

SR-40

HYDRAULIC ROTARY RIG



SR-40

HYDRAULIC DRILLING RIG

The hydraulic drilling rig SR-40 is mounted on a CATERPILLAR turret and has been specially designed for suiting the following applications:

- **cased bore piles** with casing driven directly through rotary head or optionally by casing oscillator powered by the base carrier itself;
- **deep bored piles** stabilized by drilling fluid or dry hole;
- **CFA piles** by means of auger string;
- **displacement piles**;
- **soil-mixing**.

The SR-40 is equipped with the **CAT monitoring system** of the engine power and hydraulic system.

Option features:

- winch crowd system
- crowd winch force monitoring;
- central lubrication;
- auxiliary free-fall winch.

LARGE DIAMETER BORED PILE (LDP)

* Emission certification:
EU stage III / US EPA Tier3

Main performances

Max pile diameter (cylinder/winch)	mm	1500 / 1100
Max pile depth	m	55
Max casing diameter	mm	1300

Undercarriage

Overall length	mm	5200
Track shoe width	mm	700
Overall width (extended side frames)	mm	4300
Overall width (retracted side frames)	mm	2900
Ground pressure	MPa	0,08
Travelling speed	km/h	2,25

Diesel engine

Model	type	CAT C7*
Rated power	kW (HP)	187 (253)

Hydraulic pumps

Main pumps	l/min	2x230
Auxiliary pumps	l/min	32
Max working pressure	MPa	35

Main winch

Controlled descent

1st layer nominal line pull	kN	150
1st layer nominal rope speed	m/min	87
Rope diameter	mm	22

Auxiliary winch (Standard)

Controlled descent

1st layer nominal line pull	kN	64
1st layer nominal rope speed	m/min	62
Rope diameter	mm	18

Auxiliary winch (Optional)

Free fall

1st layer nominal line pull	kN	61
1st layer nominal rope speed	m/min	62
Rope diameter	mm	18

Rotary without shifting gear box (Standard)

Maximum torque	kNm	161
Max spin off speed	rpm	160
Maximum drilling speed	rpm	25

Rotary 3 shifting gear box high speed (Optional)

Maximum torque	kNm	160	82	25
Max spin off speed	rpm	-	-	-
Maximum drilling speed	rpm	26	48	102

Crowd cylinder (Standard)

Crowd force (pull down/pull up)	kN	120 / 155 (200)
Pull down stroke	mm	5100

Winch crowd system (Optional)

Crowd force (pull down/pull up)	kN	180 / 220
Pull down stroke	mm	11000

CONTINUOUS FLIGHT AUGER (CFA)

4th line pull

Main performances

Max pile diameter	mm	1000
Max pile depth	m	20
Max pile depth (w. roller type auger cleaner)	m	18,8
Max diameter (w. roller type auger cleaner)	mm	1000
Max extraction force	kN	520
Crowd force on auger	kN	90

TURBOJET

Main performances

Max pile diameter	mm	1000
Max pile depth (4 th line pull)	m	20
Max extraction force	kN	520
Crowd force on tool	kN	90

WEIGHT & DIMENSIONS

* c/w kelly, w/o tool

** w/o rotary and kelly

*** w/o rotary, counterweight and kelly

		LDP versione	CFA versione
Transport width	mm	2900	2900
Transport height	mm	3250	3250
Transport length	mm	12800	12800
Operating weight	ton	50*	49
Minimum transport weight	ton	41** / 35***	41 / 35

