

Famous Full-Function Upper Design Exclusive Speed-o-Matic Power Hydraulic Controls

The unique machinery power train is ideal for powering the tower crane attachment. All functions are independent and gear driven.

1 TOWER HOIST DRUM:

- 1a. Drum brake; spring-applied, power hydraulically released, interlocked with tower hoist/lowering function.
- 1b. Mechanical drum locking pawl.
- 1c. Planetary reduction tower hoist unit.
- 1d. Planetary reduction tower lowering unit.

2 BOOMHOIST DRUM:

- 2a. Drum brake; spring-applied, power hydraulically released, interlocked with boomhoist/lowering function.
- 2b. Mechanical drum locking pawl.
- 2c. 2-shoe boomhoist clutch. (Clutch drum only visible.)
- 2d. 2-shoe boom lowering clutch.

3 LOAD ROPE DRUMS:

- Hold up to 1,008' of rope.

4 DRUM BRAKES:

Mechanically operated by foot pedals. Separated from clutches, eliminating heat transfer, extending lining life.

5 LOAD LOWERING CLUTCHES:

Completely independent 2-shoe clutches; for powering down light loads and controlled lowering of heavier loads.

6 LOAD HOIST CLUTCHES:

2-shoe, separated from drum brakes. (Clutch drums only visible.)

7 HIGH-SPEED HOIST PLANETARY DRIVE UNIT:

Optional on front and rear hoist drums. Gives rope hoist speed up to 304 f.p.m. on 1st layer, 455 f.p.m. on 7th layer.

8 SWING:

2-shoe swing clutches transmit power smoothly to the vertical swing shaft. (Only left side swing clutch is visible.)

9 ENGINE:

Diesel engine with torque converter.

10 TRANSMISSION:

Engine power to machinery through chain enclosed in chain case.

11 UPPER FRAME:

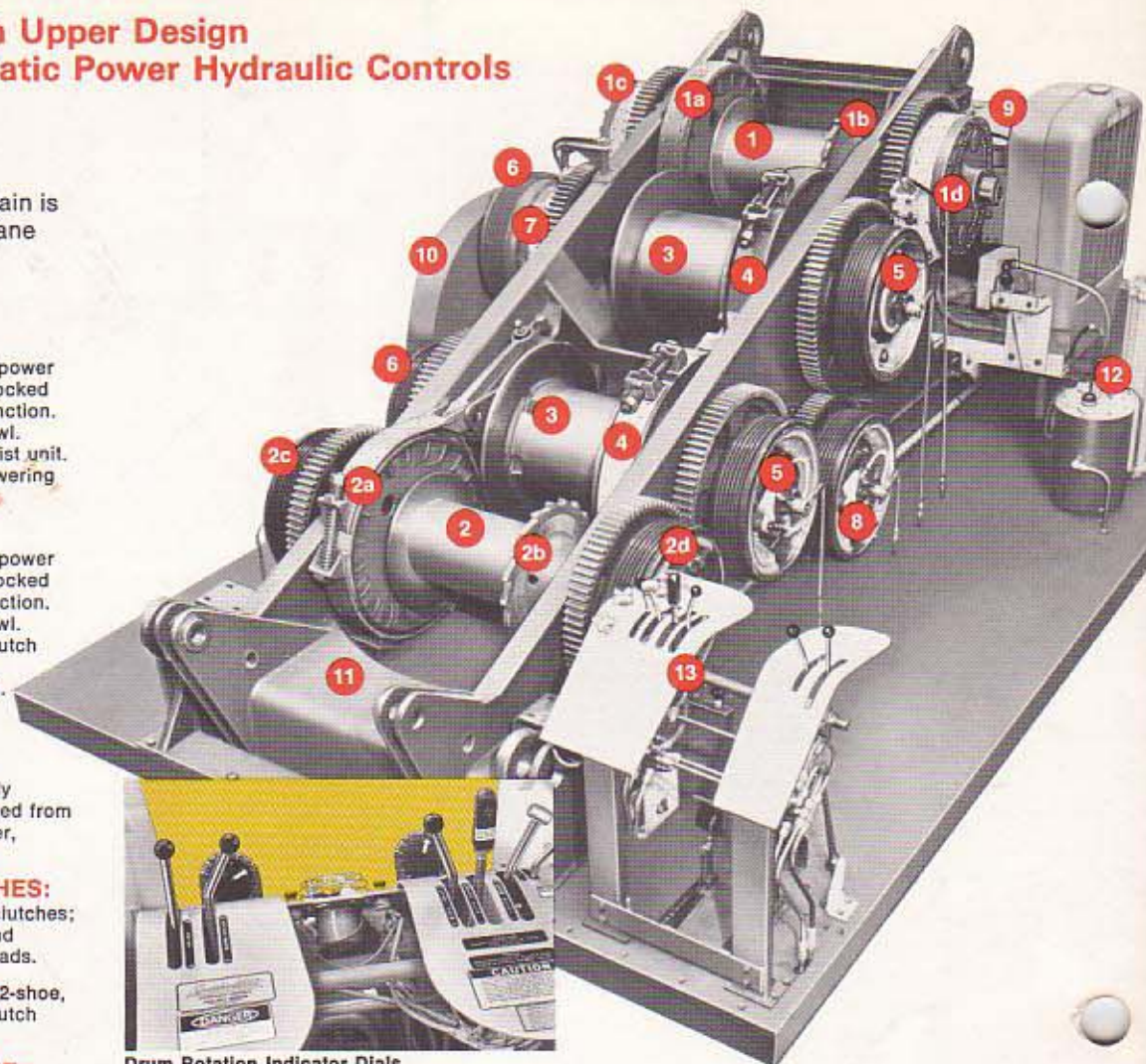
Jig welded and stress relieved for strength and durability; line bored for proper shaft and gear alignment.

