SANY

Moving Tomorrow, Today!

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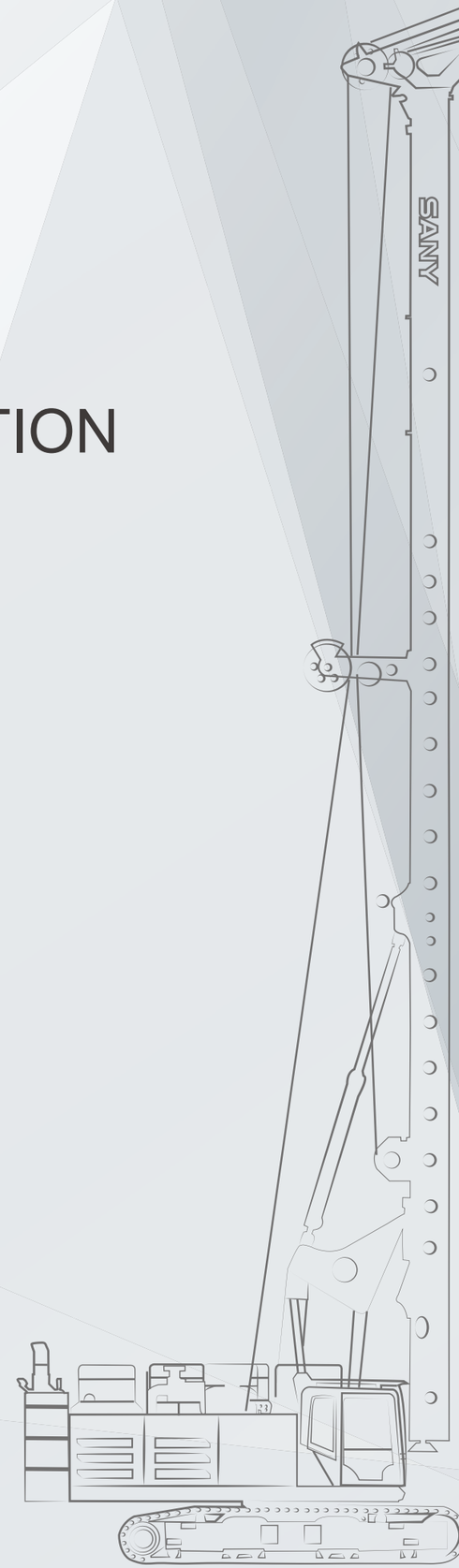
SANY®

PILING MACHINERY
PRODUCTS COLLECTION



2021

INNOVATION HISTORY OF SANY PILING MACHINERY

Beijing Sany Intelligent Technology Co., Ltd. has always been focusing on the design, manufacturing, sales and service of foundation construction equipment. The main products are rotary drilling rig and diaphragm wall grab cover the whole area of pile foundation, pit supporting and underground construction. With the principle of Quality Changes the World, Beijing Sany has always been dedicating to providing the professional total solution of foundation construction to global customers.

2003

The first Sany rotary drilling rig SYR220 was born.

2005

Beijing Sany passed ISO 9001 and CE certifications and became the first Chinese rotary drilling rig manufacturer to obtain such certifications.

2007

The first winch crowded rotary drilling rig in China SR220R was born.

2008

SR360 with the largest torque in Asia was developed by our own technology.

2009

The successful developing of SR420 rotary drilling rig manufacturing in China.

2011

The largest rotary drilling rig in Asia SR460 rolled off the production line. Sany was awarded Customer Satisfaction in the First by China Quality Association.

2013

SANY kelly bar product line was awarded FOUR STARS by China Quality Association.

2014

C8 series comes to the market grandly and sets the new benchmark with its high quality and strong drilling ability.

2016

Official launch new C10 series rotary drilling rig, led the industry with innovative technology, high quality, and create legends again.

2017

SR420II sets a 149m record for the deepest drilling depth on the sea.

2018

H10 series release to the world,being a matrix of Rotary Drilling for hard rock layer,achieve 100 meters deep pile.

2019

Intelligent rotary drilling rig SR580R launchs, leading a new step to pile intelligence. All new-gen Hydraulic Grab SH700 was rleased to global grab market.

2020

11 new products release to the world, fighting the virus cannot block the infrastructure. Wall grab products have been seriated, multifunction rotary drilling rig comes top.

HIGH QUALITY, NEW INNOVATION

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Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1100	
Max. drilling depth	m	20/27	①
Rotary drive			
Rated output torque	kN·m	70	
Rotation speed	rpm	5~40	
Crowd system			
Crowd force	kN	105	
Line pull	kN	120	
Stroke	mm	3000	
Main winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	79	
Auxiliary winch			
Lifting capacity	kN	40	
Wire rope diameter	mm	14	
Max. line speed	m/min	75	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	3	
Main Chassis			
Base engine	/	4JJ1 ISUZU	
Engine power	kW/rpm	84/2200	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	2.999	
Chassis length	mm	4855	
Extension width	mm	2700	
Track shoe width	mm	600	
Swing radius	mm	3000	
Overall machine			
Overall height	mm	12765	8110 ②
Operating weight	t	23	
Transport width	mm	2700	
Transport height	mm	3410	

①: inter-locking kelly / friction kelly depth
②: the height is low headroom mode

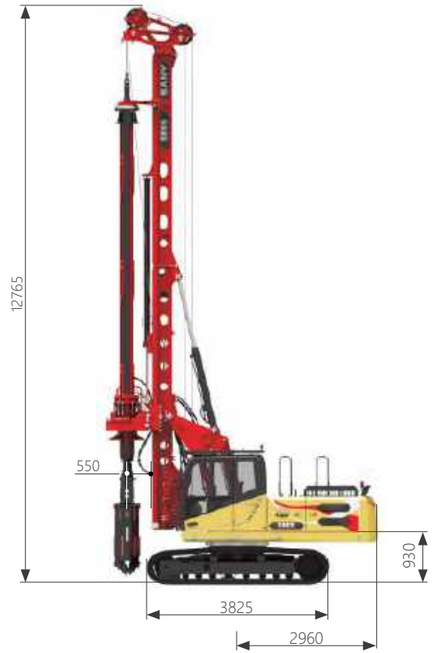
Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ273×3×7.5	2000	20	Standard
Friction kelly	Φ273×4×7.5	2335	27	

SR65 is positioned for industrial and civil construction and municipal construction in small cities. It can perform efficient construction and rapid operation within the range of Φ1.1 m borehole diameter and 27 m borehole depth.

- The whole machine is easy to transport, no need to disassemble.
- The new special chassis for rotary drilling rig makes the construction more stable and the maintenance more convenient.
- Strong travelling ability, brand-new driving wheel, large travelling motor reducer, high-speed travelling function, facilitate travelling on all terrains.
- High-speed rotary drive, the max. speed can reach 40rpm.
- Equipped with one-key soil dumping and one-key soil shaking functions, and the efficiency is increased by more than 50%.

Long-life wire rope, single-layer winding of the main rope, less wear and longer service life.

- Low headroom mode can drill 9m, choose high or low state to meet the special needs of restricted working conditions.
- Base machine with high configuration, the large-displacement electronically controlled main pump is matched with a large-diameter main valve with independent intellectual property rights to realize the high efficiency and unity of surging power and precise control.
- The new C11 cab, safety (double full-protection roof), intelligence (new touch screen), high technology (one-button start, mobile phone interconnection), comfort (large space, strong air conditioning, air suspension seats), and a better driving experience.



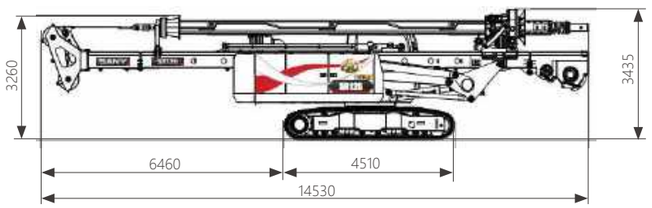
SR125

SANY

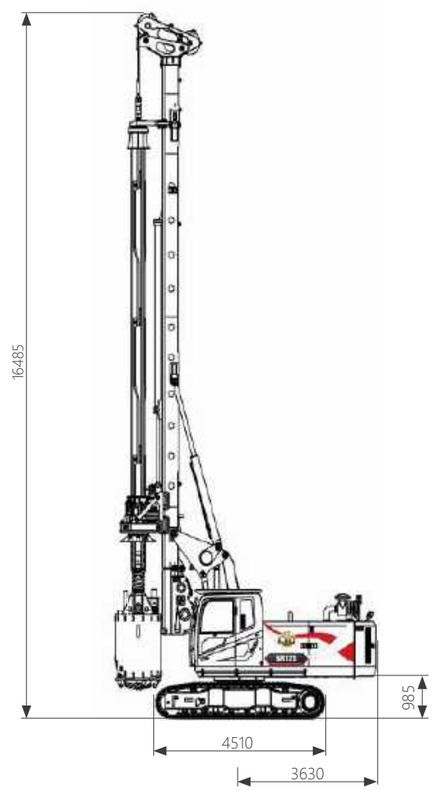
Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1300	1500①
Max. drilling depth	m	36/45	②
Rotary drive			
Rated output torque	kN·m	130	
Rotation speed	rpm	6~45	
Crowd system			
Crowd force	kN	130	
Line pull	kN	160	
Stroke	mm	3700	
Main winch			
Lifting capacity	kN	145	
Wire rope diameter	mm	24	
Max. line speed	m/min	81	
Auxiliary winch			
Lifting capacity	kN	60	
Wire rope diameter	mm	14	
Max. line speed	m/min	75	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	3	
Main Chassis			
Base engine	/	4HK1 ISUZU	
Engine power	kW/rpm	133/2200	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	5.193	
Chassis length	mm	5865	
Extension width	mm	3650	
Track shoe width	mm	600	
Swing radius	mm	3680	
Overall machine			
Overall height	mm	16485	
Operating weight	t	37.5	
Transport width	mm	2660	2550③
Transport height	mm	3435	

①: optional
②: inter-locking kelly / friction kelly depth
③: width when dismantling the cab bridge platform

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ325×4×10	4100	36	
Inter-locking kelly	Φ351×4×10	4600	36	
Friction kelly	Φ325×4×10	3700	36	Standard
Friction kelly	Φ351×5×10	4600	45	



Intelligence and high efficiency: an expert at foundation construction in rural areas, small towns, and workshops, the flagship product in small rotary drilling rigs. The large-torque and high-speed rotary drive, equipped with the function of one-key automatic soil throwing and automatic soil shaking functions, facilitates efficient drilling and fast soil conveying. The lightweight Kelly bar can drill the borehole with a minimum diameter of Φ400 mm. The main winch with large line pull and fast speed enhances high efficiency.
Strong power: imported Isuzu EFI engine, equipped with high-power main pump; large-diameter main valve adopts power optimization control technology to realize real-time power distribution and fast operation response, high fuel efficiency, and low valve loss. The comprehensive energy is reduced by 10%~15%.
Convenient transportation: the whole machine is easy to transport, no need to disassemble the Kelly bar. It is the first rotary drilling rig in domestic market that the transport dimensions and weight are all within the limits, which can save more than 50,000 yuan in transportation costs each year. With 2.55 meters transportation width, large traveling traction and high traveling speed, it is fully adapted to the field construction and road traffic in small rural towns.
Smart upgrade: a new generation of 10-inch high-definition smart touch screen, multi-language switching, millisecond refresh rate, smooth animation display, mobile phone interconnection, automatic air conditioning control, and weather warning. The professional service APP (Yiweixun) can realize real-time online display of working conditions and one-click call service.
Safety and reliability: the new generation of cab has roomier space, upgraded sealing, increased wiper area. Add top protection net to enhance cab safety. The air suspension seat improves vibration filtering capacity.
Convenient maintenance: The side-placed engine provides spacious maintenance space. The electrical system with modular management and control facilitates troubleshooting. The lubrication point on the pulley yoke



