacity.

CAPACITY

80,000 lbs to 26'-0" radius, and 24,000 lbs to 60 ft. Maximum extension.

Two 360 degree capacity charts are provided, due to the 245 Carrier track adjustability, detailing loads and angles. Attempts may be made to telescope boom under all load conditions but due to lubrication and other factors it's operation may be limited.

LOAD MONITOR SYSTEM

An overload system is incorporated into the design of the crane to prevent imposing an overload.

See section 8 of this manual for more detail on load monitor and anti-two block system.

GENERAL

Boom:

Extended length: 60 ft radius
Retracted length: 26 ft radius
(from centre of rotation to centre of boom tip)

Height overall: 11'-10" (Top of Cab)
Length overall: 39'-7" (Boom retracted)
Function speeds and times (based on 110 gpm system flow):

Swing speed: 2 rpm- 5rpm
Boom luffing (0° to +70°): 12.0sec up
11.0sec dn
Boom ext'n (min to max): 35 sec
Boom ret. (Min to max): 32 sec

Swing: 360 degrees continuous
Boom elevation: -3 to +70 degrees
Boom tip height @ full extension: 63'
Weight: 16,000 lbs
(Approx. Wt of Boom Assembly)