12 POWER PACKAGE FOR POWER HYDRAULIC CONTROLS:

Vane-type pump, belt driven from engine; piston-type accumulator and sump tank. Normal system operating pressure, 900 to 1,050 p.s.i.

13 CONTROL CONSOLE:

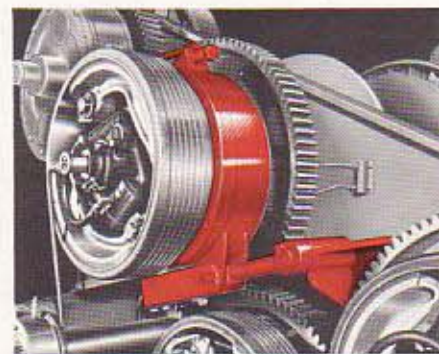
Exclusive Speed-o-Matic power hydraulic controls, time-tested and proven throughout the world.



Drum Rotation Indicator Dials

Rotation indicator dials for both the front and rear drums are mounted on the operator's control console.

The flexibility of Link-Belt Speeder design makes possible independent, planetary-driven, 2-speed front and rear rope drums and, at the same time, retain standard speed for swing, tower, and boom hoist.



2-Speed Rope Drums, Planetary Driven

With an extended drum shaft, planetary is mounted between the drum gear and clutch drum; provides up to 70% increased hoist speed (up to 455 f.p.m. on 7th layer of rope on drum). Engaging standard 2-shoe clutch provides standard rope speed; planetaries are controlled by push button located on hoist drum control lever.

The tower and boom hoist rope drum brakes are automatically spring applied and power hydraulically released. The swing brake is automatically spring applied and power hydraulically released and can be set manually to hold crane upper and tower attachment at any swing position, or can be set manually to engage partially for a slight drag when making precision lifts. Swing brake is controlled from operator's position. The HC-218 also features a swing lock as standard equipment.

We are constantly improving our products and therefore reserve the right to change designs and specifications.



Link-Belt Speeder

DIVISION OF FMC CORPORATION

Cedar Rapids, Iowa • Woodstock, Ontario, Canada • Queretaro, Mexico • Milan, Italy



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Link-Belt Speeder

HC-218

Truck Tower Crane

This machine is manufactured in accordance with the requirements of:
ANSI B30.5-1968
and is designed with suitable load and angle indicating
devices in accordance with THE DEPARTMENT OF LABOR
SAFETY FEDERAL REGISTER
Vol. 36 Nos. 75 and 105 (OSHA)

H17.07.30
hydro-crane

Carrier-Mounted Tower Crane 145' Tower + 130' Boom + 50' Jib Gives

- 7,600 lb. Lifting Capacity At 325' Height
- 1,700 lb. Lifting Capacity At 180' Reach

The model HC-218 truck crane with Link-Belt Speeder exclusive Full-Function Design upper machinery is ideally suited for adaptation to tower crane attachment. Four rope drums permit independent tower hoist, boom hoist, main load hoist, and jib load hoist. Machine functions are controlled by power hydraulics — superbly smooth for acceleration and deceleration.

