11-8-04 JTM

## WATSON INCORPORATED

# Model 3100 Specifications

### General Description:

The Model 3100 is a self-contained drill unit. Typical mountings include crane carrier 4-axle truck and hydraulically driven crawler undercarriage. Typical units include two-element kelly bar systems with drill depths to 80' and three-element kelly bar systems to 120'.

The following outlines standard unit specifications with 80' (nominal) drill depth:

POWER UNIT:

John Deere diesel, 201 hp

TRANSMISSION:

Torque converter driven powershift, Clark Model 32000

ROTARY:

Double reduction with spur gear primary and straight bevel ring gear and pinion final. Roller type kelly drive; output torque to 113,000 ft.

lbs.

MAST:

Lattice type structure. Mast is elevated with two parallel

hydraulic cylinders which allow positioning 10 degrees past vertical

KELLY:

Telescoping two-element, 8" outer/6" (5/8" wall) inner bar (kelly stub

per customer's requirement)

Kelly operating Performance:

Outer element is controlled full length by a hydraulic

cylinder. Crowd force to 50,000#

KELLY AND SERVICE HOISTS: The inner kelly hoist and service hoists are controlled by air clutches mounted on a power shaft powered by a reversible hydraulic motor. With the air clutch disengaged, drum is controlled by a band brake actuated by a foot controlled air diaphragm

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Kelly hoist:

Line pull – 25,000# Line speed – 200 ft./min. Cable size –7/8" diameter

Service hoist:

Line pull – 16,000# Cable size – 5/8" diameter

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ROTATING FRAME:

Mounted to a slew ring bearing with gear teeth. Rotation is provided by two hydraulic motors and gear boxes with an integral braking

system. Rotational swing 360 degrees

SLIDE FRAME:

Incorporates engine, hoists, mast mount and operator's control

position. Slide travel is 60". Extended drill radius is 156"

MOUNTING OPTIONS:

Crane type carrier, 8x4, GVW rating 86,000#. Beam type out/down

outriggers. Outriggers are operator controlled and powered by upper

OR

Crawler type undercarriage, 11' 11" wide by 15' 9" long tracks, triple

grousers. Carbody incorporates tilt system with 5 degree tilt

adjustment. Crawlers are hydraulically driven with independently

controlled tracks

DRILL UNIT OPTIONS:

Open back mast for air circulation

Solid inner kelly bar

Kelly/mast configuration for alternate drill depths

Reaction jack installation for crawler unit

Separate man hoist

Quick disconnect mast installation

Operator controlled panel cover

Operator's cab with optional heater and air conditioning

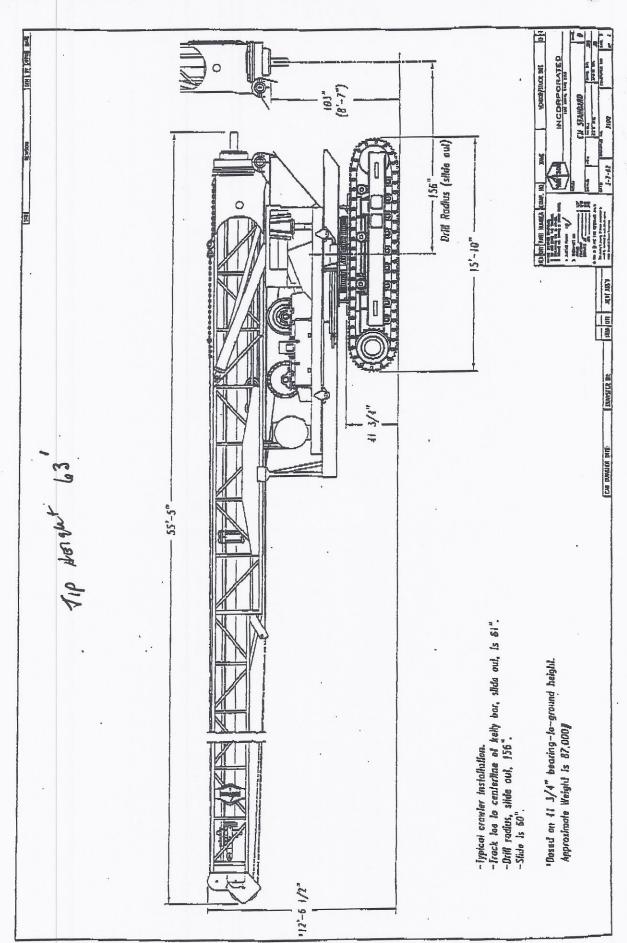
Short mast assembly

TRUCK/CARRIER OPTIONS: Detachable rear seissor-type outriggers

52,000# tandem rear axle assembly with heavy duty suspension

Dash mounted air conditioning

# Walson Model 3100 CM Standard 80' Drill Depth





3-7-02

# WATSON INCORPORATED

Model 3100 CM with 80' (nominal) Drill Depth

OVERALL UNIT LENGTH: 55'-5"

CARBODY WIDTH (FIXED): 143" (11'-11")

ROTARY CLEARANCE: 103" (8'-7")

OVERALL UNIT HEIGHT: 150 1/2" (12'-6 1/2")

APPROX. WEIGHT UNIT: 87,000 LBS. (hollow inner kelly)

DRILL RADIUS (slide out) C/L rotation to C/L kelly: 156" (13'-0")

DISTANCE OFF TRACK TOE TO KELLY C/L:

Slide in: 1" Slide out: 61"

SLIDE DISTANCE: 50"

