

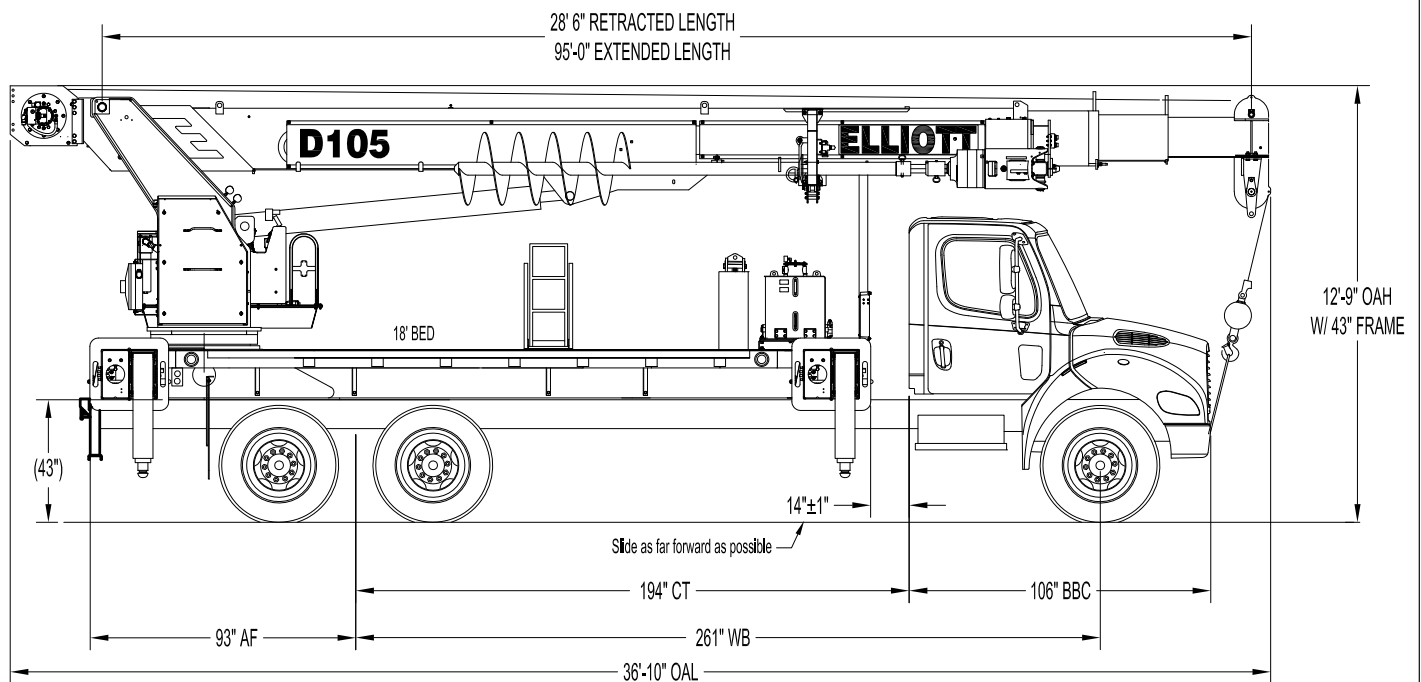
DIGGER DERRICK

D105

TECHNICAL SPECIFICATIONS



D105 SIDE VIEW DIAGRAM



• Sheave Height (Maximum)	107' / 32,6 m
• Sheave Height (Retracted)	40' / 12,2 m
• Horizontal Reach (Maximum)	92' / 28 m
• Horizontal Reach (Intermediate)	42' / 12,8 m
• Horizontal Reach (Retracted)	26' / 7,9 m
• Lifting Capacity (Maximum)	50,000 lbs / 22 679 kg
• Lifting Capacity @ 10' Radius	30,000 lbs / 13 608 kg
• Boom Elevation Limits	-8/+80 Degrees
• Winch Single Line Pull	12,000 lbs / 5443 kg

• Boom Rotation	360 Degrees Continuous
• Digger Motor Torque	20,000 ft-lb / 27 116 Nm
• Digger Speed (High/Low)	80 RPM / 35 RPM
• Digging Radius (Maximum)	41' / 12,5 m
• Digging Radius (Minimum)	24' / 7,3 m
• Outrigger Configuration	Out-Down
• Outrigger Spread (Full-Span)	20' / 6,1 m
• Outrigger Spread (Mid-Span)	13' 11" / 4,2 m
• Certification	ANSI A10.31 for Digger Derricks



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TECHNICAL SPECIFICATIONS

Derrick Capacity: 30,000 lbs at a 10' radius.

