

# R-930

HYDRAULIC ROTARY RIG



# R-930

## HYDRAULIC ROTARY RIG

### A new model

The R-930 drilling rig mounted on SOILMEC base machine has been specially designed to perform the following jobs:

- Bored piles with or without drilling fluid;
- Casing with rotary head or by the use of an oscillator;
- C.F.A. (Continuous Flight Auger) piles;
- R.C. (Reverse Circulation) piles;
- C.S.P. (Secant Piles with double head) piles;
- D.P. (Displacement Pile) piles.

The main features of R-930 are the following:

- Machine class: 100 ton;
- Completely self-erecting mast withstand the max torque over the whole length;
- Casing driving by rotary crowd system;
- Advanced instrumentation;
- Reliability and safety;
- DRILL 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.

		PILE	TORQUE MULTIPLIER	CFA	CSP	RC
Max pile diameter	mm	3000	2500	1200	1000	2500
Max cased diameter	mm	2500	2500	-	1000	-
Max pile depth	m	76,5	76,5	28,6	25	100-150
Max cased depth	m	-	-	-	18,5	-
Casing max height	m	6	6	-	-	-
Max pile depth w. auger cleaner	m	-	-	27	25	-
Nominal extraction force (4 line pull)	kN	-	-	1160	1160	1160
Cylinder pull-up down force on casing/kelly	kN	320/150	320/150	-	-	320/150
Max rotary torque	kNm	305	676	305	305	305
Second rotary max drilling speed	-	-	-	-	7	-
Second rotary max torque	-	-	-	-	450	-
Rotary max speed	rpm	25	11	25	25	25
Operating weight	ton	105-110	110-115	95 + cfa	102 + cfa and casing	98 + kelly
Cable crowd stroke (opt.)	m	13,5	-	22,5	18,5	-
Crowd system pull-up / down force	kN	360	-	205	410	-



DRILL MATE SYSTEM



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#### Undercarriage

Overall length	mm	5950
Track shoe width	mm	900
Overall width (extended side frames)	mm	5000
Overall width (retracted side frames)	mm	3400
Ground pressure	MPa	0,10

#### Diesel engine <sup>(1)</sup>

Engine	Deutz BF8M1015C	
Power rating according EPA II	kW (HP)	400 (536) @ 2000 rpm

#### Hydraulic pumps

Main pumps	lt/min	2 x 380
Hydr. power setting	kW (HP)	247 (331)
Max working pressure	MPa	32

#### Main winch

Controlled descent

1 <sup>st</sup> layer nominal line pull	kN	290
1 <sup>st</sup> layer nominal rope speed	m/min	82
Rope diameter	mm	30

#### Service winch

Controlled descent  
SW140

Free fall  
SF140 SF240

1 <sup>st</sup> layer nominal line pull	kN	140	140	240
1 <sup>st</sup> layer nominal rope speed	m/min	62	62	38
Rope diameter	mm	26	26	30

#### Rotary table

Maximum torque	kNm	305
Max spin off speed	rpm	117
Maximum drilling speed	rpm	25
Max push / pull force cylinder	kN	320 on casing
Max push force on kelly	kN	153
Pull down cylinder stroke	mm	6500

#### Weights and dimensions

Transport width	mm	3400 / 3000 <sup>(2)</sup>
Transport height	mm	3560 / 3200 <sup>(2)</sup>
Minimum transport weight	ton	45 <sup>(3)</sup>

(1) Nonroad diesel exhaust regulations compliance (EU - 97/68/CE; Step 2; U.S.A. - EPA II; California - CARB)

(2) With / without tracks; (3) Tracks, counterweight, rotary, bottom & top mast section, sheave head removed.

#### Kelly Bars

##### Friction kelly bar – ø 483 mm

elements no	length m	depth m	weight ton	H height m
4x	10,5	37,0	7,0	9,9
4x	11,5	41,0	7,5	8,8
4x	13,5	49,5	8,5	6,8
4x	15,5	57,5	9,5	4,8
4x	16,5	61,0	10,0	3,9
5x	10,5	46,0	7,6	9,9
5x	11,5	51,5	8,3	8,8
5x	13,5	62,0	9,6	6,8
5x	15,5	72,0	10,9	4,8
5x	16,5	76,5	11,5	3,9

##### Mechanical locking kelly bar – ø 483 mm

elements no	length m	depth m	weight ton	H height m
4x	10,5	37,0	7,0	9,9
4x	11,5	41,0	7,5	8,8
4x	13,5	49,0	8,5	6,8
4x	15,5	57,0	9,5	4,8
4x	16,5	61,0	10,0	3,9

