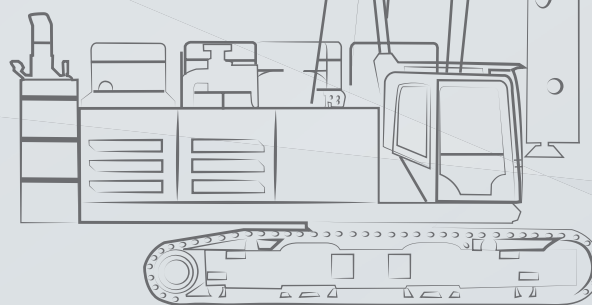


# SANY

## PILING MACHINERY PRODUCTS COLLECTION

SANY

2021



BEIJING SANY INTELLIGENT TECHNOLOGY CO.,LTD.

# 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 146m 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 launches, leading a new step to pile intelligence. All new-gen Hydraulic Grab SH700 was released 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.



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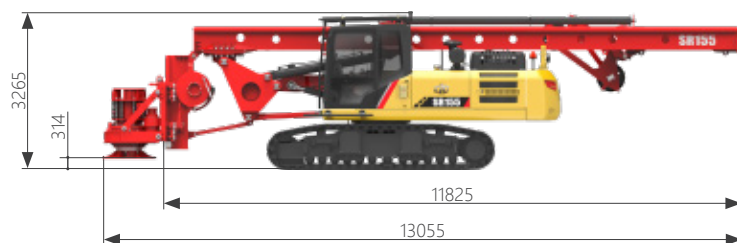
HIGH QUALITY, NEW INNOVATION



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	1500	
Max. drilling depth	m	56/44	①
<b>Rotary drive</b>			
Rated output torque	kN·m	155	
Rotation speed	rpm	5~35	
<b>Crowd system</b>			
Crowd force	kN	155	
Line pull	kN	160	
Stroke	mm	4200	
<b>Main winch</b>			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	80	
<b>Auxiliary winch</b>			
Lifting capacity	kN	60	
Wire rope diameter	mm	14	
Max. line speed	m/min	75	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	D06FR	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	
<b>Overall machine</b>			
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	
Friction kelly	Φ377×4×12 6600	44	
	Φ377×4×12 6100	44	
	Φ377×5×12 5800	56	Standard



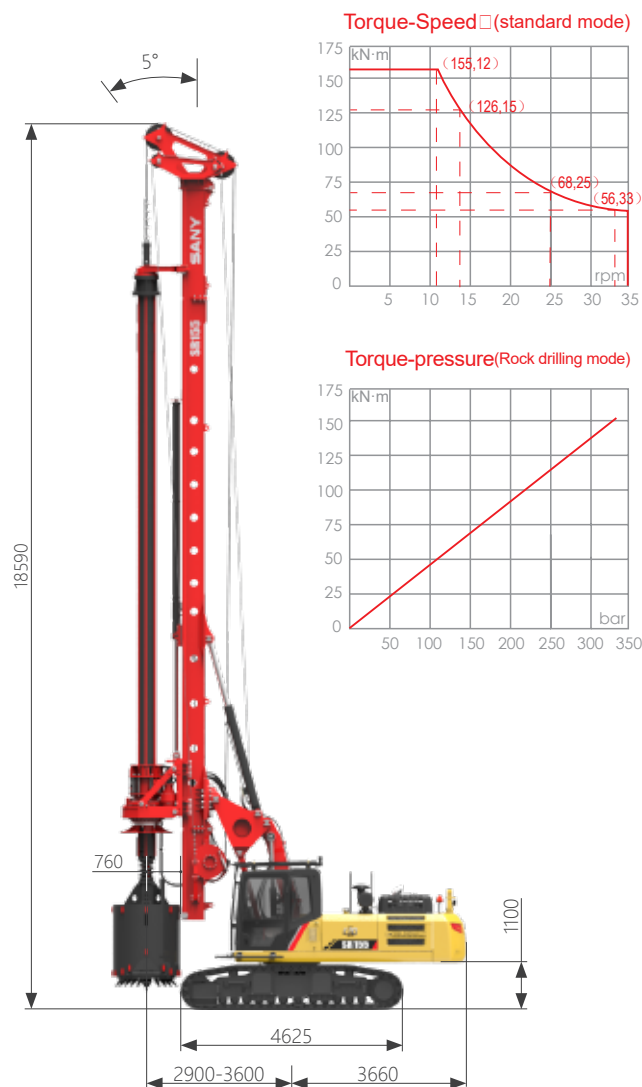
**High efficiency and flexibility:** Suitable for the construction of small and medium-sized soil layer boreholes. High main winch lifting speed and boreholes verticality, flexible operation, working efficiency higher than similar models of competitor by 15%.

