



SR-40

HYDRAULIC DRILLING RIG

A new model

The SR-40 drilling rig on new Caterpillar 3.25 D high power module has been designed to perform the following jobs:

- bored pile with or without drilling fluid;
- bored pile with casing installed by oscillator or rotary crowd system;
- continuous flight auger pile (CFA).

The main features of SR-40 are the followings:

- Machine class: 45 tons;
- New Caterpillar Power 3.25 D module c/w diesel engine and sound proofed canopy, mounted on a 360 degrees slew ring;
- New electronic Caterpillar engine C7 ACERT[®] with max power 300 BHP and meeting latest TIER 3 emission regulations;
- New powerful rotary: 161 kNm, available on request as 3 gear version;
- Self-erecting mast able to withstand the max torque over the whole length;
- Casing driving by rotary crowd system;
- Crowd system by 5,1 m hydraulic cylinder;
- Advanced instrumentation;
- Reliability and safety;
- Stability and easy to handle;
- High productivity;
- Easy to transport, transport weight 45 tons;
- Mechanical and hydraulic pre-arrangement for casing oscillator (available on request);
- Crowd system by winch (available on request).

Large diameter bored pile			
Max pile diameter	mm	1500	
Max cased diameter	mm	1300	
Max pile depth	m	55	
Max torque	kNm	161	
Max drilling speed (standard rotary)	rpm	26	
Max drilling speed (with 3 gear high speed rotary)*	rpm	26 / 48 / 102	
Spin off speed	rpm	160	
Main winch line pull	kN	150	
Service winch line pull	kN	65	
Engine ¹	type	CAT C7 ACERT®	
Max Power	kW (BHP)	224 (300) @ 2200 rpm	
Cylinder crowd (Pull up/down force on kelly)	kN	155 / 120	
Stroke	mm	5100	
Winch crowd (Pull up/down force on kelly)	kN	180 / 180	
Stroke	mm	11000	
Operating weight (c/w kelly w/o tool) ²	ton	49	
Transport weight (w/o kelly)	ton	45	

The nominal values are referred to 100% total efficiency. /¹ Meeting the EPA-TIER3 emission regulations. /² Weight is based on final configuration.

Continuous Flight Auger (CFA)			
Max pile diameter	mm	750 / 1000	
Max pile depth ¹	m	20 / 17 / 14	
Max extraction force	kN	520	
Max torque	kNm	161	
Operating weight ²	ton	48	

¹ Pile depht depends on sleeve lenght ./ ² Weight is based on final configuration.

* 3 gear high speed rotary		1 °	2 °	3°
Max drilling speed	rpm	26	48	102
Max torque	kNm	162	87	24

- 1 Undercarriage class D5 with expandable tracks by means of hydraulic cylinders.
- 2 Caterpillar power module 3.25D c/w diesel engine C7 ACERT® and sound proofed canopy, mounted on a 360 degrees slew ring.
- 3 Winch assembly.
- **4 Parallelogram system** which allows various working radius and always mantaining the mast in vertical position.
- **5 Self-erecting mast** which can withstand the max torque over the whole length it is composed by 11,43 m intermediate element, 2,1 m botton element and 1,85 m extension.

6 - Sheave cathead.

- 7 Crowd system by 5,1 m hydraulic cylinder.
- **8 Rotary head** with 4 hydraulically shifted drilling speeds and one high speed spinoff. On request a gear with 3 mechanical shifts is available.
- **9 Telescopic kelly bar** with guide on mast either available friction or mechanical locking type.
- **10- Mechanical and hydraulic** pre arrangement for casing oscillator (optional).



The new SR-40 is installed on new "Caterpillar" turret with easy access to any hydraulic and mechanical parts. New designed cabin allows better visibility and easier way of use.



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LARGE DIAMETER BORED PILES

Working Condition



Kelly Bars

Mechanical locking kelly bar – Ø 355 mm				
elements	length	depth	weight	H height
n°	т	т	ton	т
4x	6,0	18,5	2,4	6,9
4x	8,0	28,5	3,0	6,9
4x	9,0	32,5	3,3	6,6
4x	10,5	38,5	3,8	5,1
4x	12,0	45,0	4,2	3,4
4x	13,0	48,0	4,6	2,6

H = Kelly stub height from ground level

Friction k elements n°	celly bar – Ø length m	355 mm depth m	weight ton	H height m
4x	6,0	20,0	2,4	6,9
4x	9,0	33,0	3,4	6,6
4x	11,0	40,0	3,7	4,2
4x	12,0	46,0	4,2	3,4
5x	8,5	39,0	4,1	6,9
5x	9,0	41,0	4,3	6,6
5x	11,0	50,0	5,1	3,6
5x	12,0	55,0	5,5	3,8

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CFA VERSION



Transport Conditions LDP









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All technical data are purely indicative and subject to change without notice