KELLY BARS

H = kelly stub height from ground level

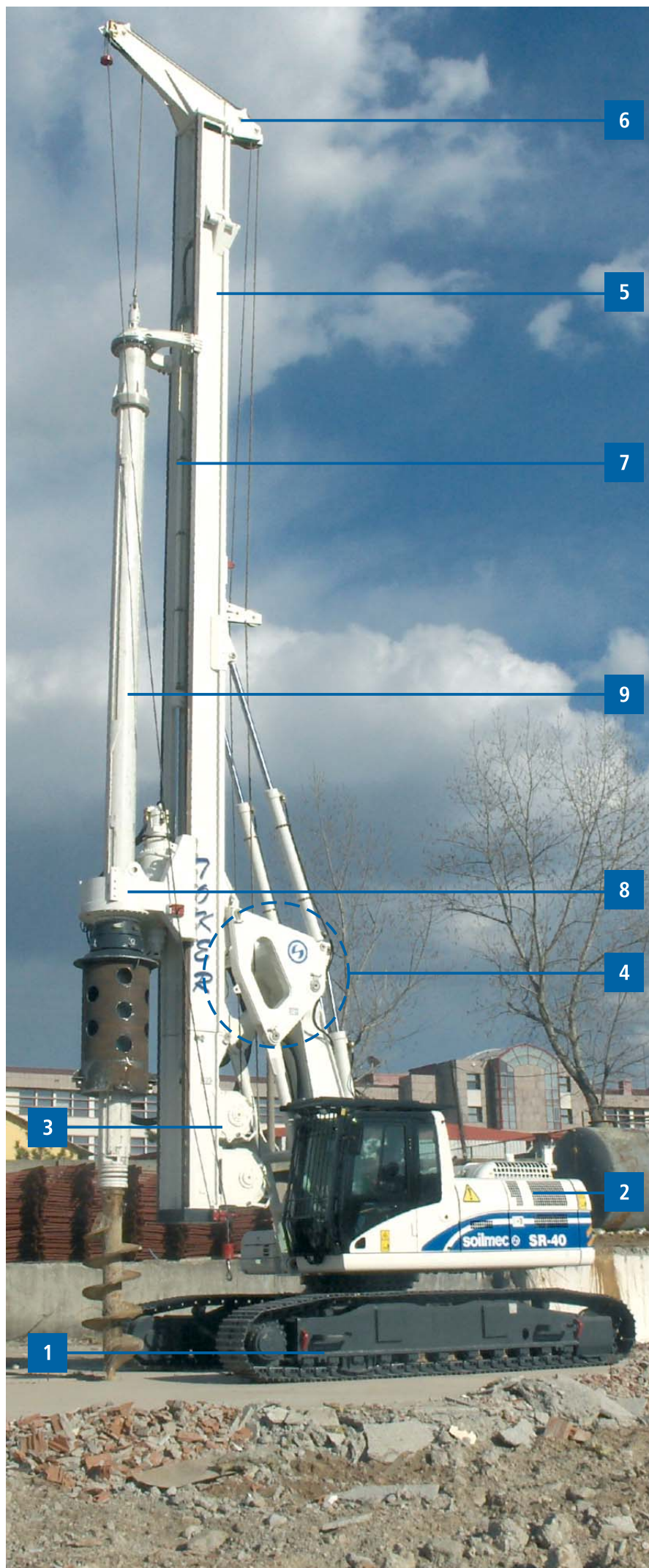
Mechanical locking kelly bar – Ø 355 mm	elements n°	length m	depth m	weight ton	H height m
	3x	8,0	21,7	3,1	7,6
	4x	6,0	19,2	2,5	10,0
	4x	8,0	29,4	3,1	7,4
	4x	9,0	32,4	3,4	6,5
	4x	10,5	39,0	3,9	4,9
	4x	12,0	45,2	4,3	3,4
	4x	13,0	48,7	4,6	2,7
Friction kelly bar – Ø 355 mm	elements n°	length m	depth m	weight ton	H height m
	4x	6,0	19,2	2,5	10,0
	4x	8,0	29,4	3,1	7,4
	4x	11,0	39,3	4,0	5,1
	4x	12,0	45,2	4,3	3,8
	4x	13,0	48,7	4,6	2,7
	5x	8,5	39,0	4,1	7,1
	5x	9,0	40,5	4,3	6,7
	5x	10,0	45,8	4,7	5,7
	5x	11,0	48,9	5,1	5,1
	5x	12,0	55,2	5,5	3,9