SR155

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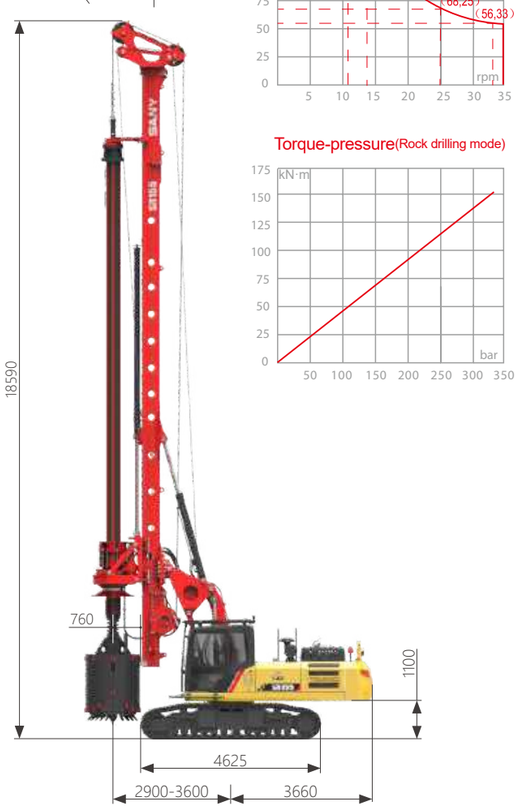
Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1500	
Max. drilling depth	m	56/44	①
Rotary drive			
Rated output torque	kN·m	155	
Rotation speed	rpm	5~35	
Crowd system			
Crowd force	kN	155	
Line pull	kN	160	
Stroke	mm	4200	
Main winch			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	80	
Auxiliary winch			
Lifting capacity	kN	60	
Wire rope diameter	mm	14	
Max. line speed	m/min	75	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	D06FRC-TAA	Mitsubishi
Engine power	kW/rpm	147/2100	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	6.373	
Chassis length	mm	5975	
Extension width	mm	4100	
Track shoe width	mm	700	
Swing radius	mm	3715	
Overall machine			
Overall height	mm	18590	
Operating weight	t	48	
Transport width	mm	3140	
Transport height	mm	3265	

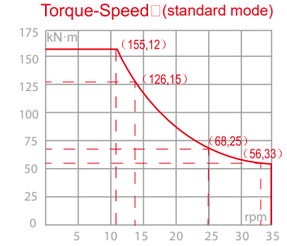
①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ377×4×11	6100	40	
	Φ377×4×12	6600	44	
Friction kelly	Φ377×4×12	6100	44	
	Φ377×5×12	5800	56	Standard

High efficiency and flexibility: Suitable for the construction of small and medium-sized soil layer boreholes. High main winch lifting speed and boreholes verticality, flexible operation, working efficiency higher than similar models of competitor by 15%.
Economical fuel saving: Using power optimization control technology, real-time adjustment of power distribution, quick response, high fuel efficiency, comprehensive energy saving by 10% to 15%.
High reliability: The mast adopts box structure with strong resistance to torsion and fatigue; sixth generation kellybar adopting upgraded material and strengthened block ring, the overall strength increased by 25% with high drilling ability in strongly weathered rock layer.
Convenient transportation: The whole machine size is small, only 48T in weight, barrier free in city transportation and meet height limit.
Intelligent upgrade: 10-inch HD touch screen, fast response and more convenient operation.



Torque-Speed (standard mode)



Torque-pressure (Rock drilling mode)

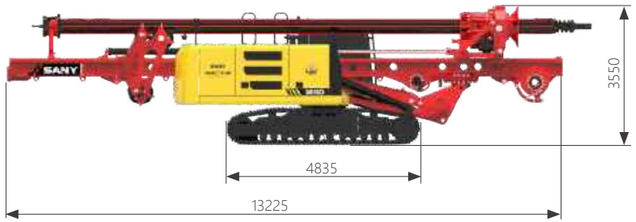
SR165

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1500	
Max. drilling depth	m	56/44	①
Rotary drive			
Rated output torque	kN·m	165	
Rotation speed	rpm	5~35	
Crowd system			
Crowd force	kN	160	
Line pull	kN	180	
Stroke	mm	4200	
Main winch			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	80	
Auxiliary winch			
Lifting capacity	kN	60	
Wire rope diameter	mm	16	
Max. line speed	m/min	60	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±4	
Main Chassis			
Base engine	/	D06FRC-TAA	Mitsubishi
Engine power	kW/rpm	147/2100	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	6.373	
Chassis length	mm	6050	
Extension width	mm	4100	
Track shoe width	mm	700	
Swing radius	mm	3720	
Overall machine			
Overall height	mm	18965	
Operating weight	t	51	
Transport width	mm	3100	
Transport height	mm	3550	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ377×4×11	6100	40	
	Φ377×4×12	6600	44	
Friction kelly	Φ377×4×12	6100	44	
	Φ377×5×12	5800	56	Standard



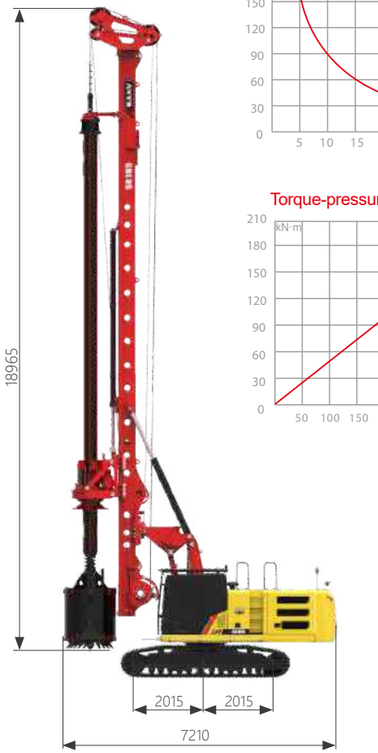
High efficiency of jobsite transfe: The compact design of SR165 allows it can be transported with Kelly bar mounted and mast head unfolded, the transportation height is within the limitation. Offering unmatchable transfer convenience, increasing construction efficiency, and lowering transportation cost.

High drilling efficiency: Using Kawasaki new type pump, the large flow design realizes higher rotary drive torque, rotary speed and main winch lifting speed than competitors in the same class.

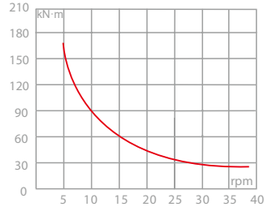
Economic fuel consumption: Adopting positive flow control hydraulic system, saving unnecessary power losses. Under same drilling conditions, SR165 will be more fuel efficient.

High reliability: Increasing brake torque, the slewing bearing doesn't swing when drilling rock layer. New upgraded undercarriage structure, enhancing the stability of the machine. The mast adopts box structure with strong resistance to torsion and fatigue; sixth generation Kelly bar adopts upgraded material and strengthened block ring, the overall strength increased by 25% with high drilling ability in strongly weathered rock layer.

Intelligent upgrade: The pre tension technology of wire rope makes the wire rope on the main winch always maintain certain tension avoiding disordering and twisting, and improves the service life by 30%. 10-inch HD touch screen, fast response and more convenient operation.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)

SR185

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1800	
Max. drilling depth	m	59/47	①
Rotary drive			
Rated output torque	kN·m	190	
Rotation speed	rpm	5~34	
Crowd system			
Crowd force	kN	180	
Line pull	kN	180	
Stroke	mm	4200	
Main winch			
Lifting capacity	kN	185	
Wire rope diameter	mm	28	
Max. line speed	m/min	75	
Auxiliary winch			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	75	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6HK1 ISUZU	
Engine power	kW/rpm	212/2000	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	7.79	
Chassis length	mm	6380	
Extension width	mm	4150	
Track shoe width	mm	700	
Swing radius	mm	3805	
Overall machine			
Overall height	mm	21040	
Operating weight	t	63	
Transport width	mm	3210	
Transport height	mm	3560	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ406×4×13	8200	47	Standard
Friction kelly	Φ406×5×13	8100	59	

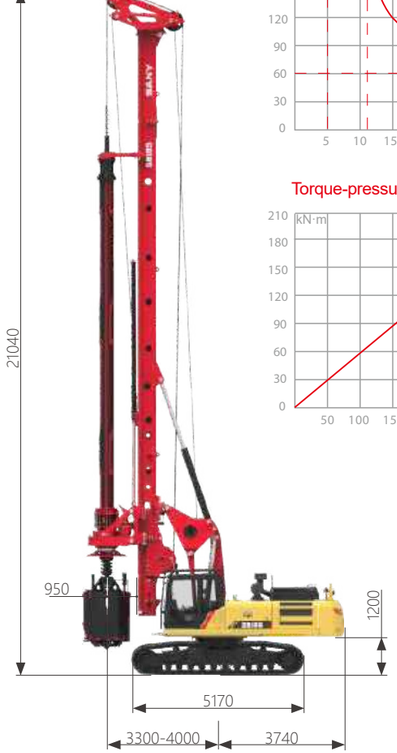
Efficient and flexible: Widely used in small dia. & deep borehole construction in civil engineering, high main hoist lifting up and down speed, high verticality of finished borehole, high working efficiency in civil construction.

Special chassis: Telescopic large widening chassis designed for rotary drilling rig, roller type large diameter slewing bearing to guarantee the high stability in deep borehole construction.

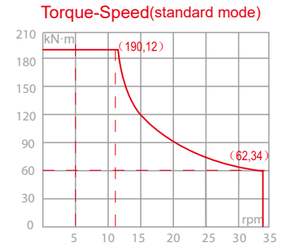
Economical and energy-saving: Imported large-displacement EFI engine with strong power, adopts power optimization control technology, adjusts power distribution in real time, fast response speed, higher fuel efficiency and more energy-saving.

High reliability: The mast adopts box structure with strong resistance to torsion and fatigue; sixth generation kelly bar adopting upgraded material and strengthened block ring, the overall strength increased by 25% with high drilling ability in strongly weathered rock layer.

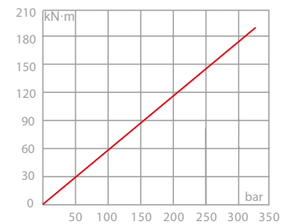
Intelligent upgrade: 10-inch HD touch screen, fast response and more convenient operation.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



SR215

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1800	
Max. drilling depth	m	64/51	①
Rotary drive			
Rated output torque	kN·m	220	
Rotation speed	rpm	5~30	
Crowd system			
Crowd force	kN	180	
Line pull	kN	190	
Stroke	mm	4200	
Main winch			
Lifting capacity	kN	220	
Wire rope diameter	mm	28	
Max. line speed	m/min	75	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6HK1 ISUZU	
Engine power	kW/rpm	212/2000	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	7.79	
Chassis length	mm	6380	
Extension width	mm	4150	
Track shoe width	mm	700	
Swing radius	mm	3805	
Overall machine			
Overall height	mm	21040	
Operating weight	t	65	
Transport width	mm	3210	
Transport height	mm	3560	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ419×4×13	8600	47	
	Φ419×4×14	9200	51	
Friction kelly	Φ419×5×14	8900	64	Standard

Efficient and flexible: Widely used in small dia. & deep borehole construction in civil engineering, high main hoist lifting up and down speed, high verticality of finished borehole, high working efficiency in civil construction.

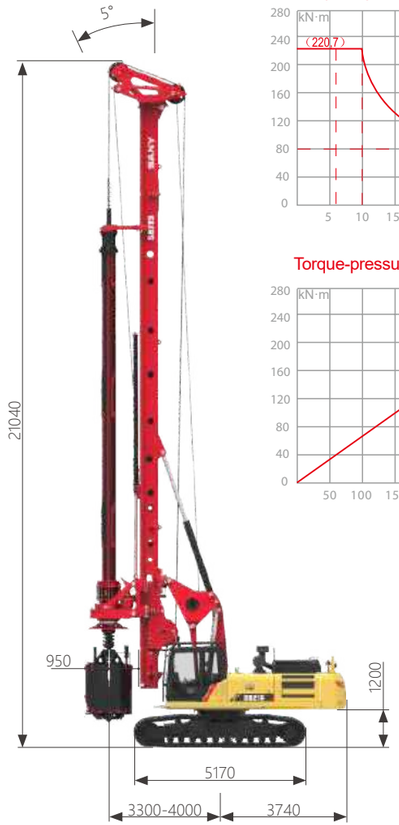
Special chassis: Telescopic large widening chassis designed for rotary drilling rig, roller type large diameter slewing bearing to guarantee the high stability in deep borehole construction.