**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.

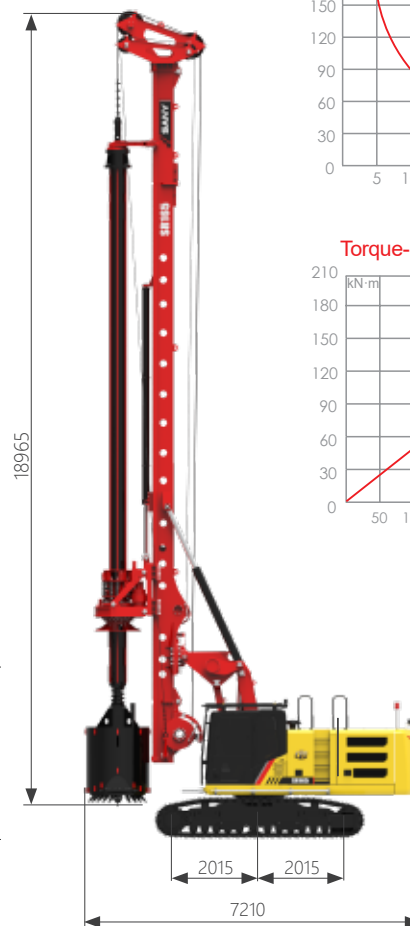
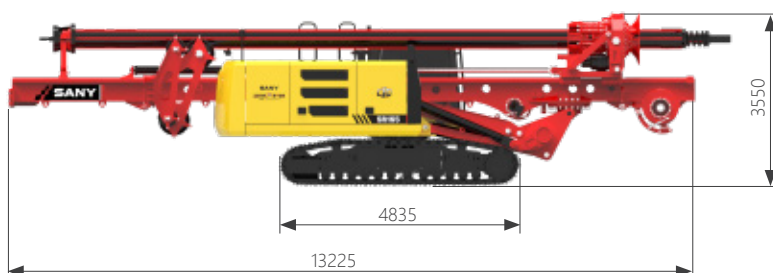
**Intelligent upgrade:** 10-inch HD touch screen, fast response and more convenient operation.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	1500	
Max. drilling depth	m	56/44	①
<b>Rotary drive</b>			
Rated output torque	kN·m	165	
Rotation speed	rpm	5~38	
<b>Crowd system</b>			
Crowd force	kN	160	
Line pull	kN	180	
Stroke	mm	4200	
<b>Main winch</b>			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	80	
<b>Auxiliary winch</b>			
Lifting capacity	kN	60	
Wire rope diameter	mm	16	
Max. line speed	m/min	60	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
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	
<b>Overall machine</b>			
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	Φ377×4×11	6100	40
kelly	Φ377×4×12	6600	44
Friction kelly	Φ377×4×12	6100	44
	Φ377×5×12	5800	56 Standard



**High efficiency of jobsite transfer:** 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 unmatched transfer convenience, increasing construction efficiency, and lowering transportation cost.

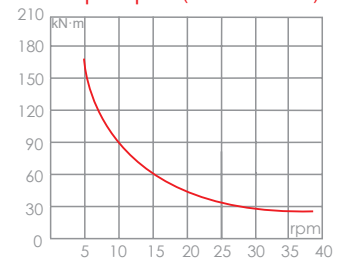
**High drilling efficiency:** Using Kawasaki new type K7V main pump, the large flow design realizes higher rotary drive torque, rotary speed and main winch lifting speed than competitors in the same class.