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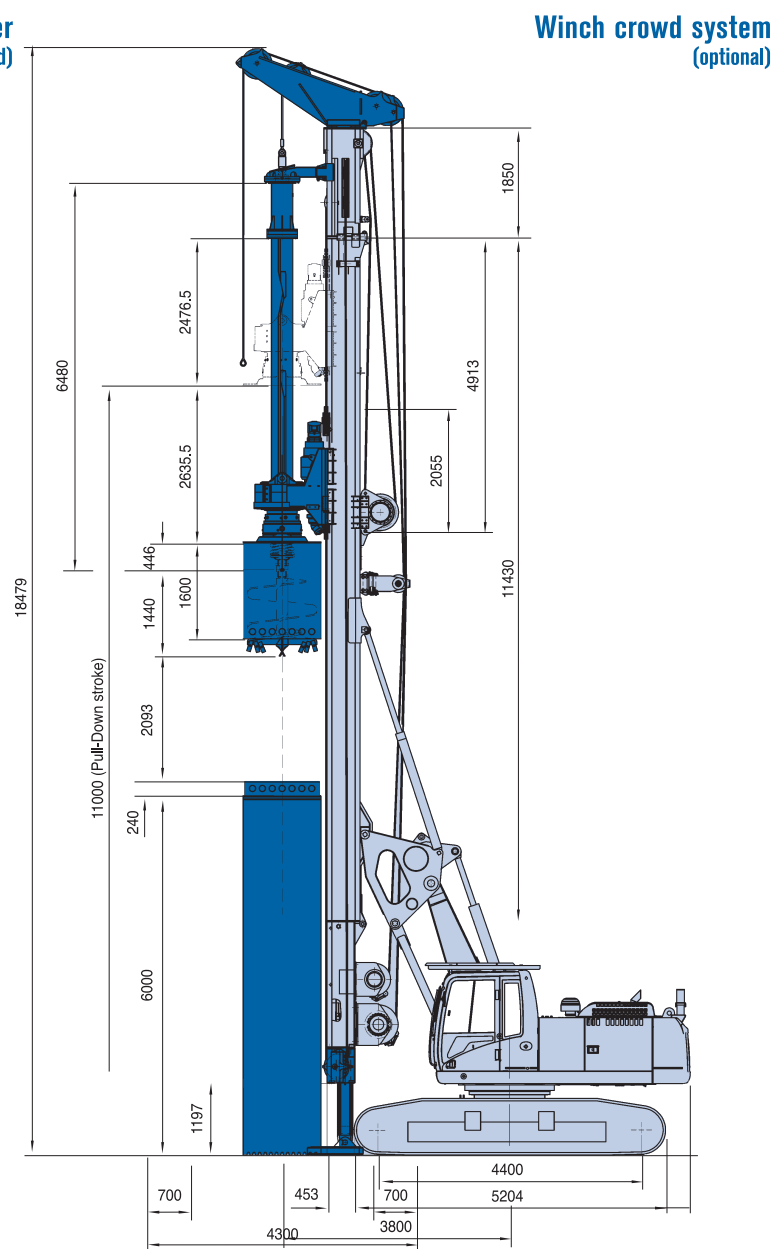
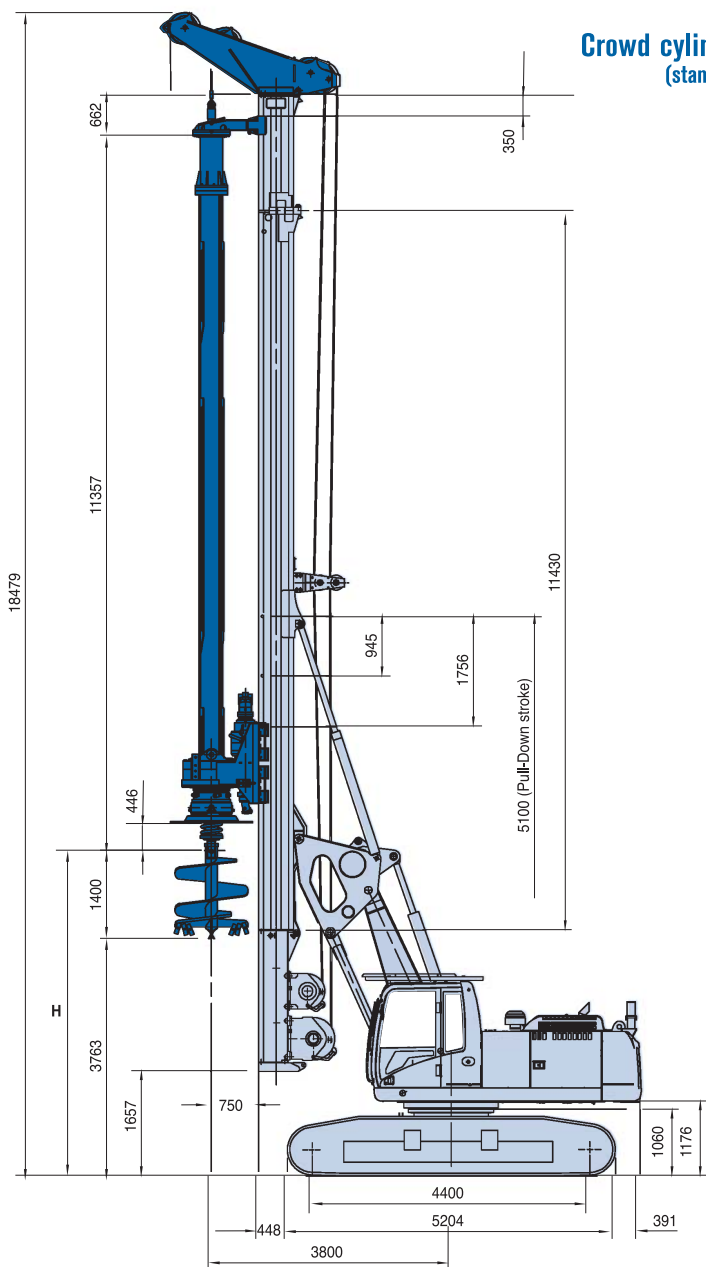
MAIN FEATURES