Maximum Tip Height: 107'

Control Console: Rotating open seated control station equipped with five single axis control levers for the main digger controls. Operator station includes LMI display, bubble level gauge, engine start/stop switch, signal horn button, variable speed throttle switch, lifting capacity chart, range diagram chart, boom angle indicator, system pressure gauge, 12V DC power source, and cup holder. Independent ground level electric operated outrigger controls.

Boom: Four-section 28'6" retracted to 95' extended, proportionally extended, high strength steel plated rectangular boom. A maximum boom tip height of 107'. The boom tip contains one upper sheave and two lower sheaves. Assembly includes heavy-duty cylinder fittings, pivot pins, and replaceable wear pads. Includes detachable hydraulic pole claw with gripping and tilting functions with pole guide. Enhanced arms for gripping wider poles.

Winch: Mounted at the base of the boom for a long fleet angle and flat level spooling of cable. Winch is driven by a planetary reducer and powered by a hydraulic motor. The winch brake is spring applied, pressure release design. Supplied with 335' of 7/8" diameter synthetic rope with a single line pull of 12,000 lbs and a downhaul ball with swivel hook for single part line.

Auger System: 20,000 ft-lb hydraulic two-speed auger with 3" hex drive mounted at end of boom. Auger equipped with a 3" Kelly bar (auger extension bar) able to accept 24", 36", or 48" flightings. Auger and flighting to be stowed on side of boom from controls operated at main control station. Up to a 36" flighting to be stowed during transport. The auger provides a 41' digging radius. Auger is provided with radio remote control system with integral LMI display in transmitter.

Elliott Equipment Company reserves the right to change the specification of any unit at any time without prior notice. This brochure is only a statement of general specifications on the date of this publication. For more detailed info on specific Elliott trucks go to www.elliottequip.com

Load Moment Indicator System:

System senses hoist cylinder pressures, boom length and boom angle with hydraulic function lockout. The display console is equipped with a bar graph showing crane utilization, boom angle or boom length, mode select controls for main boom and optional platform operation, and an anti-two block with an audio/visual warning and shut-off functions to limit hook-boom point contact.

Outriggers: Two sets of out and down overframe outriggers with 20' span. Outriggers are configured for full span or mid span operation. Outriggers equipped with ball socket aluminum removable pads that stow on vertical outrigger legs.

Frame: Full length, all welded rigid 4-plate design sub-frame. Sub-frame allows for bolt-on addition of 18' bed wings, with top plate of subbase serving as a portion of the bed deck to form a three-piece bed.

Turret: Reverse offset turret is one-piece weldment. Turret rotates on large diameter ball bearing.

Rotation: Hydraulic motor drives turret through double reduction planetary swing drive for 360 degree continuous rotation.

Lift: One double-acting long stroke cylinder provides smooth and stable boom elevation. Holding valve prevents boom from falling in event of hose failure.

Boom Extension: Incorporates a 2-stage hydraulic extension cylinder, attached to the largest boom section, with a proportional cable extension system driving the outermost sections.

Hoses: All high pressure hoses are wire braid reinforced with a minimum safety factor of 4 to 1.

Cylinders: All cylinders use microhoned cylinder tubing, chrome shafts, top grade packing and protective rod wipers.

Cylinder-mounted holding valves provided on all load-holding cylinders.

Hydraulic System: Equipped with air-shift PTO, piston pump, SAE O-ring face seals on pressure lines, and a 10-micron return line filter. The control valve distributes all flow to hoist system, swing circuit, and other crane functions. System is closed center type.

Oil Tank Capacity: 119 gallon mounted on top of front outriggers.

Cab Equipment: PTO switch with indicator lights installed in truck cab. U/L approved 5:BC dry chemical fire extinguisher installed in truck cab.

