

# SR-20

HYDRAULIC ROTARY RIG



# SR-20

## HYDRAULIC DRILLING RIG

Several jobsite require equipment suitable to have short rig up time and easy to operate in narrow location. SOILMEC meets these requirements marketing the new SR-20, a solid machine completely self-erecting with high performances and minimum operating costs.

### The main characteristics of SR-20 are the following:

- New powerful diesel engine: 170 HP.
- New powerful hydraulic pumps and new Load Sensing system.
- Higher torque on rotary table: 100 kNm.
- Higher drilling speed: 43 rpm.
- DRILLING MATE SYSTEM on 10" touch screen for monitoring and control of the operating parameters. Memo-block for acquisition of data and software for processing them on PC station. On request data transfer via GSM/GPRS with "calling on trouble" option.
- Self-erecting rig; Kelly bar does not need to be removed.
- No special road permits required.

Large diameter bored pile		
Max pile diameter	mm	1200
Max pile depth	m	40
Max casing diameter	mm	-
Undercarriage		
Overall length	mm	4120
Track shoe width	mm	600
Overall width (extended side frames)	mm	3400
Overall width (retracted side frames)	mm	2500
Ground pressure	MPa	0,07
Diesel engine		
Model	type	CUMMINS QSB 4,5
Power	kW (HP)	127 (170)
Hydraulic pumps		
Main pumps	lt/min	270
Auxiliary pumps	lt/min	69, 17, 35
Max working pressure	MPa	30
Main winch		
1st layer nominal line pull	kN	103
1st layer nominal rope speed	m/min	78
Rope diameter	mm	20
Auxiliary winch		
1st layer nominal line pull	kN	41
1st layer nominal rope speed	m/min	67
Rope diameter	mm	15
Rotary (3 shifting gear box high speed)		
Maximum nominal torque	kNm	-
Max spin off speed	rpm	-
Maximum drilling speed	rpm	-
Rotary (without shifting gear box)		
Maximum nominal torque	kNm	100
Max spin off speed	rpm	-
Maximum drilling speed	rpm	43
Crowd cylinder		
Crowd force (pull down/pull up)	kN	68/124
Pull down stroke	mm	3000
Winch crowd system		
Crowd force (pull down/pull up)	kN	-
Pull down stroke	mm	-

## CFA VERSION

Continuous Flight Auger (CFA) 4 line pull		
Max pile diameter	mm	75,0
Max pile depth	m	15,3
Max pile depth (w. roller type auger cleaner)	m	14,0
Max diameter (w. roller type auger cleaner)	mm	750
Extraction force	kN	280
Diesel engine		
Model	type	CUMMINS QSB 4,5
Power	kW (HP)	127 (170)
Hydraulic pumps		
Main pumps	lt/min	270
Auxiliary pumps	lt/min	69, 17, 35
Max working pressure	MPa	30, 25
Rotary table		
Maximum torque	kNm	100
Maximum drilling speed	rpm	43
Main winch		
Model		SW100
1st layer nominal line pull	kN	103
1st layer nominal rope speed	m/min	78
Rope diameter	mm	20
Service winch		
Model		SW42
1st layer nominal line pull	kN	41
1st layer nominal rope speed	m/min	67
Rope diameter	mm	15

## OTHER VERSIONS

Cased Secant Piles (CSP/CAP)		
Max pile diameter	mm	-
Max pile depth	m	-
Casing pull up/down	kN	-
Second rotary	kNm	-
Max extraction force	kN	-
Max casing speed	rpm	-
Operating weight. approx	tons	-
Reverse Circulation System (RC)		
Max pile diameter	mm	-
Max pile depth	m	-
Max extraction force	kN	-
Operating weight approx	tons	-
Diaphragm Walls		
Max section excavation	mm	-
Max wall depth	m	-
Max extraction force	kN	-
Operating weight approx	tons	-

## WEIGHT & DIMENSIONS

		LD version	CFA version	CSP version	RC version	BH version
Transport width	mm	2550	2550	-	-	-
Transport height	mm	3090	3090	-	-	-
Transport length	mm	12430	13400	-	-	-
Operating weight	ton	27	27	-	-	-
Minimum transport weight	ton	24	24	-	-	-