Economical and energy-saving: Imported large-displacement EFI engine with strong power, adopts power optimization control technology, adjusts power distribution in real time, fast response speed, higher fuel efficiency and more energy-saving.

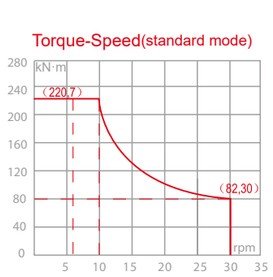
High reliability: The mast adopts box structure with strong resistance to torsion and fatigue; designed service life more than 20000 hrs.

Drilling upgrade: Adopting 419 sixth generation kelly bar with upgraded material and strengthened block ring, the overall strength increased by 25% with high drilling ability in strongly weathered rock layer.

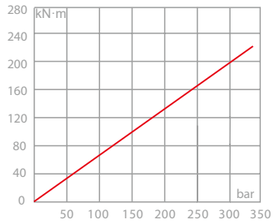
Intelligent upgrade: 10-inch HD touch screen, fast response and more convenient operation.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



SR235

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2000	
Max. drilling depth	m	68/54	①
Rotary drive			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~32	
Crowd system			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	5000	
Main winch			
Lifting capacity	kN	235	
Wire rope diameter	mm	32	
Max. line speed	m/min	70	
Auxiliary winch			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6UZ1 ISUZU	ISUZU
Engine power	kW/rpm	257/2000	
Emission regulation	/	COMⅢ	
Engine displacement	L	9.84	
Chassis length	mm	7265	
Extension width	mm	4500	
Track shoe width	mm	800	
Swing radius	mm	4360	
Overall machine			
Overall height	mm	22870	
Operating weight	t	81	
Transport width	mm	3540	
Transport height	mm	3660	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ445×3×15	10300	40	
	Φ445×4×14	10300	50	
	Φ445×4×15	11000	54	Standard
Friction kelly	Φ445×5×14	10200	63	
	Φ445×5×15	10900	68	

Efficient construction: EP control is upgraded again, the drilling capacity of rotary drive is increased by 15%, the spin-off speed is increased to 32rpm, and the earth unloading capacity is doubled; The hoisting speed of main winch is accelerated, the hoisting force is increased by 17%, so as to cope with extreme engineering.

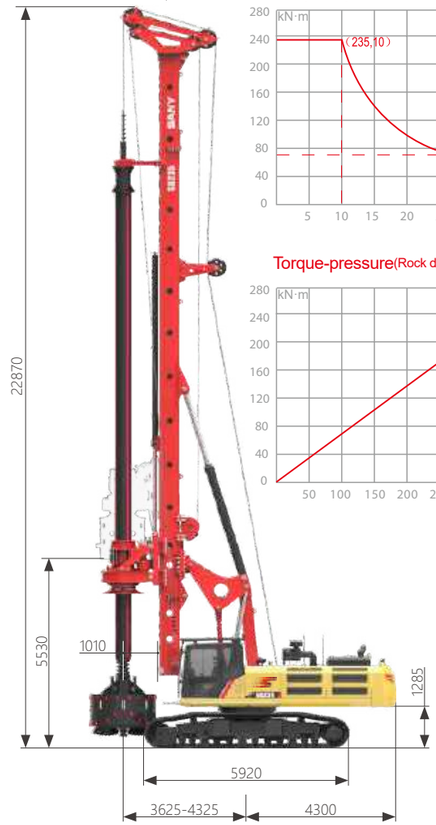
Strong power: imported large displacement EFI engine, equipped with high-power main pump, adopting power optimization control technology and real-time power distribution, the machine has fast response speed, high fuel efficiency, and a comprehensive energy saving of 10% - 15%.

Step drum: single layer winding of wire rope on inter-locking kelly bar to meet 54 m drilling depth; The pre tension technology of wire rope makes the wire rope on the main winch always maintain certain tension, avoiding disordering and twisting, and improves the service life by 30%.

High reliability: Strong and durable mast, luffing and other high standard design can work 20000 hours without cracking. The reducer has large torque, high configuration, high efficiency, wide working range and can work faster and safer.

Intelligent upgrade: The machine has weather warning function, and can provide 24-hour bad weather emergency warning. It is also equipped with cluster management system, which provides equipment, engineering, human resources and report integrated management. The newly added function of pressure table is a Sany patented technology, which can accurately display the locking and unlocking process, reduce wear and eliminate kelly bar accidents.

Good convenience: the rotary drive key bar is set on the top, which is convenient for observation and replacement; The wire rope of the main winch is fixed with wedges, which is convenient for assembly and disassembly. Special lubrication point is led out by lubricating rubber tube, which is easy to grease.



Torque-Speed(standard mode)

Torque-pressure(Rock drilling mode)

SR265

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2200	
Max. drilling depth	m	73/58	①
Rotary drive			
Rated output torque	kN·m	265	
Rotation speed	rpm	5~25	
Crowd system			
Crowd force	kN	230	
Line pull	kN	275	
Stroke	mm	5000	
Main winch			
Lifting capacity	kN	275	
Wire rope diameter	mm	32	
Max. line speed	m/min	80	
Auxiliary winch			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6UZ1 ISUZU	
Engine power	kW/rpm	257/2000	
Emission regulation	/	COM Ⅲ	
Engine displacement	L	9.84	
Chassis length	mm	7265	
Extension width	mm	4500	
Track shoe width	mm	800	
Swing radius	mm	4360	
Overall machine			
Overall height	mm	23870	
Operating weight	t	85	
Transport width	mm	3540	
Transport height	mm	3685	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ445×3×15	10300	40	
	Φ445×4×15	11300	54	
	Φ445×4×16	12000	58	Standard
Friction kelly	Φ445×5×15	10900	68	
	Φ445×5×16	11700	73	

Efficient construction: With 2.2-meter large-diameter construction capability, working efficiency is much higher than other similar models by increasing main winch speed by 12%; adopting the sixth-generation new material 445 Kelly bar, integrated locking device, whole strength increased by 25%, suitable for drilling in multiple strata.

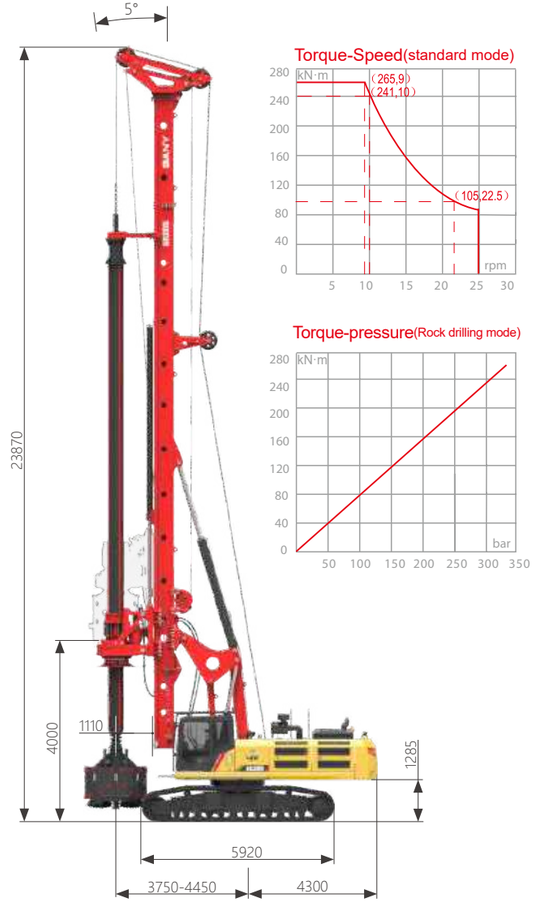
Strong power: Imported large-displacement EFI engine, equipped with high-power main pump, using power optimization control technology, real-time power distribution, fast response speed, high fuel efficiency, saving energy by 10%~15%.

Step drum: Single layer wire rope winding for interlocking Kelly bar; free of mutual extrusion and wear to increase service life by 35%.

High reliability: High standard design for mast and luffing boom to make it more strong and durable, no cracking in 20,000 hours operation test. High configuration reducer with large torque reservation and wide safe high-efficiency working scope.

Intelligent upgrade: HD touch screen, 3ms refresh frequency, smooth animation display.

Convenient maintenance: The rotary head inside driving key outside connected by bolts for easy observation and replacement; the main winch wire rope end is fixed by wedge easy to disassemble and assemble. The special lubrication point connected with outlet hose to facilitate butter injection.



SR305R

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2500	
Max. drilling depth	m	100/65	①
Rotary drive			
Rated output torque	kN·m	360	
Rotation speed	rpm	8~29	
Crowd system			
Crowd force	kN	275	
Line pull	kN	335	
Stroke	mm	6000	
Main winch			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	72	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±4	
Main Chassis			
Base engine	/	6WG1	ISUZU
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMⅢ/R96	
Engine displacement	L	15.68	
Chassis length	mm	7590	
Extension width	mm	4760	
Track shoe width	mm	800	
Swing radius	mm	4530	
Overall machine			
Overall height	mm	26395	
Operating weight	t	105	
Transport width	mm	3490	
Transport height	mm	3690	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ508×3×17	13600	46	
	Φ508×4×17	13700	61	
	Φ508×4×18	14400	65	Standard
Friction kelly	Φ508×6×17	15800	94	
	Φ508×6×18	16600	100	

Efficient Construction: Both soil and rock modes are extraordinary in industrial and civil construction, and the construction capacity is large; the new sixth-generation kelly bars has integral compression platform, upgraded materials, strengthening rings, etc.; the capacity of rotary drive is upgraded, which performance is increased by 15% in drilling in hard soil and rock layer .

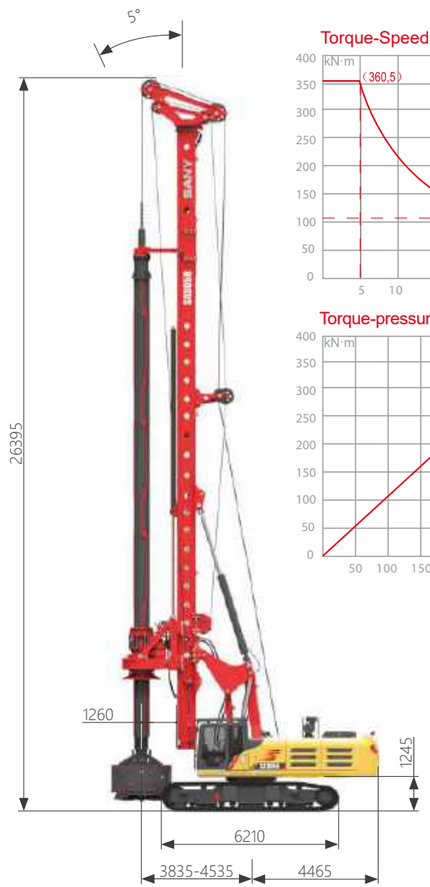
Low Fuel Consumption: Power optimisation control technology, real-time power distribution, smooth response and fast speed of compound actions are applied.

Step drum: The steel rope of inter-locked kelly bar is single-layer to meet the maximum drilling depth of 65 meters; the steel wire rope has no squeeze, no abrasion, and its life is increased by 35%.

High Reliability: The anti-vibration technology is adopted for piling in the rock, which is anti-fatigue, long life, and does not crack for 20,000 hours. The motor and reducer have high configuration and large reserve coefficient to meet the demand of severe working conditions.

Intelligent Upgrade: High-definition touch screen, 3 millisecond refresh rate, smooth animation display; EVI, the exclusive APP, on mobile phone can remote monitor the equipment location, efficiency, fuel consumption, etc.; after-sell service engineer and additional six services can order on APP, reducing the frequency of manual operations.

Convenient Maintenance: The key bar of rotary drive is placed on the top for easy observation and replacement; the oil drain pipeline of the reducer is led out for easy operation; the double door design makes a large maintenance space; the standard centralised lubrication system saves manpower and automatically lubricates.



Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2500/2000	①
Max. drilling depth	m	100/65	②
Rotary drive			
Rated output torque	kN·m	335	
Rotation speed	rpm	5~27	
Crowd system			
Crowd force	kN	275	
Line pull	kN	335	
Stroke	mm	6000	
Main winch			
Lifting capacity	kN	350	
Wire rope diameter	mm	36	
Max. line speed	m/min	72	
Auxiliary winch			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±4	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMⅢ/R96	
Engine displacement	L	15.68	
Chassis length	mm	7598	
Extension width	mm	4760	
Track shoe width	mm	800	
Swing radius	mm	4530	
Overall machine			
Overall height	mm	26395	
Operating weight	t	110	
Transport width	mm	3490	
Transport height	mm	3690	

①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ508×4×16	13100	57	
	Φ508×4×17	13700	61	Standard
	Φ508×4×18	14600	65	
Friction kelly	Φ508×6×17	15900	94	
	Φ508×6×18	16800	100	

High-efficiency in rock drilling: Equipped with the newly upgraded sixth-generation Kelly bar of integral locking device, upgraded materials, and reinforced rings, etc.,to make rock layers construction capacity improved by 10%.

Economy and energy saving: Adopt power optimization control technology to realize power distribution in real time, excellent compound action response time; high fuel efficiency and low comprehensive fuel consumption.

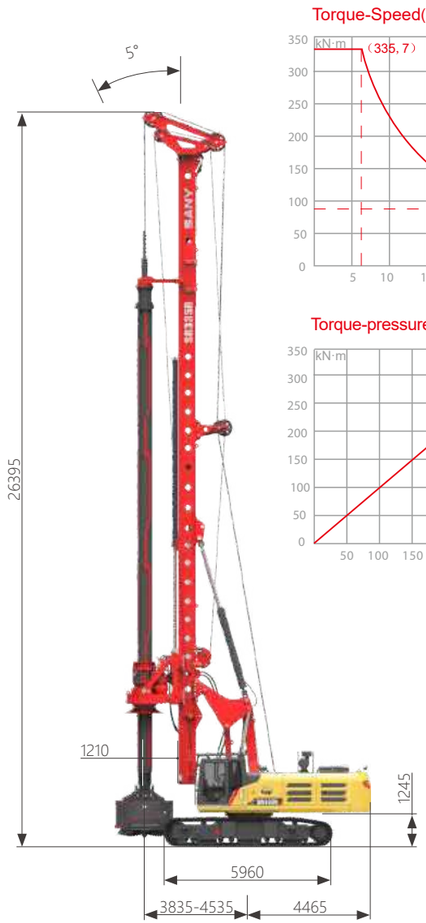
Step drum: Single layer wire rope winding for interlock Kelly bar; free of mutual extrusion and wear to increase service life by 35%.

High reliability: High standard design for mast and luffing boom to make it more strong and durable, no cracking in 20,000 hours operation test; high configuration reducer with large torque to guarantee high efficiency, safer operation and wider working scope.

Intelligent upgrade: HD touch screen, 3ms refresh frequency, smooth animation display.

Convenient maintenance: The external driving key of rotary drive facilitates maintenance and replacement; the main winch wire rope end is fixed by wedge easy to disassemble and assemble. The special lubrication point connected with outlet hose to facilitate butter injection.

Safe and secure:360° full-field monitoring, sound and light alarm.



Torque-Speed(standard mode)

Torque-pressure(Rock drilling mode)

NOTE

ASCEND THE STAIRS,SWEEP THE WORLD

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SANY
Moving Tomorrow, Today!

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2500	
Max. drilling depth	m	100/65	①
Rotary drive			
Rated output torque	kN·m	360	
Rotation speed	rpm	5~25	
Crowd system			
Crowd force	kN	290	
Line pull	kN	335	
Stroke	mm	6000	
Main winch			
Lifting capacity	kN	360	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±4	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	7850	
Extension width	mm	4900	
Track shoe width	mm	800	
Swing radius	mm	4705	
Overall machine			
Overall height	mm	26365	
Operating weight	t	120	
Transport width	mm	3530	
Transport height	mm	3745	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ530×3×15	14300	40	
	Φ530×4×17	16000	61	
	Φ530×4×18	16800	65	Standard
Friction kelly	Φ530×6×17	17400	94	
	Φ530×6×18	18300	100	

Large construction capacity: Expert in construction of 2.5m large dia. and 100m deep borehole without torque limit; main winch with large lifting force to ensure stable operation.

Strong rock drilling ability: The heaviest model of the same level ensures large crowding force; equipped with heavy duty, impact resistance reducer to realize stable torque output; excellent drilling ability in hard rock layers more than 60MPa.

High reliability: The structural parts adopt impact, fatigue resistance technology in rock drilling, single layer wire rope winding for interlocking Kelly bar; free of mutual extrusion and wear in wire rope layers to increase service life by 35%.

Economy and energy saving: Adopt power optimization control technology to realize power distribution in real time, excellent compound action response time. High fuel efficiency and low comprehensive fuel consumption, fuel consumption reduced by 10%~15%.

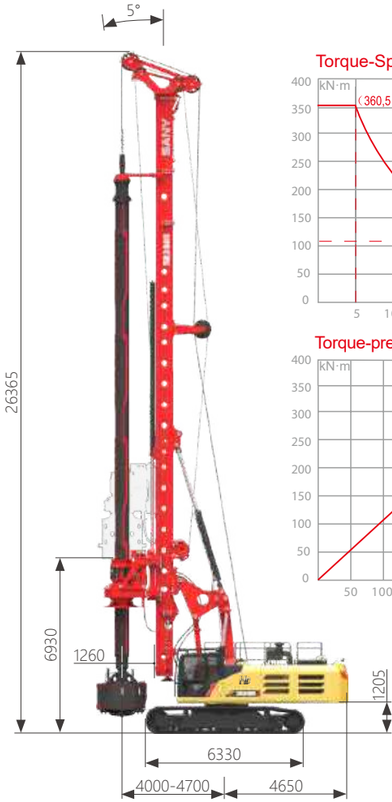
Intelligent upgrade:

1) HD touch screen, 3ms refresh frequency, smooth animation display.

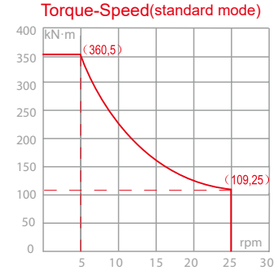
2) SANY patented locking device visualization technology can accurately display the process of locking and unlocking, reduce wear and Kelly bar accidents.

Convenient maintenance: The external driving key of rotary drive facilitates maintenance and replacement; the main winch wire rope end is fixed by wedge easy to disassemble and assemble. The special lubrication point connected with outlet hose to facilitate butter injection.

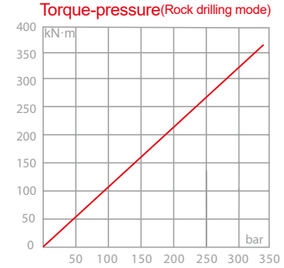
Safe and secure: 360° full-field monitoring, sound and light alarm.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



SR405R

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Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2800	
Max. drilling depth	m	106/85	①
Rotary drive			
Rated output torque	kN·m	405	
Rotation speed	rpm	5~25	
Crowd system			
Crowd force	kN	340	
Line pull	kN	380	
Stroke	mm	6000	
Main winch			
Lifting capacity	kN	400	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
Auxiliary winch			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	4/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	377/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	7800	
Extension width	mm	4900/3500	
Track shoe width	mm	800	
Swing radius	mm	4600	
Overall machine			
Overall height	mm	27700	
Operating weight	t	131	
Transport width	mm	3550	
Transport height	mm	3575	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ580×4×16	17500	57	
	Φ580×4×18	19500	65	Standard
	Φ580×4×19	20500	69	
	Φ580×5×18	21000	80	
	Φ580×5×19	22000	85	
Friction kelly	Φ580×6×18	20500	100	
	Φ580×6×19	21500	106	

Powerful: Adopt 6th generation Kelly bar, integrated locking device, upgraded material, reinforced ring, increase strength by 25%, achieve strong impact resistance, increase crowd force by 15% and rock drilling capacity by 25%; for 5-section interlocking bar, the hard rock drilling depth can be up to 85meters.

Economical and energy saving: By collecting big data, the average comprehensive fuel consumption is lower than that of similar models in the industry.

Flexible: Aadopt parallelogram structure, more flexible and free of site limitation.

Reliability: The whole machine design standard is high, the design life of structural parts > 20,000 hours.

Innovative technology:

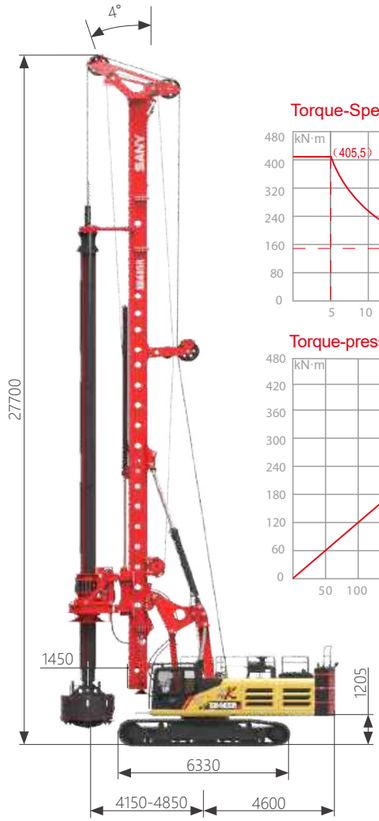
1) HD touch screen, 3ms refresh frequency, no visual delay.

2) The display function of the locking device can accurately display and guide the locking and unlocking of the Kelly bar locking device, which reduces the wear and eliminates the accident. SANY owns the patent of this technology.

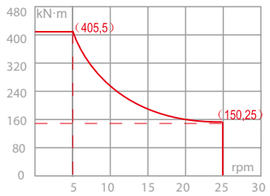
3) Roller bit auto drilling function: Set the speed of rotary drive to realize automatic drilling.

4) Wire rope pre-tensioning technology: The pre-tensioning force is always applied on the main rope to avoid random rope and twisting.

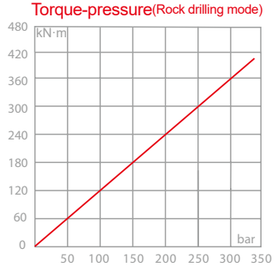
Convenient maintenance: Automatic centralized lubrication and combined counterweight, reduce dismantling time and improves transmission efficiency.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



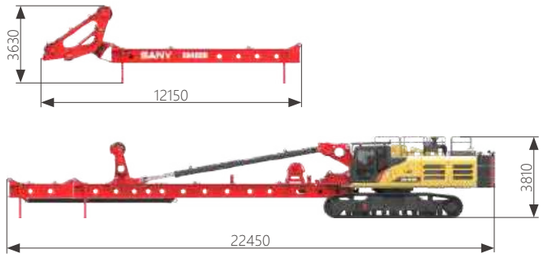
SR415R

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	3000	
Max. drilling depth	m	110/90	①
Rotary drive			
Rated output torque	kN·m	415	
Rotation speed	rpm	4~23	
Crowd system			
Crowd force	kN	360	
Line pull	kN	360	
Stroke	mm	6000	
Main winch			
Lifting capacity	kN	520	
Wire rope diameter	mm	40	
Max. line speed	m/min	63	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	90/15	
Lateral	°	±3	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	377/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	8040	
Extension width	mm	4900	
Track shoe width	mm	800	
Swing radius	mm	4700	
Overall machine			
Overall height	mm	29700	
Operating weight	t	145	
Transport width	mm	3600	
Transport height	mm	3805	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ580×4×19	20200	68	
	Φ580×4×20	20100	72	Standard
	Φ580×5×20	23100	90	
Friction kelly	Φ580×6×19	21900	104	
	Φ580×6×20	23000	110	



Heavy load construction: The classic big triangle structure drilling machine with well-designed center of gravity, high overall strength, meet the requirements of 3 meters diameter and 112 meters depth simultaneously.

