

**TOUGHER > FASTER > SIMPLER**



**3110**

**NOMINAL TORQUE**

154,000 ft-lb, 209 kNm

**ACTUAL TORQUE**

128,000 ft-lb, 174 kNm

**SPIN OFF** 130 rpm

**LINEPULL** 32,000 lb, 151 kN

**WEIGHT** 90,000 lbs, 41 mT

**MAX DEPTH** 160 ft, 48 m

**WATSONUSA.COM**

800-927-8486



**100% WATSON OWNED**



**DRILL MORE HOLES**

## 3110 Technical Specifications

	MECHANICAL		HYDRAULIC	
Nominal Torque	154,000 ft-lb	209 kNm	154,000 ft-lb	209 kNm
Actual Torque	128,000 ft-lb	174 kNm	128,000 ft-lb	174 kNm
Spinoff	147 RPM	147 RPM	70 RPM	70 RPM
Recommended Drill Diameter	48-96 in	1,219-2,438 mm	48-96 in	1,219-2,438 mm
Crowd Down • Pull up	50,000 • 30,000 lbs	222 • 133 kN	50,000 • 30,000 lbs	222 • 133 kN
Kelly Winch Line Pull	32,000 lbs	142 kN	32,000 lbs	142 kN
Kelly Winch Line Speed • Cable Size	180 ft/min • 7/8" dia	54.9 m/min • 22 mm	180 ft/min • 7/8" dia	54.9 m/min • 22 mm
Service Winch Line Pull • Cable Size	18,000 lbs • 5/8" dia	80 kN • 16 mm	18,000 lbs • 5/8" dia	80 kN • 16 mm
Power Unit	200 HP		200 HP	
Transmission Speeds	4 FWD/ 4 REV		Variable	

## 3110 Standard Features

<b>Rotary</b>	Double reduction with spur gear primary and bevel ring gear and pinion. Roller or slip-type kelly drive.
<b>Mast</b>	Lattice type structure. Mast is elevated with two parallel hydraulic cylinders allowing positioning 9° past vertical.
<b>Kelly</b>	Telescoping multi-element. Customized Kelly stub per customer specification.
<b>Kelly Winch</b>	"Controlled freefall" when lowering and 2 speed 32,000 lb raise.
<b>Service Winch</b>	18,000 lb. power-up/power-down.
<b>Rotating Frame</b>	Enables 360° swing. Rotation provided by two hydraulic motors and gear boxes with an integral braking system.
<b>Slide Frame</b>	88" slide on truck mount and 42" on crawler mount, increases drill radius for maximum drill radius of 165"(13'9").
<b>Base Frame/ Outriggers</b>	Outriggers are out/down on cab and drill end. Outriggers are powered by upper unit and controls are at operator's position. (Truck Only)
<b>Truck Mount (TM)</b>	8x4 crane type carrier, typical gross vehicle weight (GVW) rating is 86,000-90,000 lbs.
<b>Crawler Mount (CM)</b>	11' 11" wide x 15' 3" long crawler undercarriage with triple grouser shoes. Carbody incorporates a 5 degree side-tilt adjustment. Each track is controlled interdependently with 2-speed track motors.

Note: Both the truck mount and crawler mount are offered with a mechanical or hydraulic driven rotary, allowing a wider range of kelly options.

## 3110 Additional Options

- Open back mast for air drilling
- Reaction jack (Crawler Only)
- Solid inner Kelly bar
- Man hoist winch
- Mast height variations from low clearance to tall configurations
- Multiple kelly bar options available
- Night lighting
- Operator's cab with optional heater and air conditioning
- Cold weather operation package