Operators Manual & Video: Two CD copies and one hard copy of operation, maintenance, safety and parts manual provided with each unit.

Installation: Unit installed on chassis, painted, system and tank filled with oil, tested, inspected, and ready to operate.

Standard Paint: Paint turret and boom white, outriggers red, and bed and boxes black. Top of bed painted with black nonskid surface.

Bumper: Bureau of Motor Carrier Safety rear bumper.

Weight: Approximately 31,800 lbs with 18' steel-floor bed less truck.

Truck Chassis Required: Approx. 192" C.T. RBM 3,300,000 in-lb per rail, 20,000 lb front axle and 60,000 lb GVWR required. Recommended GVWR is minimum with flatbed only. Contact factory when additional equipment is to be added.

Available Options:

2-Stage Vertical Stroke Outriggers

15 or 25-Ton Hook Blocks

2-Person Detachable Work Platform

Multiple Auger Flightings to 48"

Wireless Outrigger Controls

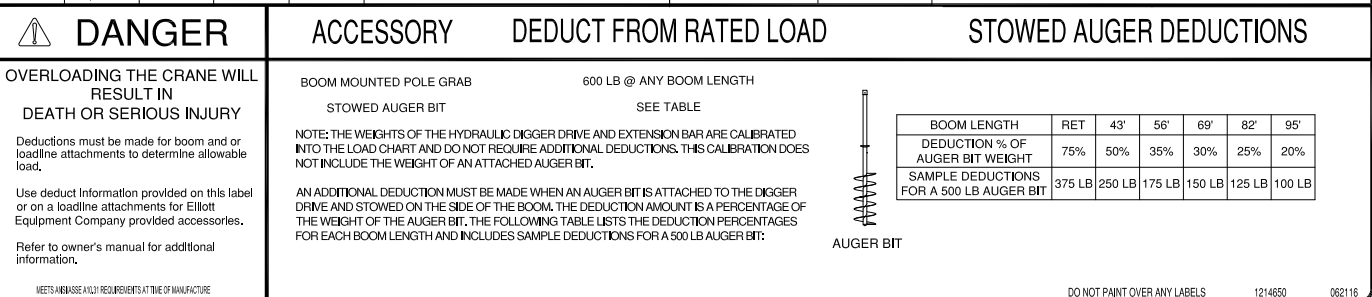
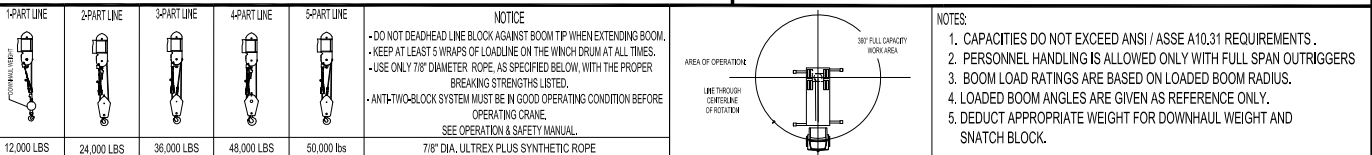
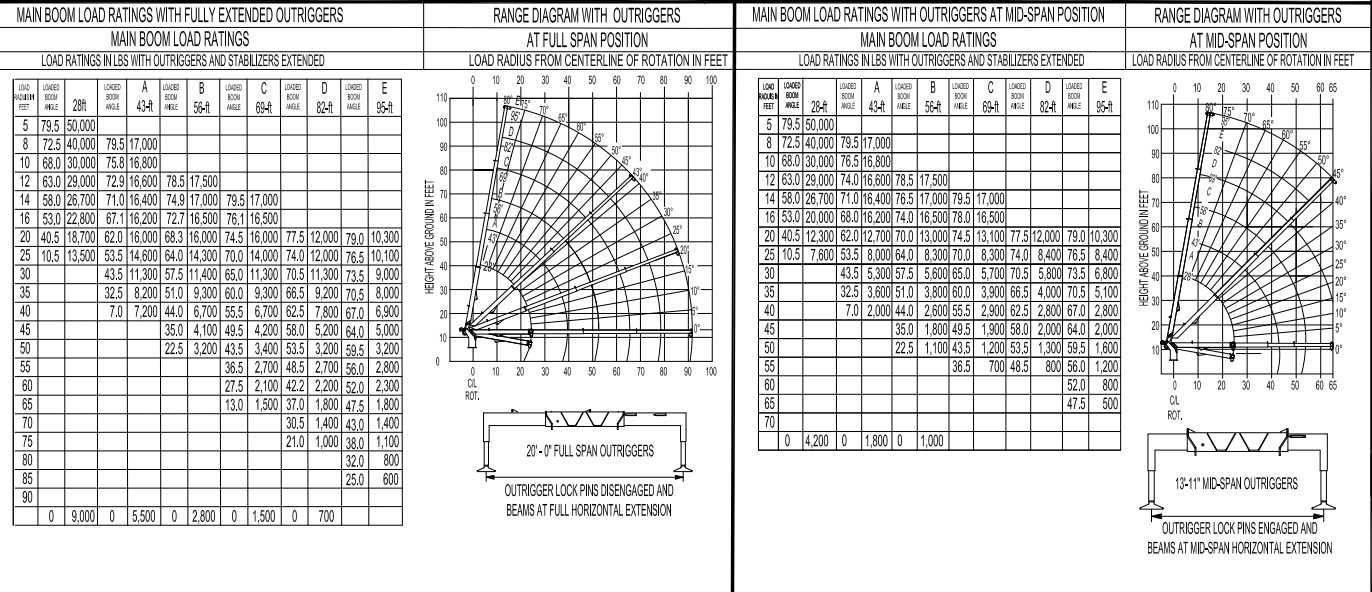
Underbody Toolboxes