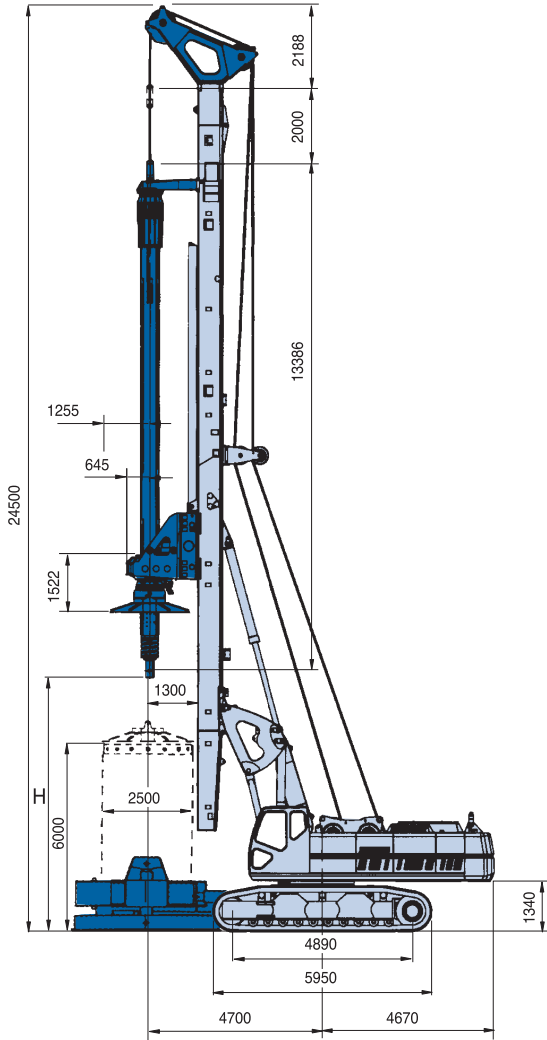
Standard dimension of tool connection is 200 x 200 mm  
H = Kelly stub height from ground level

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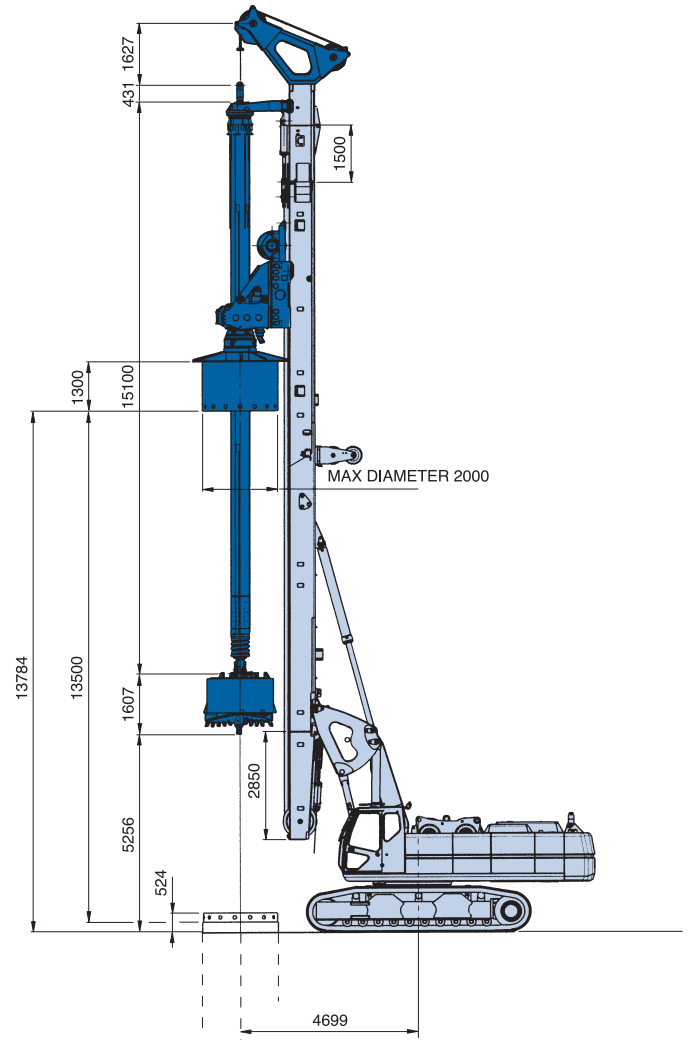
## LARGE DIAMETER PILES