## Drill Depths - Mechanical Rotary Drive

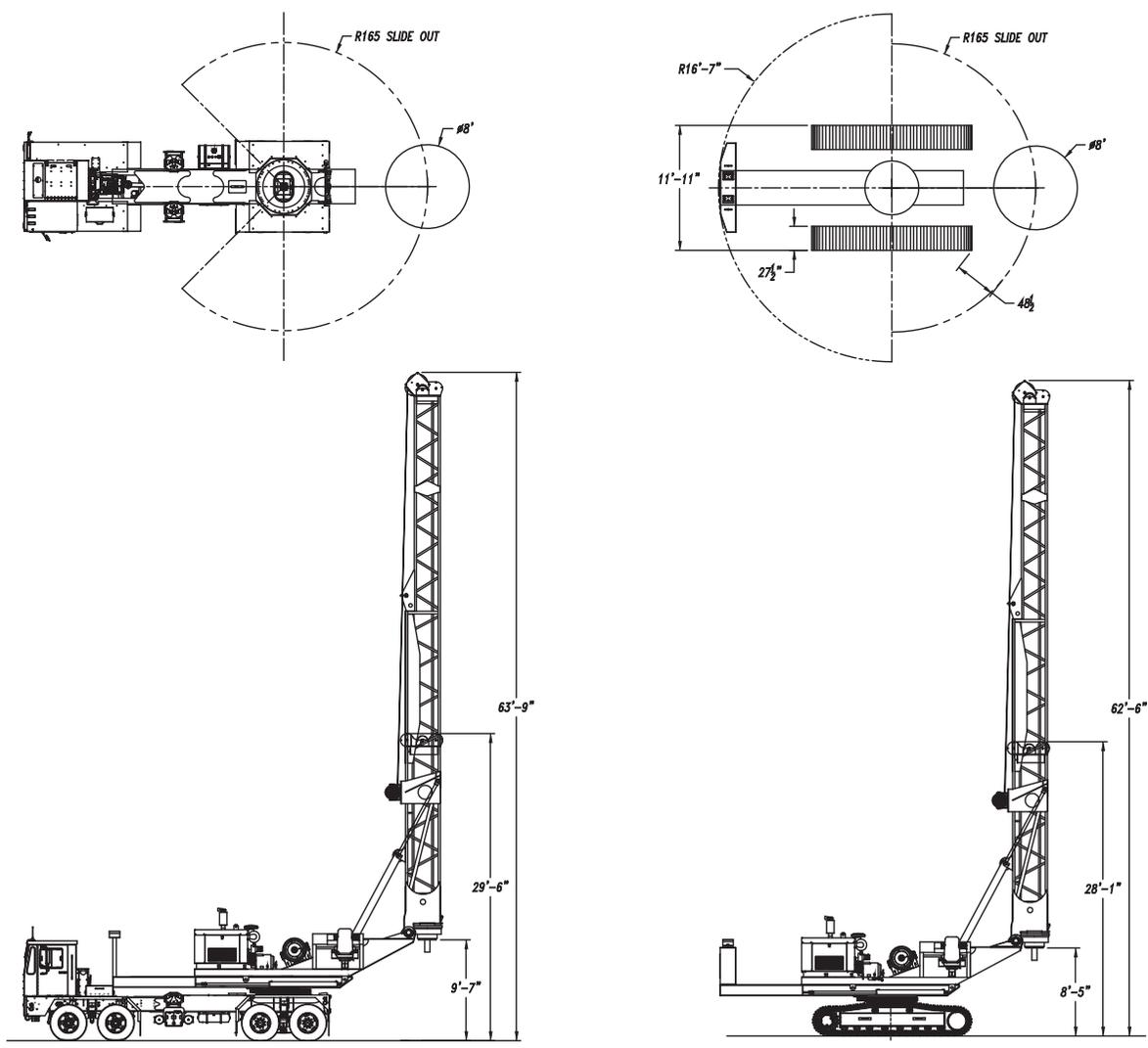
KELLY BAR				MAST HEIGHT							
				29'6" 9m	34'6" 10.5m	53'8" 16.4m	58'8" 17.9m	63'8" 19.4m	68'0" 20.7m		
BAR TYPE	BARS	BAR DIMENSIONS		KELLY PENETRATION DEPTH							
Square	2	8/6 in	203/152 mm	-	-	-	-	56 ft 17.1 m	66 ft 20.1 m	76 ft 23.2 m	86 ft 26.2 m
Square	3	10/8/6/ in	254/203/152 mm	37 ft 11.3 m	52 ft 15.8 m	86 ft 26.2 m	101 ft 30.8 m	116 ft 35.4 m	131 ft 39.9 m		
Square	4	10/8/6/4.25 in	254/203/152/108 mm	53 ft 16.2 m	73 ft 22.3 m	116 ft 35.4 m	136 ft 41.5 m	156 ft 47.5 m	176 ft 53.6 m		