Strong drilling ability: The new sixth-generation 580 Kelly bar, integrated locking device, upgraded material and strengthening ring, the strength is increased by 25%. Crowd force, torque, lifting force and other core capabilities perfectly matched to realize efficient drilling of hard rock, deep hole and large pile.

Economy and energy saving: Adopt power optimization control technology to realize power distribution in real time, excellent compound action response time; high fuel efficiency and low comprehensive fuel consumption, fuel consumption reduced by 10%~15%.

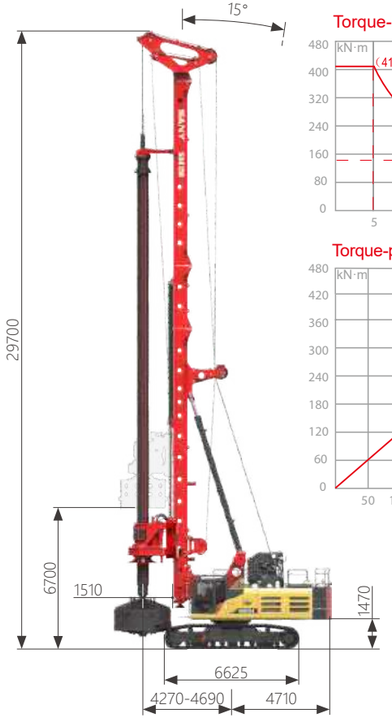
High reliability: Large professional chassis, thick steel plate welding, large width of crawlers, stable and reliable; professional structure parts for rock drilling, anti-vibration, anti-damage, anti-crack; single-layer large diameter drum, no extrusion between the rope, no wear and tear, longer service life.

Intelligent upgrade:

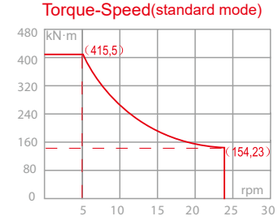
1) High-definition touch screen, 3 milliseconds refresh frequency, smooth animation display.

2) With the patented technology of locking device visualization, locking and unlocking process can be accurately displayed; reduce wear and eliminate Kelly bar accidents. SANY owns the patent of this technology.

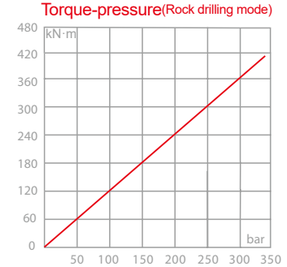
Easy maintenance and service: Standard automatic centralized lubrication system, fixed-point and quantitative maintenance, saving labor and reducing cost. Cylinder pressure, pressure more stable, easy to operate. Combined counterweight facilitates disassembly and transportation.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



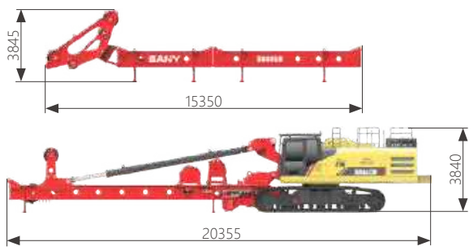
SR445R

SANY®

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	3000	
Max. drilling depth	m	116/95	①
Rotary drive			
Rated output torque	kN·m	445	
Rotation speed	rpm	4~22	
Crowd system			
Crowd force	kN	400	
Line pull	kN	400	
Stroke	mm	10000/21000	
Main winch			
Lifting capacity	kN	560	
Wire rope diameter	mm	40	
Max. line speed	m/min	60	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	90/15	
Lateral	°	±3	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	377/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	8040	
Extension width	mm	4900	
Track shoe width	mm	800	
Swing radius	mm	4800	
Overall machine			
Overall height	mm	30730	
Operating weight	t	162	
Transport width	mm	3600	
Transport height	mm	3810	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ580×4×20	21100	72	
	Φ580×4×21	22100	76	Standard
	Φ580×5×21	25300	95	
Friction kelly	Φ580×6×20	23000	110	
	Φ580×6×21	23600	116	



Heavy load construction: The classic big triangle structure drill rig has a well-designed center of gravity and high overall strength. New sixth generation 580 Kelly bar, whole pressurized table, material, reinforcing ring upgrade. The drilling diameter is 3 meters, and the pile hole depth is 116 meters.

Full/half crowd stroke: 10 meters conventional and 21 meters ultra-long crowd stroke can be switched freely, which can be used for breezy hard rock drilling construction and long casing construction of loose geology such as beach, backfill and pebble.

Economy and energy saving: Adopt power optimization control technology to realize power distribution in real time, excellent compound action response time; high fuel efficiency and low comprehensive fuel consumption, fuel consumption reduced by 10%~15%.

High reliability: Large professional chassis, thick steel plate welding, large width of development, stable and reliable. Rock-type structure, anti-vibration, anti-damage, anti-crack. Pure single-layer large diameter drum, no extrusion between the rope, no wear and tear, longer service life.

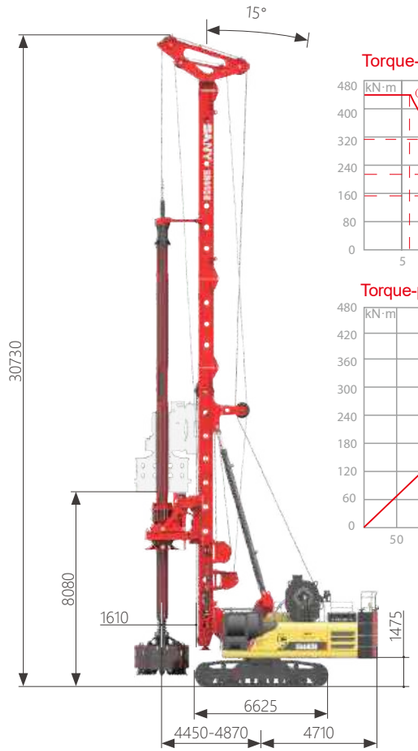
Intelligent upgrade:

1) HD touch screen, 3ms refresh frequency, no visual delay.

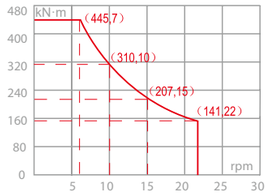
2) The display function of the locking device can accurately display and guide the locking and unlocking of the Kelly bar locking device, which reduces the wear and eliminates the accident. SANY owns the patent of this technology.

Good maintenance convenience: Standard automatic centralized lubrication system, fixed-point and quantitative maintenance, saving labor and reducing cost. Cylinder pressure, pressure more stable, easy to operate. Combined counterweight, more convenient for disassembly and transfer.

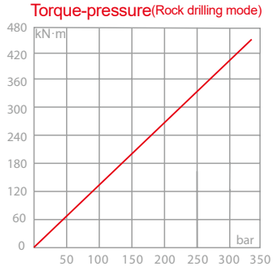
Safety: 360° full-field monitoring, sound-light alarm system, fault diagnosis system, full guardrail and other security guarantees.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



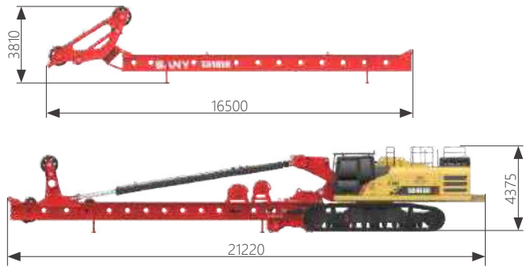
SR485R

SANY®

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	3200	
Max. drilling depth	m	120/100	①
Rotary drive			
Rated output torque	kN·m	485	
Rotation speed	rpm	5~18	
Crowd system			
Crowd force	kN	475	
Line pull	kN	475	
Stroke	mm	10000	
Main winch			
Lifting capacity	kN	600	
Wire rope diameter	mm	46	
Max. line speed	m/min	50	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	90/15	
Lateral	°	±3	
Main Chassis			
Base engine	/	VOLVOTAD1650	CAT C15
Engine power	kW/rpm	405/1800	403/1800
Emission regulation	/	COMⅢ	
Engine displacement	L	15.2	
Chassis length	mm	8610	
Extension width	mm	4900	
Track shoe width	mm	900	
Swing radius	mm	5350	
Overall machine			
Overall height	mm	32320	
Operating weight	t	180	
Transport width	mm	3600	
Transport height	mm	3645	

①: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ630×4×21	25600	76	
	Φ630×4×22	28800	80	Standard
	Φ630×5×22	27400	100	
Friction kelly	Φ630×6×21	27400	114	
	Φ630×6×22	28400	120	



Rock drilling for 100 meters: Five layers of the 6th generation interlocking bar can achieve the requirements of 3.2m of pile diameter and 100m of pile depth simultaneously; heavy load unlimited torsion, easy to meet the diameter of 2.5~3.2m and depth above 80~100m hard rock construction requirements.

Strong power: CAT high-power engine is perfectly matched with the main pump; provide continuous power output to meet the requirement of variable load of large pile diameter. Adopt priority control technology, compound movement is more fluent. Independent double oil radiator, automatic temperature control, efficient heat dissipation.

High structural reliability: The core components are imported well-known brands, the reducer and other reserve factors are large, the whole machine is compact, stable and reliable. Single layer large diameter spiral drum is used for main winch, and the service life of wire rope is extended by more than 30%.

Innovative Technology:

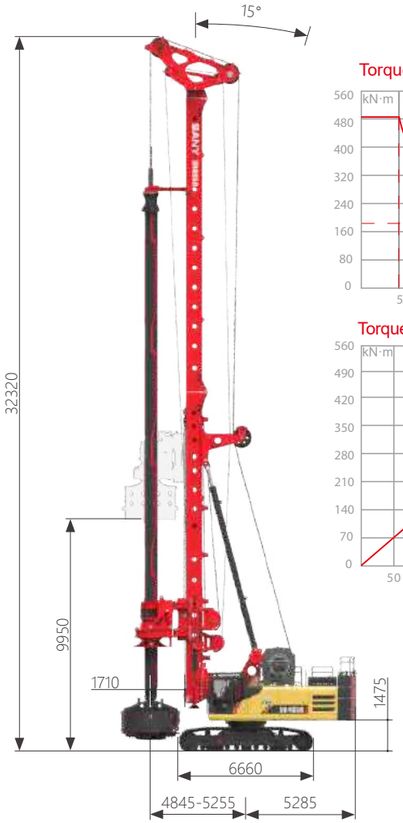
1) HD touch screen, 3ms refresh frequency, no visual delay.

2) The display function of the locking device can accurately display and guide the locking and unlocking operation of the Kelly bar locking device, which reduces the wear and eliminates the accident. SANY owns the patent of this technology.

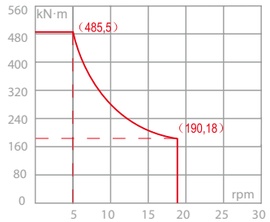
3) Roller bit auto drilling function: Set the speed of rotary drive to realize automatic drilling.

4) Wire rope pre-tensioning technology: The pre-tensioning force is always applied on the main rope to avoid random rope and twisting.

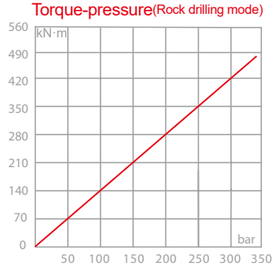
Convenient maintenance: Standard automatic centralized lubrication system, convenient maintenance; rotary drive and main winch use quick change joint; the mast cylinder can be operated by remote control, the door frame assembly guide can be automatically positioned; the combined counterweight can reduce the dismantling time and improve the transition efficiency.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



WTO

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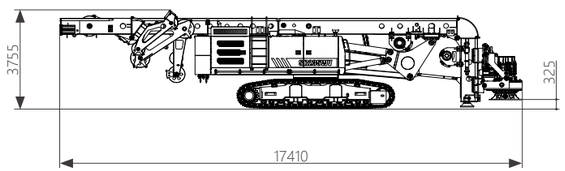
Moving Tomorrow, Today!

