

1-8-98 JTM

WATSON INCORPORATED

Model 3000 Specifications

General Description:

The Model 3000 is a self-contained drill unit. Typical mountings include crane carrier four-axle truck and hydraulically driven crawler undercarriage. Typical units include two-element kelly bar systems with drill depth to 70' and three-element kelly bar systems to 110'.

The following outlines standard specifications with 70' (nominal) drill depth:

POWER UNIT:	Cummins or Detroit Diesel
TRANSMISSION:	Torque converter driven powershift
ROTARY:	Single reduction heavy duty straight bevel ring gear And pinion. Roller type kelly drive; output torque to 94,200 ft. lbs. Drive into rotary via "triple 80" chain or stainless steel cord geared belt
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" inner bar. High strength Timken material
Kelly operating performance:	Outer element is controlled full length by hydraulic cylinder. Crowd force to 50,000#. Inner element(s) controlled by a planetary type hydraulic winch
KELLY WINCH AND SERVICE WINCH:	Inner kelly winch: Line pull – 22,000# Line speed – 145 ft./min. Cable size – 3/4" diameter Service winch: Line pull – 11,000# Cable size – 5/8" diameter

ROTATING FRAME:

Mounted to a slew ring bearing with gear teeth. Rotation is provided by dual hydraulic motors and gear boxes with an integral braking system. Rotational swing is 360 degrees.

SLIDE FRAME:

Incorporates engine, inner kelly winch, mast mount, and operator's control position. Extended drill radius is 165"

MOUNTING OPTIONS:

Crane type carrier, 8x4 GVW rating 98,000#. Beam type out/down outriggers. Outriggers are operator controlled and powered by upper unit

OR

Crawler type undercarriage, 12' wide x 15' 9" long tracks, triple grousers. Carbody incorporates tilt system with 5 degree tilt adjustment. Crawlers are hydraulically driven with independently controlled tracks

STANDARD DRILL UNIT
OPTIONS:

Open back mast for air circulation

Work platforms for crawler unit

Kelly/mast configuration for alternate drill depths

Separate man hoist

Quick disconnect mast installation

Operator control panel cover

Operator's cab

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Model 3000CM with 70' (nominal) Drill Depth

OVERALL UNIT LENGTH: 48' 8"

UNIT HEIGHT (MAST DOWN): 154"
(12' 10")

UNIT WIDTH

(FIXED): 143" (11' 11")

APPROX. UNIT WEIGHT (hollow inner
kelly): 83,000#

**FRONT MAST OVERHANG
FROM ROTATING FRAME:**

DRILL RADIUS

(SLIDE OUT): 165" (13' 9")

Slide in – 288" (24')

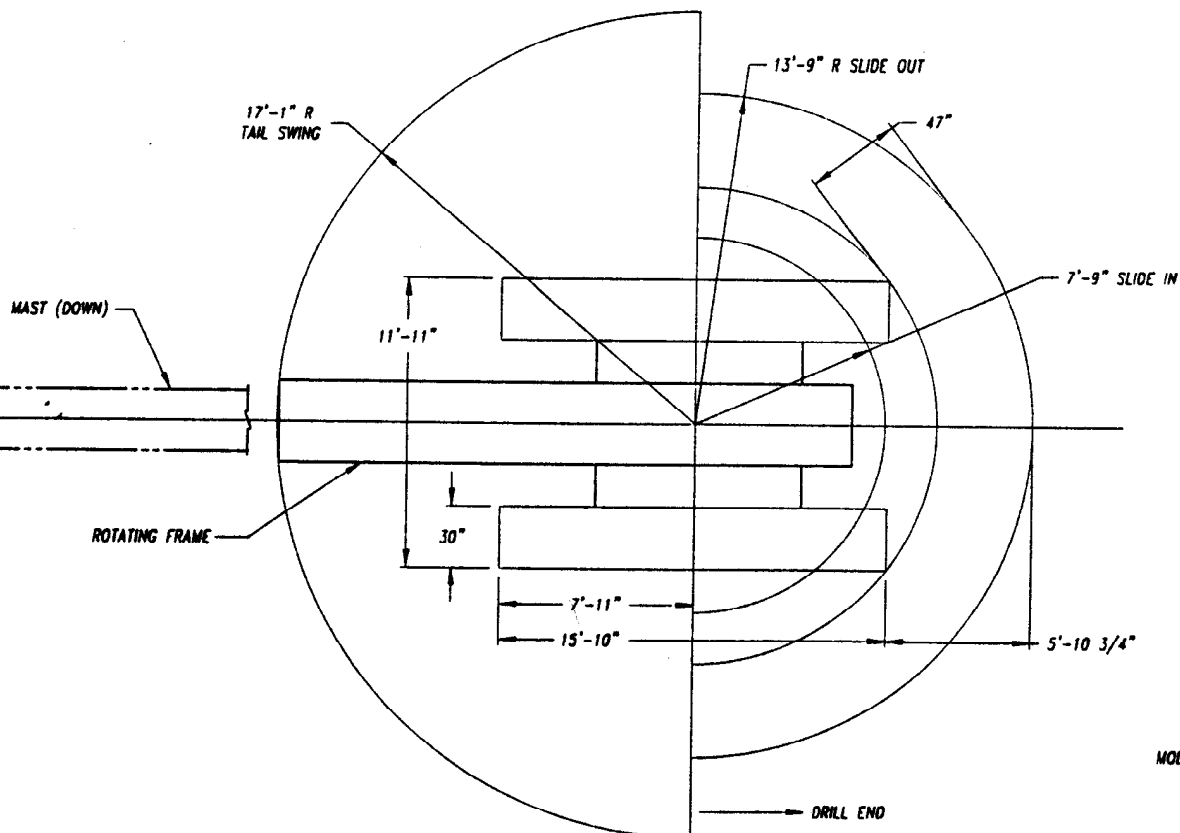
Slide out – 216" (18')