### Working Condition

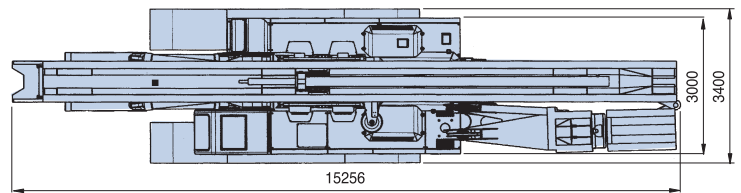
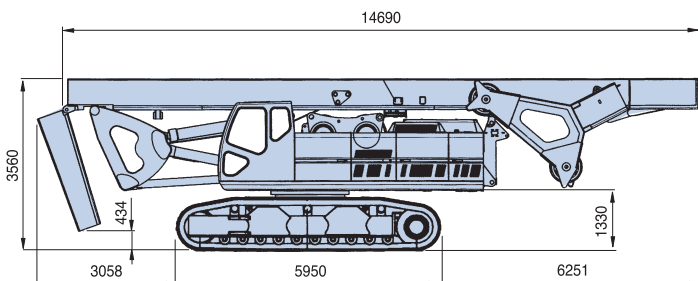
#### Standard Version



#### Cable Crowd Version

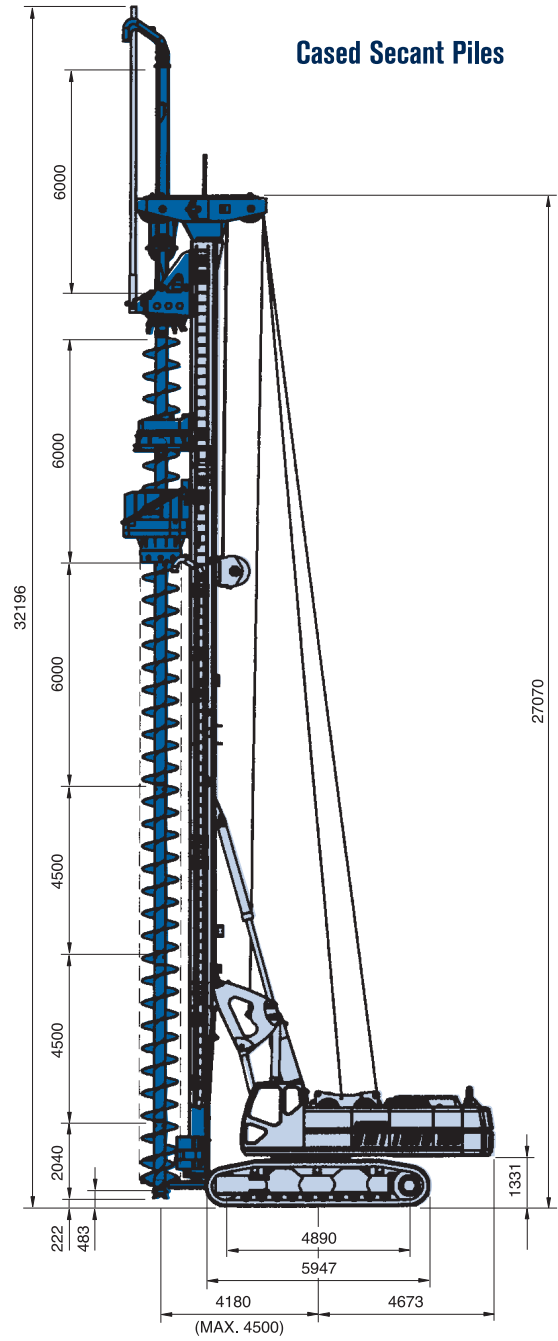
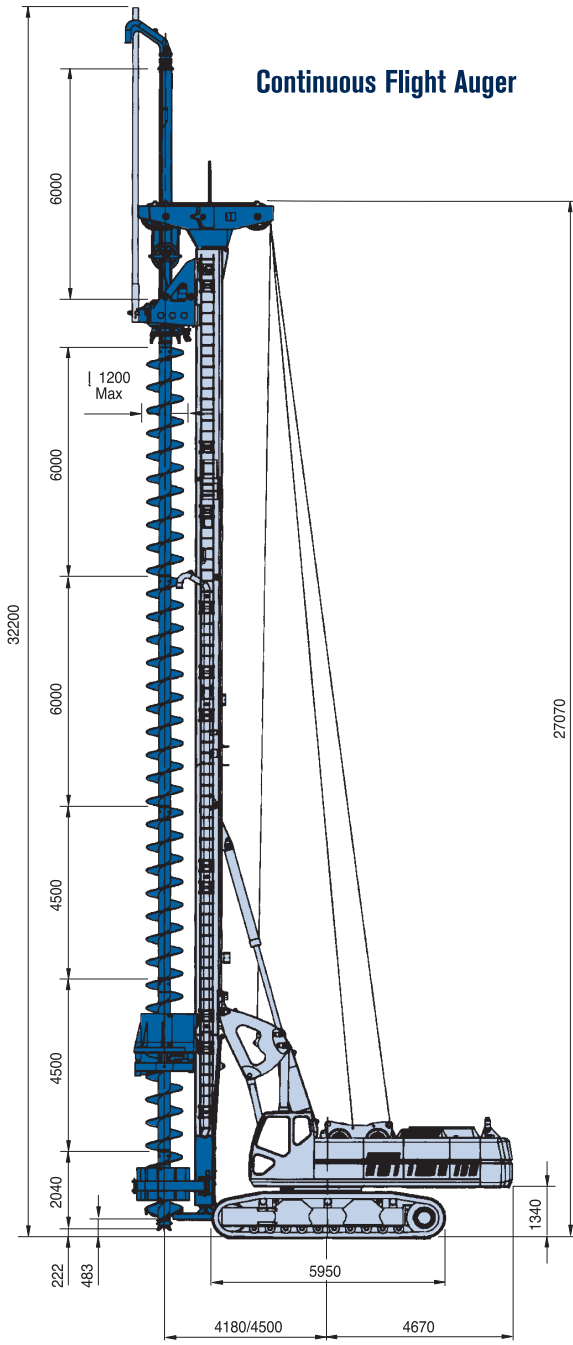