NOTE

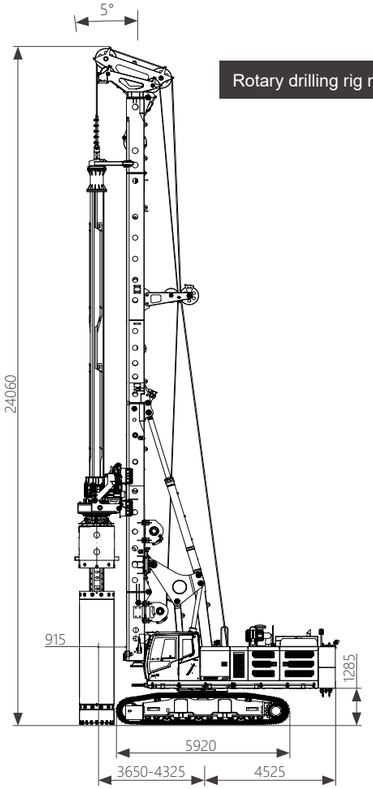
Main performances	Unit	Stage V	Com Ⅲ
Pile			
Max. drilling diameter①	mm	2000	
Max. drilling depth②	m	73/58	
Rotary drive			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~30	
Crowd system			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	15000	
Main winch			
Lifting capacity	kN	235	
Wire rope diameter	mm	32	
Max. line speed	m/min	70	
Auxiliary winch			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±3	
Main Chassis			
Engine model	/	TAD1181VE③	6UZ1④
Engine power	kW/rpm	265/2000	257/2000
Emission regulation	/	Stage V	COM Ⅲ
Engine displacement	L	10.84	9.84
Chassis length	mm	7490	7265
Extension width	mm	4500	
Track shoe width	mm	800	
Swing radius	mm	4600	4360
Overall machine			
Overall height	mm	24060	24050
Operating weight	t	83	81
Transport width	mm	3550	3540
Transport height	mm	3755	3750

①: uncased/cased
②: friction kelly depth/interlocking kelly depth
③: VOLVO
④: ISUZU

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ445×3×15	10300	40	
	Φ445×4×15	11000	54	Standard
	Φ445×4×16	11520	58	
Friction kelly	Φ445×5×15	10900	68	
	Φ445×5×16	11500	73	



High efficiency drilling: The preferred model in the field of soil and rock layer construction, smooth compound movement control, adjustable torque and rotation speed of rotary drive, suitable for different kinds of geological conditions and construction methods.
Strong power: Volvo TAD1181VE (Euro 5) fully satisfies EU emission regulations, offering long lasting, stable and reliable power output with low fuel consumption.
Full stroke crowd system: 15m extra-long stroke, featuring fast crowding and pulling function, suitable for long casing construction in beach, pebble, backfill formation.
Kelly visualization: Real-time display the location of the locking device while using the inter-lock Kelly bar, avoiding accidental damage.
Floating pretension function: The wire rope is always tensioned while working, extending the service life of it.
Smart screen: HD touch screen, 3ms refresh frequency, smooth animation display.
Centralized lubricating system: Grease in fixed quantity at fixed time, keep the machine in well-lubricated state.



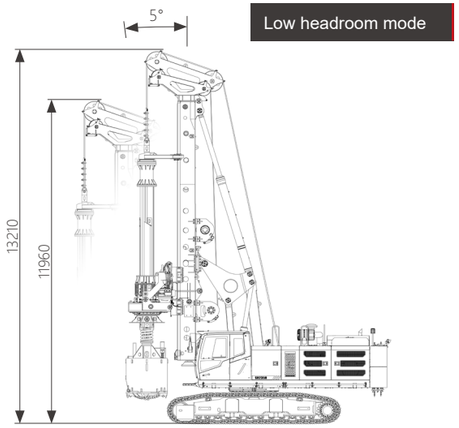
Rotary drilling rig mode

Low headroom	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2000	
Max. drilling depth	m	24	
Rotary drive			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~30	
Crowd system			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	4775	
Overall machine			
Overall height	mm	13210	①
Overall height	mm	11960	②
Operating weight	t	79	

Kelly bar		Weight(Kg)	Depth(m)	Option
Friction kelly	Φ445×5×6	4810	24	standard

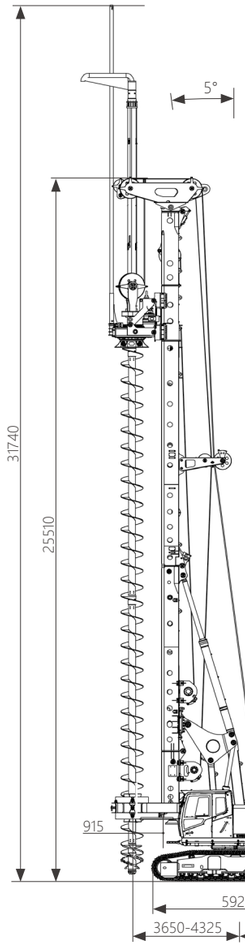
Note: ① the higher location of boom.
② the lower location of boom.
③ the other depth of kelly bar and diameter will be satisfied through custom-made.

Low headroom mode: Standard mode can quickly switch to low headroom mode.
CFA mode: Directly switch to CFA mode by changing a few parts, such as dedicated pulley yoke, balancing rope device, Auger cleaner etc.
Customized construction method: displacement pile device, deeply stirring by single shaft, CCFA were needed to be pre-order.



Low headroom mode

CFA mode	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1000	
Max. drilling depth	m	25.5	
Rotary drive			
Rotation speed	kN·m	235	
Rotation speed	rpm	5~30	
Crowd system			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	17000	
Main winch			
CFA Max.Lifting	kN	1100	
Wire rope diameter	mm	32	
Max. line speed	m/min	17.5	
Overall machine			
Overall height	mm	31740	with pipe
Operating weight	t	85	

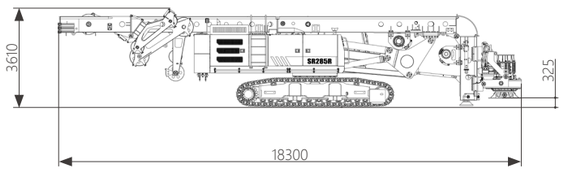


CFA mode

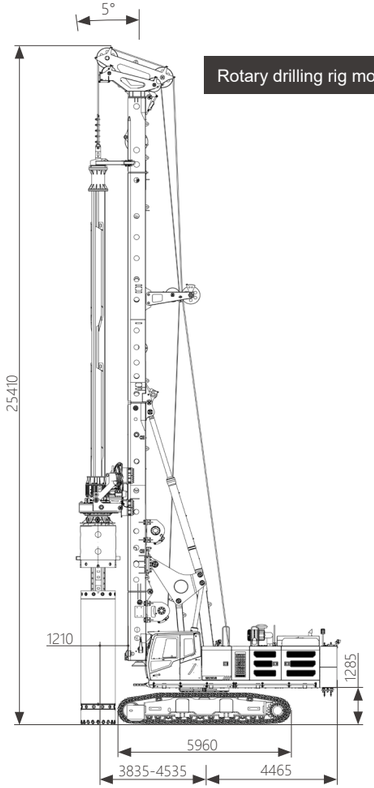
Main performances	Unit	Stage Ⅴ	Com Ⅲ
Pile			
Max. drilling diameter①	mm	2200/1900	
Max. drilling depth②	m	94/61	
Rotary drive			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~27	
Crowd system			
Crowd force	kN	260	
Line pull	kN	335	
Stroke	mm	17100	
Main winch			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	70	
Auxiliary winch			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	5/90	
Lateral	°	±4	
Main Chassis			
Engine model	/	TAD1383VE③	6WG1④
Engine power	kW/rpm	345/1800	300/1800
Emission regulation	/	Stage V	COM Ⅲ
Engine displacement	L	12.78	15.68
Chassis length	mm	7590	7475
Extension width	mm	4760	
Track shoe width	mm	800	
Swing radius	mm	4650	4530
Overall machine			
Overall height	mm	25410	
Operating weight	t	108	105
Transport width	mm	3475	
Transport height	mm	3610	

①: uncased/cased
②: friction kelly depth/interlocking kelly depth
③: VOLVO
④: ISUZU

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ508×3×17	13600	46	
	Φ508×4×16	13400	57	
	Φ508×4×17	14100	61	Standard
Friction kelly	Φ508×6×16	15000	88	
	Φ508×6×17	15800	94	



High efficiency drilling:The preferred model in the field of hard soil and rock layer construction, smooth compound movement control, adjustable torque and rotation speed of rotary drive, suitable for different kinds of geological conditions and construction methods.
Strong power: Volvo TAD1181VE (Euro 5) fully satisfies EU emission regulations, offering long lasting, stable and reliable power output with low fuel consumption.
Full stroke crowd system:17m extra-long stroke, featuring fast crowding and pulling function, suitable for long casing construction in beach, pebble, backfill formation.
Kelly visualization: Real-time display the location of the locking device while using the inter-lock Kelly bar, avoiding accidental damage.
Floating pretension function: The wire rope is always tensioned while working, extending the service life of it.
Smart screen:HD touch screen, 3ms refresh frequency, smooth animation display.
Centralized lubricating system：Grease in fixed quantity at fixed time, keep the machine in well-lubricated state.



Rotary drilling rig mode

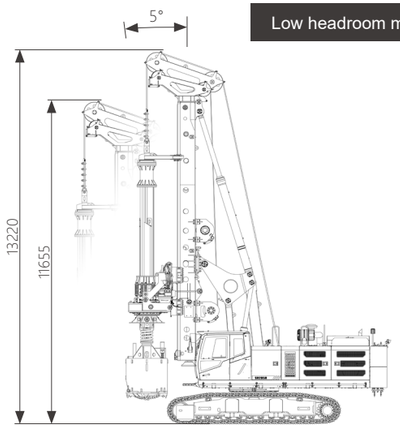
SR285R SANY

Low headroom	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2200	
Rotary drive			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~27	
Crowd system			
Crowd force	kN	260	
Line pull	kN	330	
Stroke	mm	4600	
Low headroom-12m			⑦
Overall height	mm	13280	⑤
Overall height	mm	11655	⑥
Operating weight	t	102	
Low headroom-15m			⑧
Overall height	mm	16270	
Overall height	mm	15065	
Operating weight	t	104	
Low headroom-18m			⑨
Overall height	mm	18780	
Overall height	mm	18050	
Operating weight	t	106	

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ508×4×9	7650	29	⑧
	Φ508×4×11	9760	39	⑨
	Φ508×5×5	7710	24	⑦
	Φ508×5×9	8600	38	⑧
	Φ508×5×11	10600	53	⑨

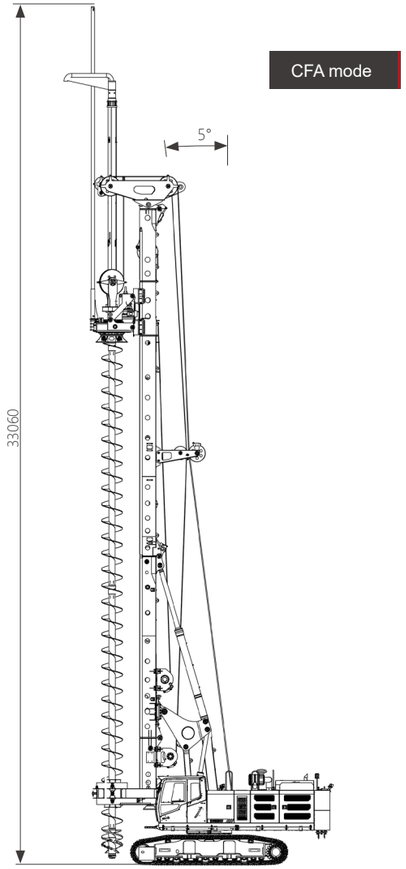
Note: ⑤ the higher location of boom.
⑥ the lower location of boom.

Low headroom mode: Standard mode can quickly switch to low headroom mode.
CFA mode: Directly switch to CFA mode by changing a few parts, such as dedicated pulley yoke, balancing rope device, Auger cleaner etc.
Customized construction method: displacement pile device, deeply stirring by single shaft, CCFA were needed to be pre-order.