DISTANCE OFF TRACK TOE TO KELLY
C/L:

ROTARY CLEARANCE: 107" (8' 11")

Slide out - 70 3/4"

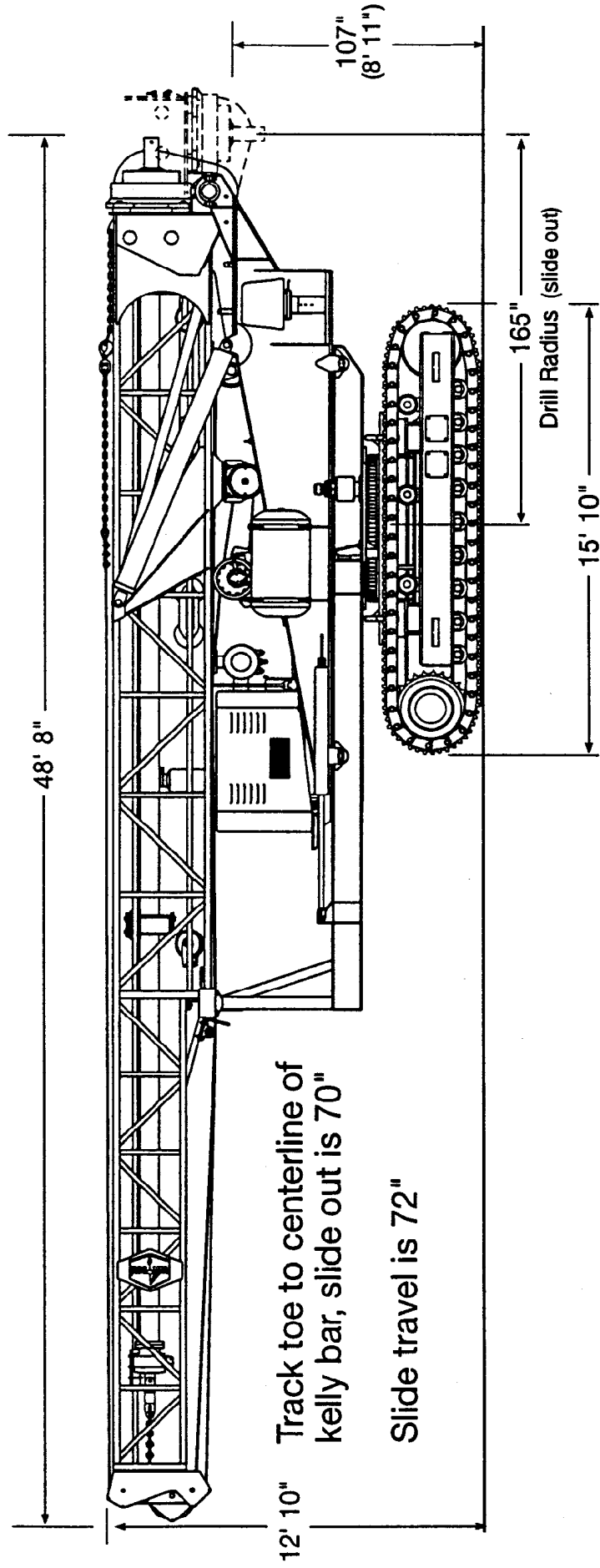
Slide in $-(-1\frac{3}{4})''$



MODEL 3000 CM

8/99

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12' 10" Track toe to centerline of kelly bar, slide out is 70"

Slide travel is 72"

Drill Radius (slide out)

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Model 3000 with 70' (nominal) Drill Depth

8x4 Carrier*

OVERALL UNIT LENGTH: 48' 8"

OVERALL UNIT HEIGHT: 162" (13' 6")
(depending on carrier height)

WIDTH: 108" (9' 0")

APPROX. WEIGHT MOUNTED: 79,000#

FRONT OVERHANG:

Slide in - 163" (13' 7")

Slide out - 91" (7' 7")

DRILL RADIUS (SLIDE OUT):

C/L rotation to C/L kelly: 144" (13' 9")

DISTANCE OFF REAR TO KELLY C/L:

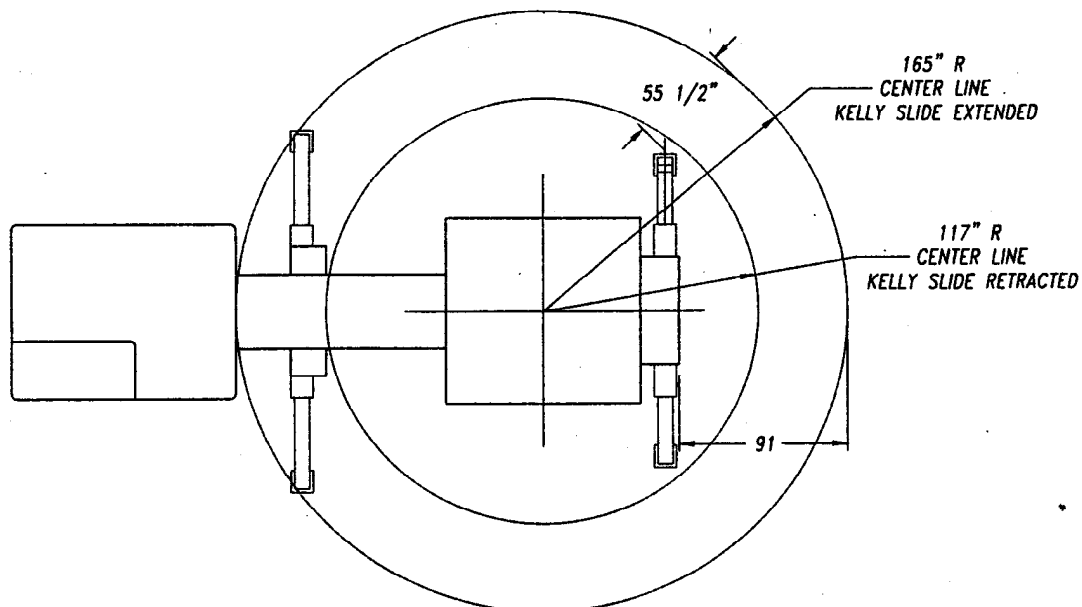
Slide distance - 72"

ROTARY CLEARANCE: 115" (9' 7")

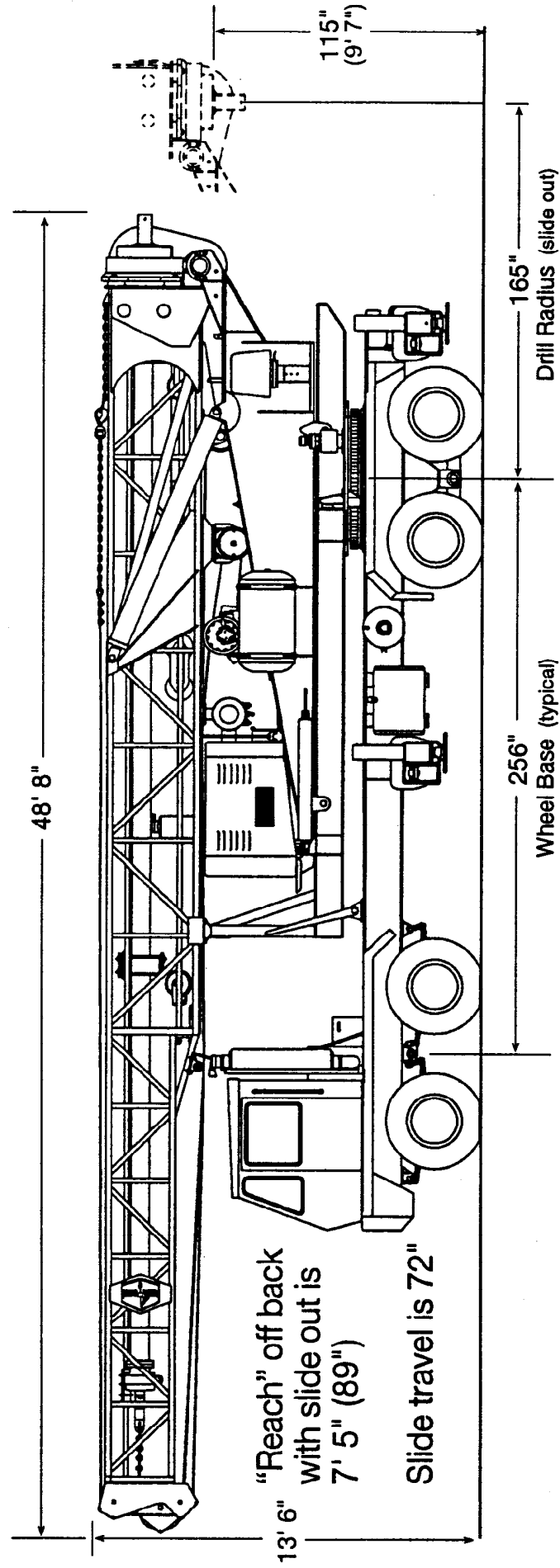
Slide in - 17"

Slide out - 89"

*** Minimum required clear, rear of cab to centerline of rear axle set is 230"**



Watson Model 3000 TM



Model 3000CM