### Transport Condition

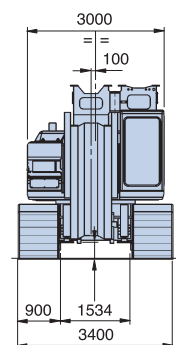
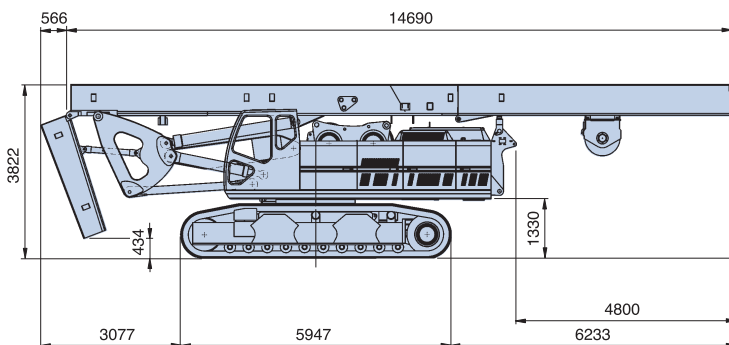


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CFA / CAP - CSP



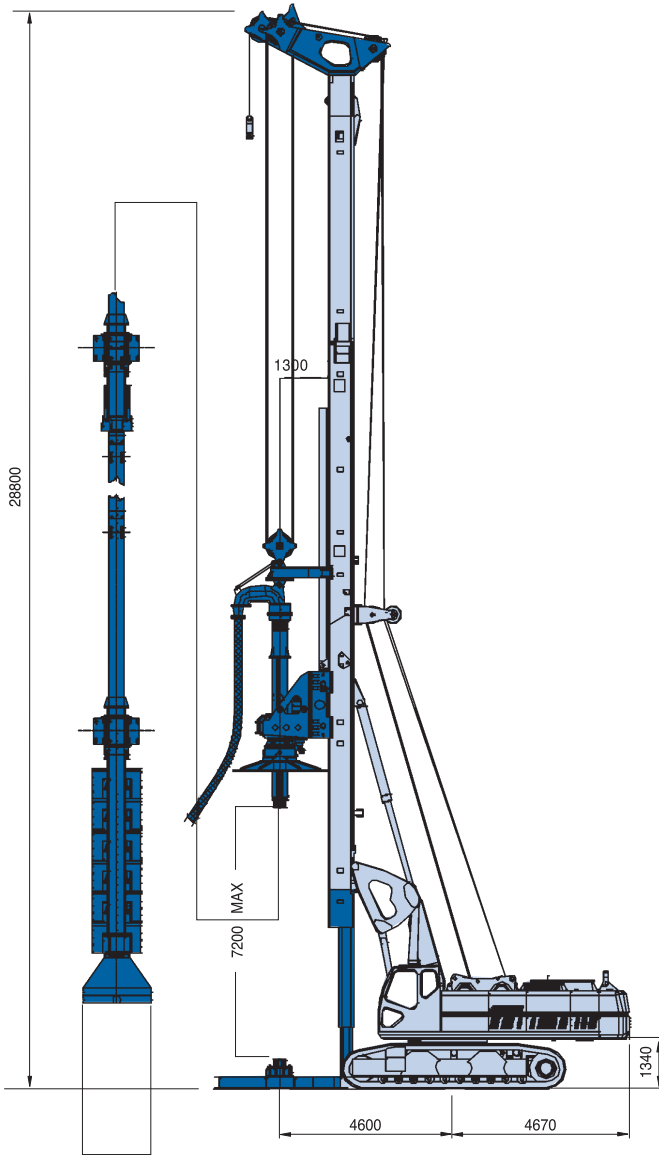
## Transport Condition



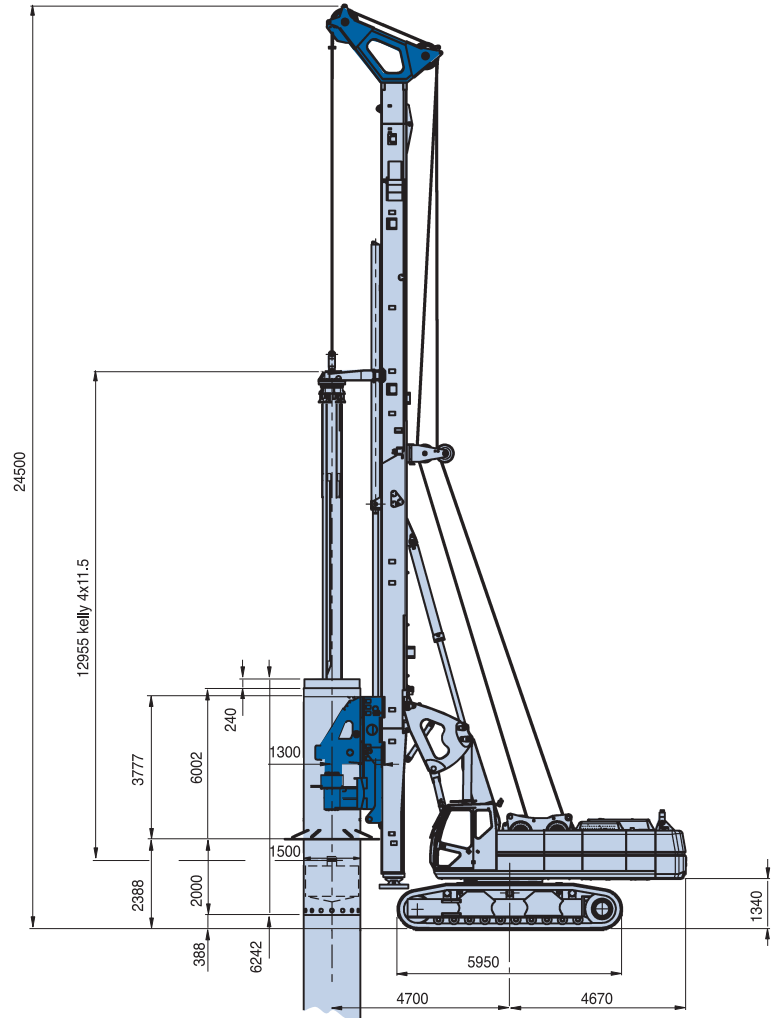
# R-930

RC / TM

## Reverse Circulation



## Torque Multiplier



## Features





SOILMEC distributes machinery and structures all over the world, supported by SOILMEC subsidiary companies and representative offices as:

**SOILMEC LTD** - U.K.

**SOILMEC MISR S.A.E. Co.** - Egypt

**SOILMEC (H.K.) Limited** - Hong Kong

**SOILMEC JAPAN CO LTD** - Japan

**SOILMEC S.P.A. - Beijing Repr. Office** - P.R. China

**SOILMEC FAR EAST PTE.LTD** - Singapore

**SOILMEC EMIRATES** - U.A.E.

**SOILMEC GULF** - U.A.E.

## CERTIFIED QUALITY SYSTEM

In 1990 Soilmec was awarded with the certification of its Quality System complying with ISO 9001/UNI 29001 standards.



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