# SR-20

## MAIN FEATURES

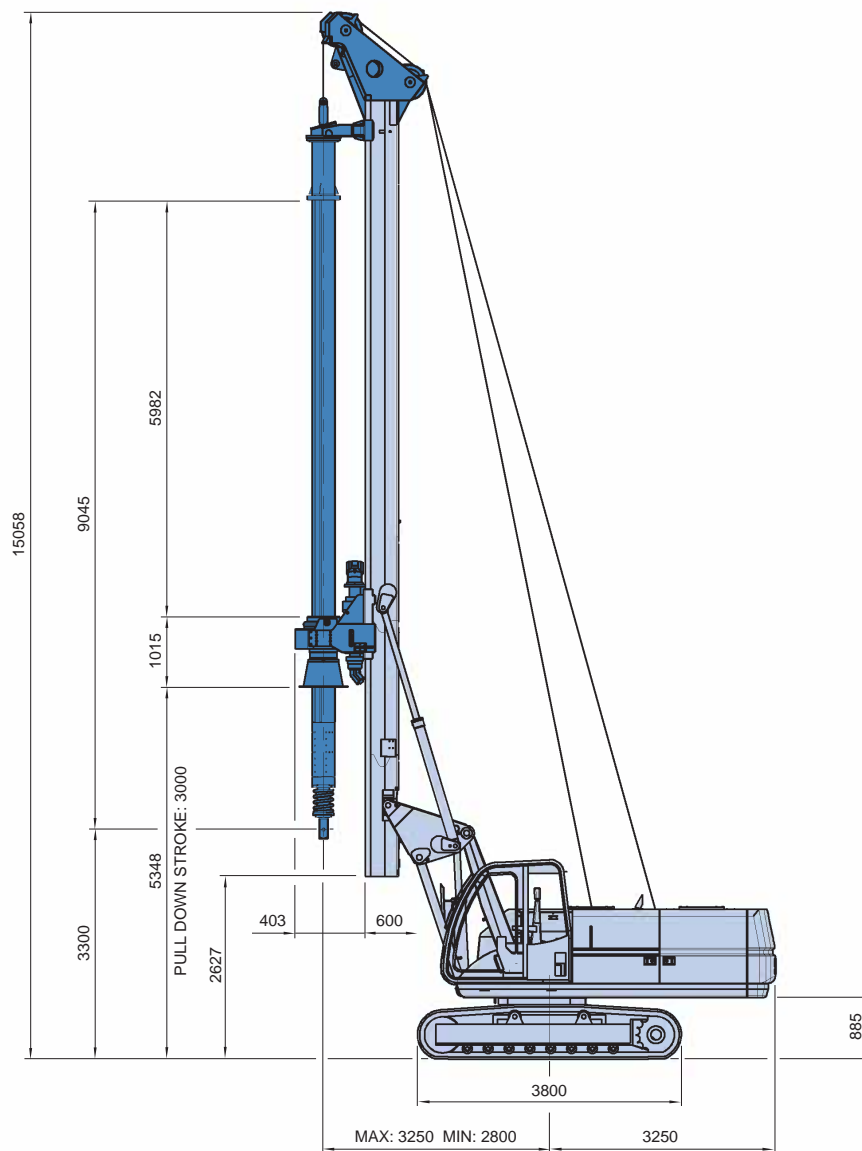
- 1 - **Undercarriage** class FL6 with expandable tracks from 2,5 to 3,4 m. by means of hydraulic cylinders.
- 2 - **Turret** c/w CUMMINS diesel engine and soundproofed canopy, mounted on a 360 degrees slew ring.
- 3 - **Winch assembly.**
- 4 - **Parallelogram system** allowing working radius adjustment always maintaining the mast in vertical position. Complete with electronic device for automatic stop.
- 5 - **Self-erecting mast** which can withstand the max torque over the whole length. Is composed by main mast plus separate sheave cathead kelly type or CFA type.
- 6 - **Cathead.**
- 7 - **Crowd system** by 3 m stroke hydraulic cylinder.
- 8 - **100 kNm torque rotary table** c/w two hydraulic motors and reducers.
- 9 - **Telescopic kelly bar** with guide. Available with friction or mechanical locking type.