The tower attachment is designed for fast erection from the straight-out position. The boom peak and jib peak are each equipped with wheel and tire. As the tower is raised, the boom and jib trail along the ground. When the tower has been raised to vertical position, the planetary tower hoist unit (page 4; item 1) is stopped and a spring-applied brake holds the rope drum in position. Also, a manually controlled rope drum locking pawl should be engaged. The boom live mast, mounted to the top of the tower, maintains proper angle

Hi-Lite Tubular Jib

Jib Pendants

Jib Stops

Hi-Lite Tubular Boom

Transducer

Rope-Type Boom Stops

Boom Frontstay Pendants

Boom Live Mast

Hi-Lite Tubular Tower

Boom Backstay Pendants

Tower Pendants

Boom Hoist Bridle

Cushioned Lever-Type Tower Stops

Tower Hoist Bridle

Tower Live Mast



Readout Unit

Control Unit

between boom and pendants both when boom and jib are being raised and when in the working position.

An electronic boom angle indicator is standard and shows the boom angle to horizontal. This mechanism consists of a **transducer** mounted on the boom base, plus **control unit** and **readout unit** in the operator's cab.



Tower Hoist Kick-Out Device

A **tower hoist kick-out device** is standard. Should the operator neglect to shut off the tower hoist, as the tower approaches the vertical position, this kick-out device activates a mechanism that automatically disengages the tower hoist and applies the spring-applied rope drum brake.

Standard boom peak is equipped with two sheaves. Jib peak is equipped with one sheave. Boom is equipped with hoist line deflector rollers. **Cushioned, lever-type tower stops** and **rope-type boom stops** are standard.

The tubular Hi-Lite tower, boom, and jib are outstanding in design and are

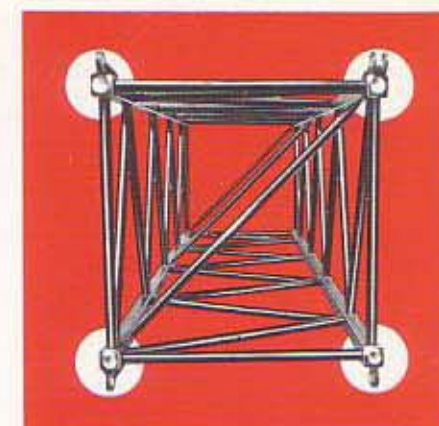
precision built, using special automatic machine tools and fixtures.

Special 10' tower section with sheaves is available to permit use of 50' tower as a boom for assembling the tower attachment.

The tower is especially designed to perform its functions in supporting the boom, jib, and load. Tower chords are square tube with round tubular lattice. **Tower sections are pin-connected** to facilitate the insertion or removal of sections. Minimum tower length is 70'; maximum, 155'. (Refer to flysheet for available tower/boom/jib lengths.) Tower section butt plates are precision machined for full-face mating of sections. Male and



Pin-Connected Boom



Pin-Connected Tower

female connecting lug arrangement aids in proper assembly.

Pin connected boom and jib have round alloy steel tubular chords. Machine coped lattice ends match the contour of the chords and are carefully welded in place with 360° welds. The method of welding the in-line pin lugs to the round chord tube is an exclusive development of Link-Belt Speeder engineering/manufacturing technology. Tapered end pins are held in place with latch pins.

Link-Belt Speeder Custom-Designed Carrier For Mobility And On-The-Job Durability

The alloy steel carrier frame has the strength for tower crane operation. The carrier features diesel engine, 8-wheel service air brakes, emer-



Turntable Bearing For Mounting Crane Upper To Carrier



Bumper Counterweight

Ground Controlled Outriggers

gency and parking brake, power hydraulic steering, levels, cab heater and defroster, tachometer, bucket seat with safety belt, ash tray, door handrail, bus-type mirrors, back-up alarm and light.

Hydraulic outriggers are powered by carrier engine. A pilot-operated check valve, fixed to jack cylinder, "locks" the oil in the cylinder.