Note: Kelly penetration depth does not include tool length. Mast heights will vary slightly between crawler and truck mounted configurations (due to chassis height).

# 3110 Drill Depths - Hydraulic Rotary Drive

KELLY BAR				MAST HEIGHT			
				29 ft-6 in 9 m		68 ft-9 in 19.4 m	
BAR TYPE	BARS	BAR DIMENSIONS		KELLY PENETRATION DEPTH			
Square	2	8/6 in	203/152 mm	-	-	76 ft	23.2 m
Square	3	10/8/6 in	254/203/152 mm	37 ft	11.3 m	116 ft	35.4 m
Square	4	12/10/8/6 in	305/254/203/152 mm	53 ft	16.2 m	156 ft	47.5 m
Square	5	12/10/8/6/4.25 in	305/254/203/152/108 mm	69 ft	20 m	-	-
Round	2	12/10 in	305/254 mm	-	-	76 ft	23.2 m
Round	3	16/12/8 in	406/305/254 mm	-	-	116 ft	35.4 m
Round	4	16/14/11.75/9.62 in	406/356/298/244 mm	45 ft	13.7 m	-	-
Round	5	16/14/11.75/9.62/7.62 in	406/356/298/244/194 mm	58 ft	17.7 m	-	-

Note: Kelly penetration depth does not include tool length.



# 3110 Maximum Drill Radius

MOUNT	DRILL RADIUS (MAXIMUM)	TOOL CLEARANCE	SLIDE	MAST TILT (L/R/OB)
Truck (TM)	165 in 4,191 mm	110 in 2,794 mm	88 in 2,235 mm	0° / 0° / 9°
Crawler (CM)	165 in 4,191 mm	103 in 2,616 mm	42 in 1,067 mm	5° / 5° / 9°



# MODEL 3110

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3110CM Long Mast



3110TM Long Mast

## 3110 Travel Configurations

MOUNT	MAST HEIGHT*		WEIGHT*		TRAVEL HEIGHT		TRAVEL LENGTH		TRAVEL WIDTH	
Truck (TM)	29 ft-6 in	9.0 m	83,000 lbs	37,650 kgs	13 ft-6 in	4.1 m	32 ft	9.7 m	9 ft	2.7 m
Truck (TM)	53 ft-8 in	16.4 m	85,000 lbs	38,555 kgs	13 ft-6 in	4.1 m	32 ft	9.7 m	9 ft	2.7 m
Truck (TM)	58 ft-8 in	17.9 m	87,000 lbs	39,460 kgs	13 ft-6 in	4.1 m	50 ft	15.2 m	9 ft	2.7 m
Truck (TM)	63 ft-9 in	19.4 m	90,000 lbs	40,370 kgs	13 ft-6 in	4.1 m	55 ft-5 in	16.9 m	9 ft	2.7 m
Crawler (CM)	28 ft-1 in	8.6 m	90,000 lbs	40,823 kgs	12 ft-7 in	3.8 m	30 ft-6 in	9.3 m	11 ft-11 in	3.6 m
Crawler (CM)	62 ft-6 in	19 m	95,000 lbs	43,091 kgs	12 ft-7 in	3.8 m	55 ft-5 in	16.9 m	11 ft-11 in	3.6 m

\*Truck mount weights, heights and length will vary slightly due to truck chassis height and configuration.