Much more...

LOAD AND RANGE CHART

ELLIOTT
EQUIPMENT COMPANY

MODEL D105 DIGGER DERRICK



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MINIMUM TRUCK CHASSIS SPECIFICATIONS

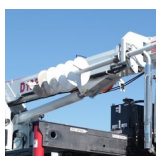
	Digger Derrick D105
Wheelbase (WB)	258" / 655 cm
Cab to Tandem (CT)	192" / 488 cm
Cab to End of Frame (EOF)	286" / 726 cm
Frame Section Modulus	30.0 in3-110,000 psi
Front Axle Gross Weight Rating	18,000 lb / 8165 kg
Rear Axle Gross Weight Rating	40,000 lb / 18 144 kg
Integral Front Frame Rails	Not Required

Chassis data is minimum general requirements-not for engineering.
Actual dimensions and truck data will depend on truck selection and axle configuration.
*Minimum chassis weight is required to meet 85% stability requirements.

AVAILABLE OPTIONS

**Automatic Safety Rotation Lockout**

Safely work where space is a concern using Elliott's rotation lockout system that permits operation with the outriggers extended on one side and retracted on the opposite side.

**Multiple Sizes of Auger Flightings**

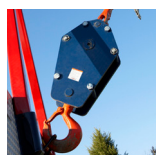
Choose from a wide range of auger flightings including a 24", 36", or 48" option. Flightings up to 36" will stow on the boom when using the standard 3" kelly bar.

**EZ-CRIB Two-Stage Outriggers**

Elliott's unique two-stage outrigger cylinder option provides both high ground clearance and increased ground penetration for working off-road with less cribbing.

**2-Man Gravity-Leveled Work Platform**

Add a 600 lb capacity 2-man platform with Elliott's hydraulic yoke lifting system for easy attachment to the boom tip. Fully OSHA compliant and heavy duty.

**Hook Blocks for Multi-Part Line**

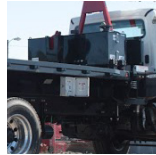
Elliott can add a 2-3 part hook block or a 4-part hook block to maximize your load chart to the full rated capacity. The blocks can be stored on the bed.

**Body Mounted Hose Reels and Circuits**

Let us work with you to customize your tool compatability by adding hose reels or hydraulic circuits to the flatbed in a variety of locations to provide power at ground level.

**Tool Boxes and Storage**

Custom tool boxes and bed storage solutions can accommodate a wide range of storage needs. Available materials include steel, painted aluminum and aluminum treadplate.

**Hydraulic Oil Tank Heater**

For work in colder climates, adding a hydraulic tank heater helps heat the oil quickly and allows you to start working quickly on the job site.