Low headroom mode

CFA mode	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	1200	
Max. drilling depth	m	27	
Rotary drive			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~27	
Crowd system			
Crowd force	kN	260	
Line pull	kN	330	
Stroke	mm	19000	
Main winch			
CFA Max.Lifting	kN	1320	
Wire rope diameter	mm	36	
Max. line speed	m/min	17.5	
Overall machine			
Overall height	mm	33060	
Operating weight	t	108	



CFA mode

SR400R

SANY

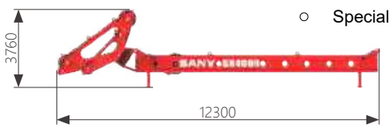
Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2500/2200	①
Max. drilling depth	m	106/85	②
Rotary drive			
Rated output torque	kN·m	400	
Rotation speed	rpm	5~22	
Crowd system			
Crowd force	kN	350	
Line pull	kN	380	
Stroke	mm	9000/18000	
Main winch			
Lifting capacity	kN	410	
Wire rope diameter	mm	36	
Max. line speed	m/min	70	
Auxiliary winch			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	90/15	
Lateral	°	±3	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	7800	
Extension width	mm	3500-4900	
Track shoe width	mm	800	
Swing radius	mm	4600	
Overall machine			
Overall height	mm	27105	
Operating weight	t	137	
Transport width	mm	3500	
Transport height	mm	3575	

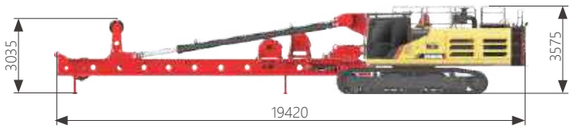
①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ530×4×18	17500	65	Standard
	Φ530×4×19	18500	69	○
	Φ530×5×18	19000	80	
	Φ530×5×19	20000	85	○
Friction kelly	Φ530×6×18	18500	100	
	Φ530×6×19	19500	106	○

○ Special extension mast





Efficient construction: Large displacement, high power main pump, system flow can be well distributed by priority control technology to achieve strong output of the actuator, and the compound action is excellent.

Economical and energy saving: By collecting big data, the average comprehensive fuel consumption is lower than that of similar models in the industry, saving fuel cost 40,000 to 80,000 RMB per year.

High reliability: The whole machine design standard is high, the design life of structural parts > 20,000 hours.

he sixth generation of Kelly bar: Integrated locking device, upgraded material, reinforced ring and other design, increase strength by 25%.

Full casing construction method: Has half and full pressure stroke; 9 meters half stroke suitable for multistage combined casing drilling construction and 18 meters full stroke targeted at the soft formation of single section ultra-long casing construction. It can be installed with crowd winch of 450kN pulling force.

Low headroom mode: It is used for the highly restricted construction site to quickly realize the switch between standard mode and low headroom mode, with the construction height of only 19 meters.

DTH hammer construction method: It can be equipped with various pneumatic DTH hammer, aiming at the super-hard stratum to realize efficient drilling and hole formation.

Innovative Technology:

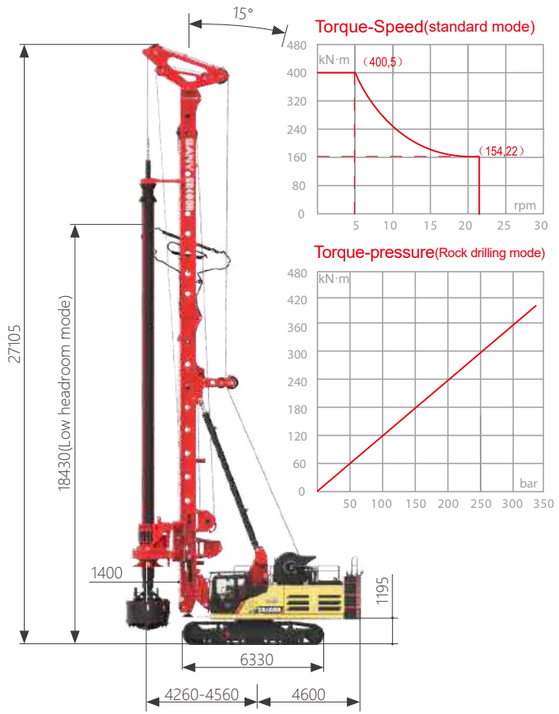
1) HD touch screen, 3ms refresh frequency, no visual delay.

2) The display function of the locking device can accurately display and guide the locking and unlocking of the Kelly bar locking device, which reduces the wear and eliminates the accident. SANY owns the patent of this technology.

3) Roller bit auto drilling function: Set the speed of rotary drive to realize automatic drilling.

4) Wire rope pre-tensioning technology: The pre-tensioning force is always applied on the main rope to avoid random rope and twisting.

Convenient maintenance: Automatic centralized lubrication and combined counterweight, reduce dismantling time and improves transfer efficiency.



Torque-Speed(standard mode)

Torque-pressure(Rock drilling mode)

SR405R

SANY

Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	2500/2200	①
Max. drilling depth	m	106/85	②
Rotary drive			
Rated output torque	kN·m	405	
Rotation speed	rpm	5~25	
Crowd system			
Crowd force	kN	350	
Line pull	kN	400	
Stroke	mm	13000	
Main winch			
Lifting capacity	kN	400	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
Auxiliary winch			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	4/90	
Lateral	°	±3	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	377/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Chassis length	mm	7800	
Extension width	mm	3500-4900	
Track shoe width	mm	800	
Swing radius	mm	4600	
Overall machine			
Overall height	mm	27700	
Operating weight	t	131	
Transport width	mm	3500	
Transport height	mm	3660	

①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ580×4×16	17500	57	
	Φ580×4×18	19500	65	Standard
	Φ580×4×19	20200	69	
	Φ580×5×18	21000	80	
	Φ580×5×19	22000	85	
Friction kelly	Φ580×6×18	20500	100	
	Φ580×6×19	21400	106	

Strong rock penetration: the torque is 405kN · m to meet the needs of casing construction; The crowd pressure is 350kN, which is the largest in the same class. The new sixth generation of 580 kelly bar is designed with integral pressure table, material upgrading and reinforcing ring, so as to improve the strength by 25%. The machine has stronger impact resistance, 15% increase in pressure and 25% increase in rock entry capacity; The drilling depth of five-layer kelly bar in hard rock can reach 87 meters.

Strong power:the lifting force of main winch reaches 400kN, and the power output is stable and powerful as a result of the large displacement main pump.

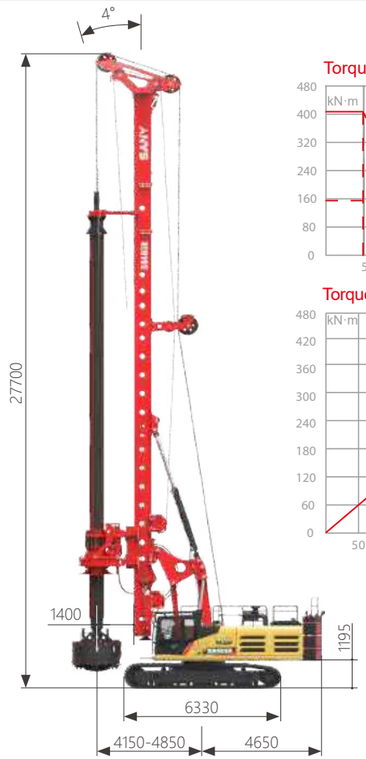
Strong casing construction:adopting 13m winch pressurization, the stroke is super long. It can also be matched with torque increaser and automatic casing driver.

Flexible: Adopting parallelogram structure, the transition is flexible, so as to meet the installation requirements of limited site.

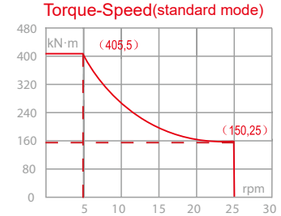
High reliability: the design standard of the whole machine is high, and the design life of structural parts is more than 20000 hours.

Intelligent upgrade:The machine is equipped with high definition touch screen. with a refresh rate of 3ms, there is no visual delay. The function of pressure table is a Sany patented technology, which can accurately display the locking and unlocking process, reduce wear and eliminate kelly bar accidents. The pre tension technology of wire rope makes the wire rope on the main winch always maintain certain tension, avoiding disordering and twisting. EVI mobile phone exclusive app enables remote monitoring of the equipment. The machine has weather warning function, and can provide 24-hour bad weather emergency warning. It is also equipped with cluster management system, which provides equipment, engineering, human resources and report integrated management.

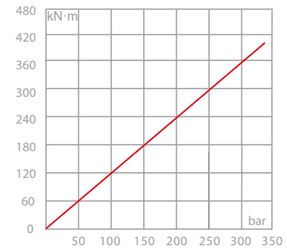
Good convenience: standard automatic centralized lubrication, large maintenance space in engine room, convenient replacement of filter, stackable counterweight, etc.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



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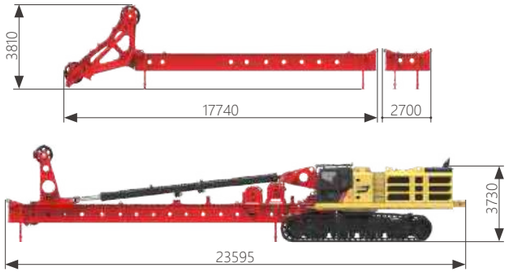
Moving Tomorrow, Today!

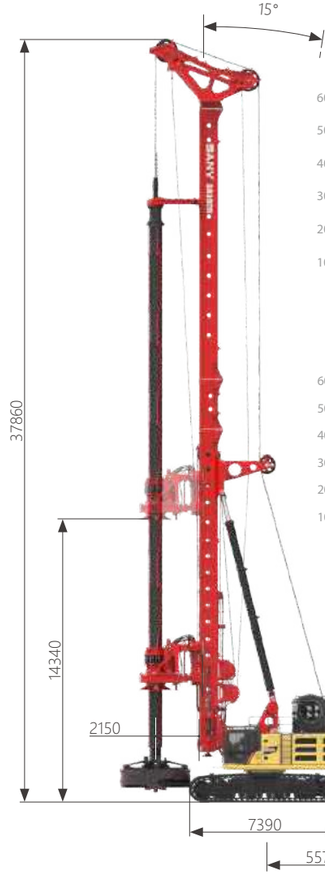
Main performances	Unit	Parameter	Remark
Pile			
Max. drilling diameter	mm	3500/4000	①
Max. drilling depth	m	150/125/100	②
Rotary drive			
Rated output torque	kN·m	580	
Rotation speed	rpm	6~38	
Crowd system			
Crowd force	kN	460	
Line pull	kN	550	
Stroke	mm	11500	
Main winch			
Lifting capacity	kN	800	
Wire rope diameter	mm	50	
Max. line speed	m/min	54	
Auxiliary winch			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	70	
Mast inclination			
Forward/backward	°	90/15	
Lateral	°	±3	
Main Chassis			
Base engine	/	CAT C18	
Engine power	kW/rpm	470/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	18.2	
Chassis length	mm	9260	
Extension width	mm	5500	
Track shoe width	mm	960	
Swing radius	mm	5640	
Overall machine			
Overall height	mm	37860	
Operating weight	t	230	
Transport width	mm	3900	
Transport height	mm	3640	

①: Standard/Optional
②: Friction /Inter-locking (5 sections)/Inter-locking(4 sections)kelly

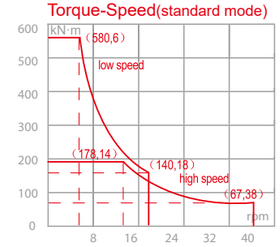
Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ630×4×24	28600	88	Standard
Friction kelly	Φ630×6×26	33400	150	



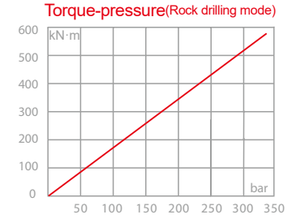
Construction capacity: An expert in the construction of hard rock formations such as high-speed railway, subway support piles and cross-sea bridges; the maximum drilling depth can be up to 150 meters, the maximum drilling diameter can be up to 3.5 meters, and even 4.0 meters. It is an intelligent and multifunctional equipment which can be equipped with several working devices.
Strong Power: CAT high-power engine is perfectly matched with the main pump; provide continuous power output to meet the requirement of variable load of large pile diameter. Intelligent independent fan can adjust the temperature automatically, saving energy and reducing noise.
High reliability: The reinforced design of platform, mast and rotary drive which can bear more alternating load and cope with complex working conditions; four motor main winch, lifting force up to 80t; wire rope single-layer winding, longer service life.
Advanced technologies: Adopt advanced intelligent technology: double cooling mode of rotary drive, also equipped with spin-off mode; roller bit gear, crowd self-adaption and other functions. Automatic freefall and pre-tension functions improve operational efficiency and convenience.
Smart control: 10 inch HD touch screen, fast response time, more convenient operation.
Convenient maintenance: Hydraulic auxiliary door frame dismantling, centralized maintenance, centralized lubrication system, modular design, and protection against accidental dismantling.
High safety configuration: The equipment contains a variety of patented safety designs, such as blind area monitoring, widened walking platform, bilateral handrail, full guardrail, 360° full field of vision monitoring, fault depth diagnosis, headlights turn-off delay, etc.



Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)

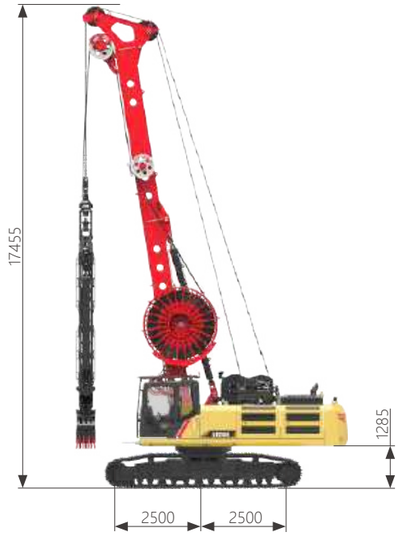


SH500

SANY

Main performances	Unit	Parameter	Remark
Slot			
Groove depth	m	80	
Groove width	mm	600-1200	
Working equipment			
Weight	t	15-25	
Max.closing force	t	165	
Open and close bucket time	s	7/7	
Main winch			
Lifting capacity	kN	2×270	
Wire rope diameter	mm	32	
Max.line speed	m/min	80	
Mast angle			
Max.working angle	°	82	
Main Chassis			
Base engine	/	6UZ1 ISUZU	
Engine power	kW/rpm	257/2000	
Emission regulation	/	COMⅢ	
Engine displacement	L	9.84	
Pump flow	L/min	2×280+144	
Chassis length	mm	7265	
Extension width	mm	4500	
Track shoe width	mm	800	
Swing radius	mm	4360	
Overall machine			
Overall height	mm	17435	
Operating weight	t	130	
Transport width	mm	3400	
Transport height	mm	3625	

Powerful: The working device has large weight and impact power, and can be used in strongly weathered rock strata within 10MPa.
Fast: The opening and closing time of the bucket is only 7 seconds, and the efficiency of soil grabbing, slag collecting and unloading is higher. Winch adopts synchronous confluence technology with the fastest speed in the same class.
High verticality: Adopt the dynamic real-time detection technology of gyroscope to adjust the deviation of the gantry push plate in real time, and the perpendicularity of the groove can reach 1.5‰.
Stable: Specialized large gauge chassis, reduce rapid impact and shake, improve construction safety.
Deep: The construction depth is 80 meters, covering more than 90% of underground support projects.
Economical: The main winch adopts single-layer large drum, achieving longer service life of wire rope.
Convenient: It is equipped with electric centralized lubrication system and hydraulic quick change joint to improve the convenience of disassembly, installation and maintenance.
Intelligent: Specialized operating system for grabber, real-time display of drilling situation.

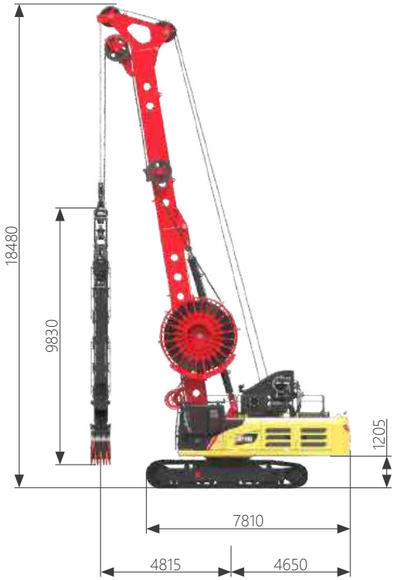


SH700

SANY

Main performances	Unit	Parameter	Remark
Slot			
Groove depth	m	80	
Groove width	mm	800-1500	
Working equipment			
Weight	t	15-35	
Max.closing force	t	220	
Open and close bucket time	s	9/9	
Main winch			
Lifting capacity	kN	2×355	
Wire rope diameter	mm	36	
Max.line speed	m/min	75	
Mast angle			
Max.working angle	°	81	
Main Chassis			
Base engine	/	6WG1 ISUZU	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMⅢ	
Engine displacement	L	15.68	
Pump flow	L/min	2×380+144	
Chassis length	mm	7850	
Extension width	mm	4860	
Track shoe width	mm	800	
Swing radius	mm	4705	
Overall machine			
Overall height	mm	18480	
Operating weight	t	130	
Transport width	mm	3400	
Transport height	mm	3500	

Powerful: The working device has large weight and maximum impact power, and can be constructed in strongly weathered rock strata within 10MPa.
Fast: The opening and closing time of the bucket is only 9 seconds, and the efficiency of soil catching, slag collecting and unloading is higher. Winch adopts synchronous confluence technology with the fastest speed.
Straight: Adopt the dynamic real-time detection technology of gyroscope to adjust the deviation of the gantry push plate in real time, and the perpendicularity of the groove can reach 1‰.
Stable: professional large gauge chassis, reduce rapid impact and shake, improve construction safety.
Deep: the construction depth is 80 meters, covering more than 90% of underground support projects, and the quality of grooves deeper than 60 meters is higher.
Economical: The main winch adopts single-layer large drum, the wire rope has longer service life.
Convenient: It is equipped with electric centralized lubrication system and hydraulic quick change joint to improve the convenience of disassembly, installation and maintenance.
Intelligent: Professional operating system, real-time display of drilling situation.



C10 Series

SR65
Max. Drilling Depth: 27m
Max. Drilling Dia. : 1,100mm

SR125
Max. Drilling Depth: 45m
Max. Drilling Dia. : 1,300mm

SR155
Max. Drilling Depth: 56m
Max. Drilling Dia. : 1,500mm

SR165
Max. Drilling Depth: 56m
Max. Drilling Dia. : 1,500mm

SR185
Max. Drilling Depth: 59m
Max. Drilling Dia. : 1,800mm

W10 Series

SR400R
Max. Drilling Depth: 106m
Max. Drilling Dia. : 2,500mm

SR405R
Max. Drilling Depth: 106m
Max. Drilling Dia. : 2,500mm

SR235
Max. Drilling Depth: 73m
Max. Drilling Dia. : 2,000mm

SR285R
Max. Drilling Depth: 94m
Max. Drilling Dia. : 2,200mm

H10 Series

SR360R
Max. Drilling Depth: 100m
Max. Drilling Dia. : 2,500mm

SR405RHK
Max. Drilling Depth: 106m
Max. Drilling Dia. : 2,800mm

SR415R
Max. Drilling Depth: 110m
Max. Drilling Dia. : 3,000mm

SR445R
Max. Drilling Depth: 116m
Max. Drilling Dia. : 3,000mm

SR485R
Max. Drilling Depth: 120m
Max. Drilling Dia. : 3,200mm

SR215
Max. Drilling Depth: 64m
Max. Drilling Dia. : 1,800mm

SR235-S
Max. Drilling Depth: 68m
Max. Drilling Dia. : 2,000mm

SR265
Max. Drilling Depth: 73m
Max. Drilling Dia. : 2,200mm

SR305R
Max. Drilling Depth: 100m
Max. Drilling Dia. : 2,500mm

SR335R
Max. Drilling Depth: 100m
Max. Drilling Dia. : 2,500mm

Hydraulic Grab

SH500
Max. Drilling Depth: 80m
Max. Drilling Dia. : 1,200mm

SH700
Max. Drilling Depth: 80m
Max. Drilling Dia. : 1,500mm

H11 Series

SR580R
Max. Drilling Depth: 150m
Max. Drilling Dia. : 4,000mm

Advantages of Sany Kelly bar

1. Time verified

Verified by long time using, economic and high efficient, Sany Kelly bar has been widely used in the civil foundation construction.

2. More reliable

With the most advanced welding robots, CNC automatic cutting machines and other advanced equipments, high components precision and welding quality guarantee high reliability.

3. Longer service life

Specific debugging filed is established to simulate real Kelly bar working conditions to analyze and improve key parts, like the drive key service life is significantly increased with Sany self developed high strength anti- wearing steel.

4. Optimized structure

Static analysis, dynamic analysis and fatigue analysis are taken with the most advanced analysis software like ANSYS and ADAMS during the designing process, which optimize Kelly bar with lighter weight and better structure without any missing of the design requirements. Dozens of patents have been applied by Sany in this field which keeps Sany's leading position in China.

Drilling tools

SANY can supply with all kinds of standard drilling tools, including DBB- II, DBB- III,CB and so on. For special geological conditions, SANY can also provide special drilling tools accordingly to improve working efficiency. The latest special drilling tools developed by SANY are as follows:

◆ Pilot drilling bucket

Integrate bailing bucket and barrel;
The design of arc reinforcing plate, outside of reinforcing plate welded with transition bending plate;
Hinge is made of high tension steel;

Applicable layers: cave, occlusal pile.

◆ Underreaming bit

Driven by hydraulic cylinder, it can meet the requirements of different pile holes;
The whole process of lowering drilling tool, drilling and lifting drilling tool is visible; the design of pressure plate is convenient for dumping slag;

It is suitable for drilling soil, highly weathered hard rock and medium weathered rock soft.

◆ Core barrel with centralizer

Suitable for stage drilling of large diameter bore hole;
The cutting teeth and roller bits are interchangeable;
Centralizer supports the hole wall to avoid drilling an inclined hole;

Applicable layers: medium or slightly decomposed bedrock, hard or superhard bedrock.

◆ Cross-shaped core barrel

Core barrel with cross-typed guide plates in thecentre;
During annular cutting, guide plates mill down therocks;
The capacity of soil conveying and orientation is better than common barrels;

Applicable layers: backfill, pebble layer and highly ormedium decomposed dipping formation.

Sany drilling teeth

Compare with other drilling teeth, SANY drilling teeth features the following characteristics:
Better material. After many times of material testing, the wear resistance and the strength of SANY teeth are more than 30% higher than the general products in the market.
Construction based designing. SANY V20 drilling teeth has larger cutting angle and has higher working efficiency, SANY drilling bullet is more adaptive to pebble, gravel and soft rock geological formations.

V20 tooth | Bauer tooth | Long cutting tooth | short cutting tooth | Roller

CONSTRUCTION CASES

No matter what kind of terrain environment, Sany rotary drilling rig can work easily.

With characteristics of wide application, high construction efficiency, stable performance, excellent service, environmental protection and energy saving, Sany rotary drilling rigs are widely used in pile foundation of civil engineering, high-speed rail, highway, bridge, airport, water conservancy and hydropower engineering, etc.
No matter in city, desert, snow, mountain or river, with suitable drilling head and construction method, all construction issues can be resolved easily by Sany rotary drilling rigs.

Service Network/Parts Warehouses

● Parts Warehouses

Service Network

SERVICE COMMITMENTS

One machine one parts manual.
Global service inspection patrolling is carried out every season.

One month's special service for new machine, including new machine assembling, commissioning, delivery inspection and operator training.

Professional training for oversea clients holds in China twice a year.

Provide service cards and service stickers, set up Global Customer Support Hotline and Global Customer Support Email.

At present, the sales and service system has been established in 30 countries.
280 overseas customer support engineers are working overseas.

Set up 22 oversea parts warehouses, with more than 3,000 kinds of spare parts can be selected by customers.

Quality Changes The World Service Create

SANY

Moving Tomorrow, Today!

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contact@sany-aus.com