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

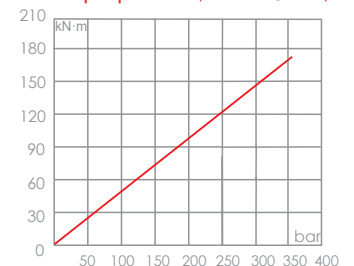
**High reliability:** Increasing brake torque, the slewing bearing doesn't swing when drilling rock layer. New upgraded undercarriage structure, enhancing the stability of the machine. The mast adopts box structure with strong resistance to torsion and fatigue; sixth generation Kelly bar adopts upgraded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

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

Torque-Speed(standard mode)



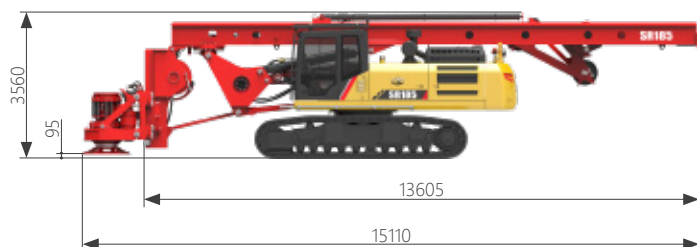
Torque-pressure(Rock drilling mode)



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	1800	
Max. drilling depth	m	59/47	①
<b>Rotary drive</b>			
Rated output torque	kN·m	190	
Rotation speed	rpm	5~34	
<b>Crowd system</b>			
Crowd force	kN	180	
Line pull	kN	180	
Stroke	mm	4200	
<b>Main winch</b>			
Lifting capacity	kN	185	
Wire rope diameter	mm	28	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	75	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6HK1	
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	
<b>Overall machine</b>			
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	



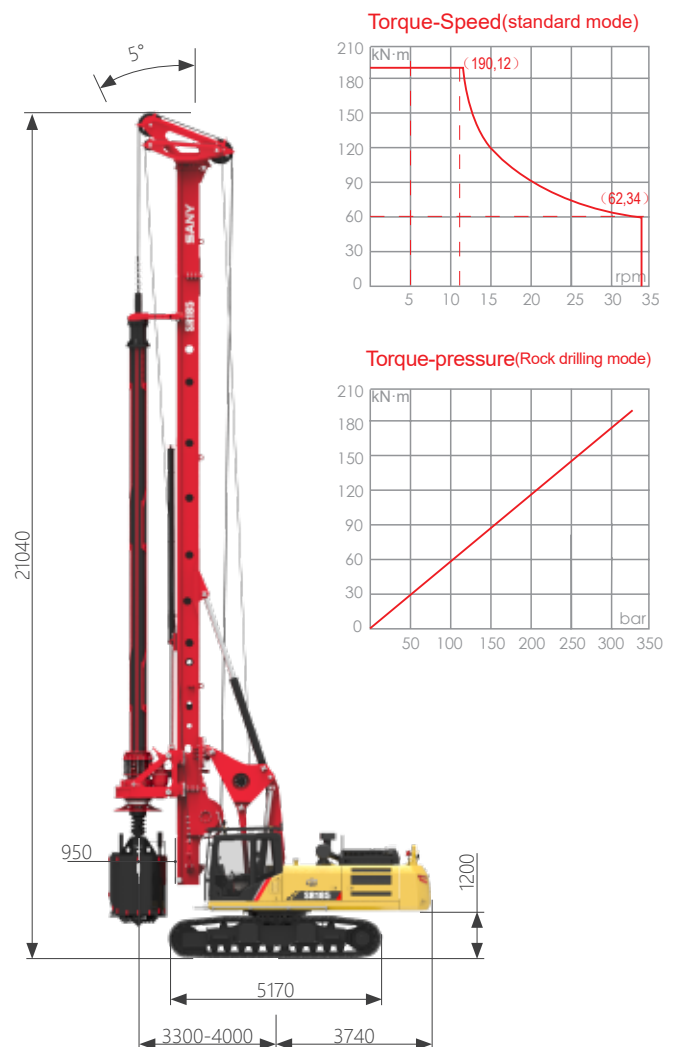
**Efficient and flexible:** Widely used in small dia. & deep borehole construction in civil engineering, high main hoist lifting up and down speed, high verticality of finished borehole, high working efficiency in civil construction.