- 1 - **Undercarriage** class D5 with expandable tracks by means of hydraulic cylinders
- 2 - **Caterpillar** power module 3.25D c/w diesel engine C7 Tier 3 and sound proofed canopy, mounted on a 360° slew ring
- 3 - **Winch** assembly
- 4 - **Parallelogram system** which allows various working radius and always maintaining the mast in vertical position
- 5 - **Self-erecting mast** which can withstand the max torque over the whole length. It is composed of 11,43 m intermediate element, 2,1 m bottom 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 spin-off. Three speed gear rotary head available (optional)
- 9 - **Telescopic kelly bar** with guide. Available with friction or mechanical locking type
- 10- **New "Caterpillar" turret** with easy access to any hydraulic and mechanical part. New designed cabin allows better visibility and easier way of use

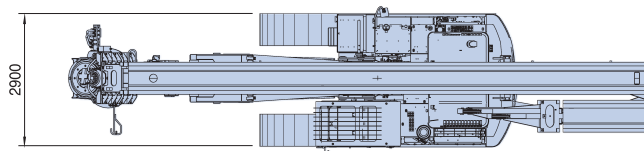
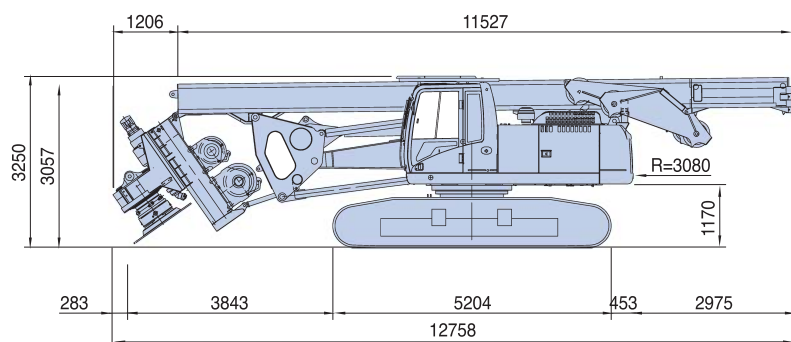


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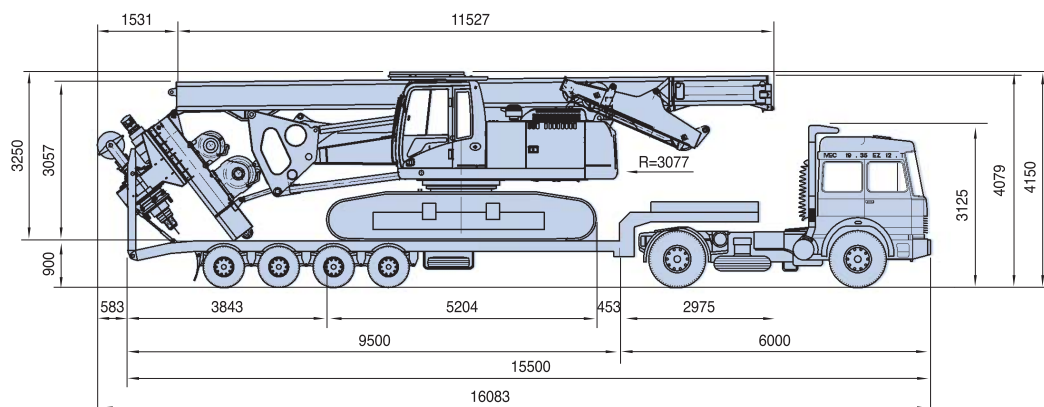
LARGE DIAMETER BORED PILES (LDP) VERSION



LDP Transport Condition



CONTINUOUS FLIGHT AUGER (CFA) VERSION





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CERTIFIED QUALITY SYSTEM

In 1990 Soilmec was awarded with the certification of its Quality System complying with ISO 9001:2000 and ISO 14001:2004 standards.



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