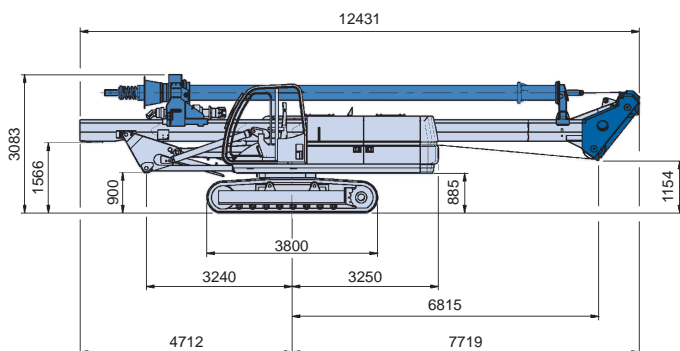
# SR-20

## LARGE DIAMETER BORED PILES

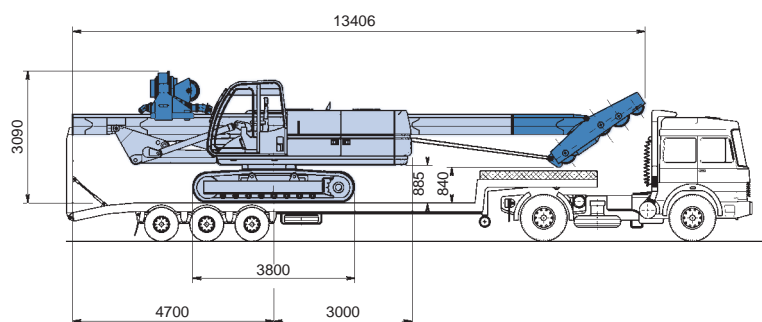
### Working Condition



### Transport Condition



### Transport Condition CFA

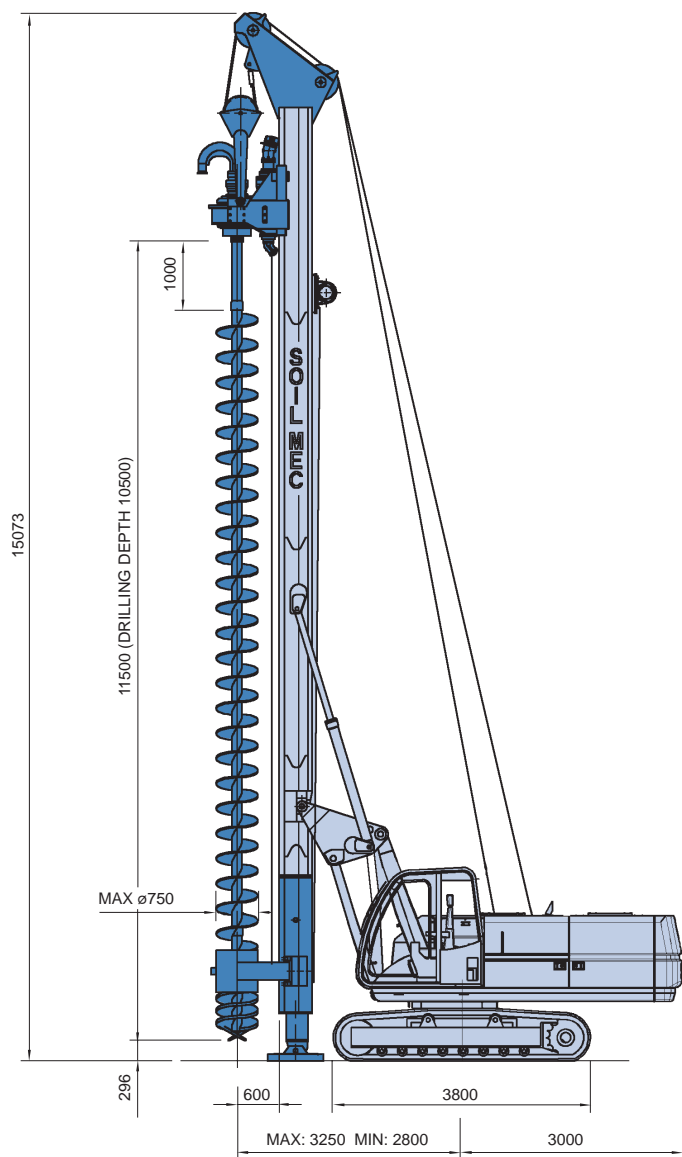


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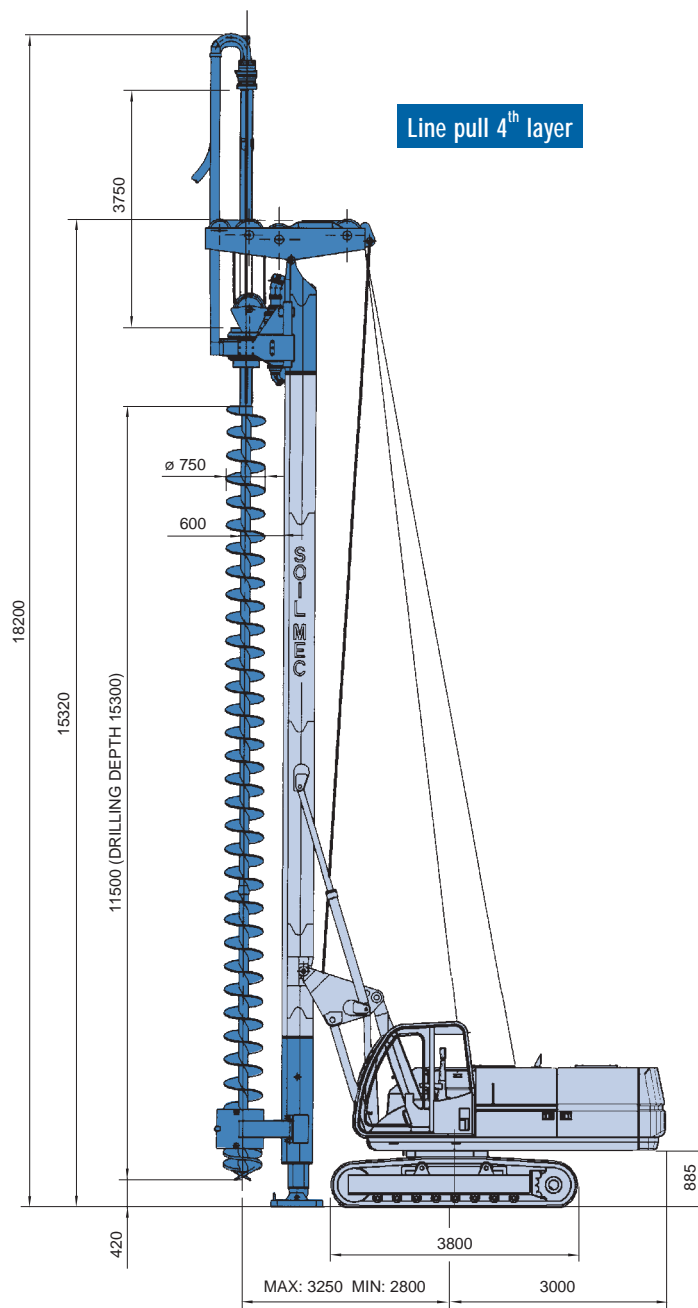
CFA Version

## Working Condition

Line pull 2<sup>nd</sup> layer



Line pull 4<sup>th</sup> layer



## Kelly Bars

### Mechanical locking kelly bar – ø 324 mm

elements n°	length m	depth m	weight ton	H height m
4x	6,5	21,0	2,3	4,7
4x	9,0	32,5	3,0	3,3

### Friction kelly bar – ø 324 mm

elements n°	length m	depth m	weight ton	H height m
4x	8,0	25,5	2,7	4,3
4x	9,0	32,5	3,0	3,3

Standard dimension of tool connection is 130x130 mm  
H= kelly stub height from ground level





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

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