**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.

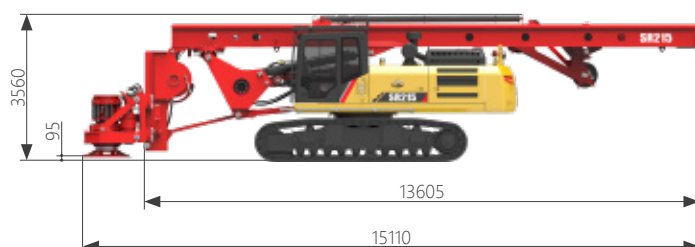




Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	1800	
Max. drilling depth	m	64/51	①
<b>Rotary drive</b>			
Rated output torque	kN·m	220	
Rotation speed	rpm	5~30	
<b>Crowd system</b>			
Crowd force	kN	180	
Line pull	kN	190	
Stroke	mm	4200	
<b>Main winch</b>			
Lifting capacity	kN	220	
Wire rope diameter	mm	28	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6HK1	
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	
<b>Overall machine</b>			
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	
Friction kelly	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.

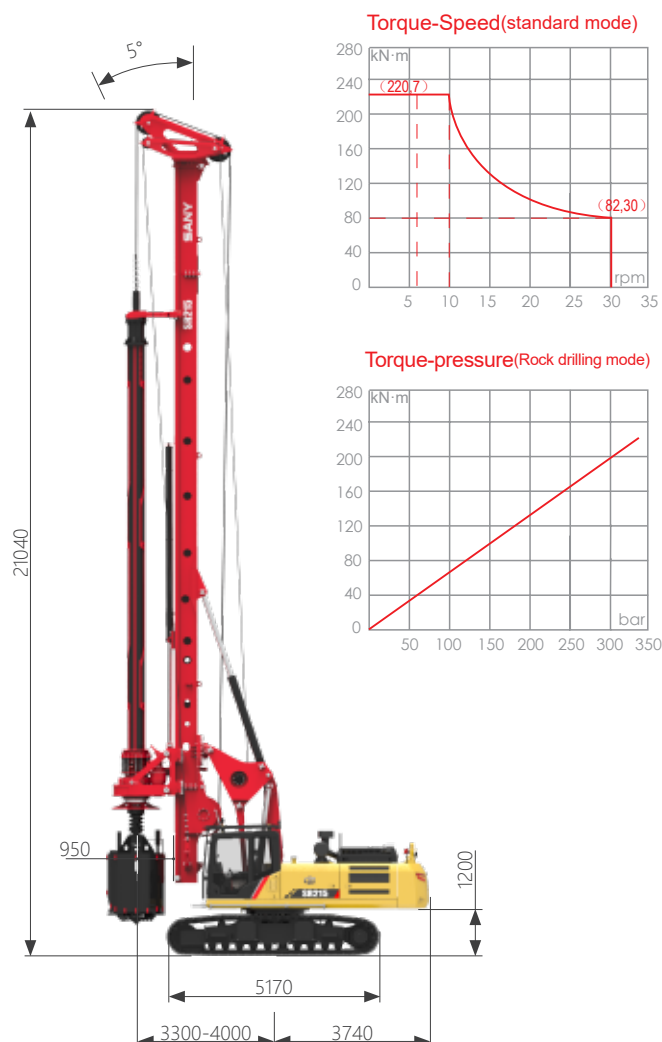
**Special chassis:** Telescopic large widening chassis designed for rotary drilling rig, roller type large diameter slewing bearing to guarantee the high stability in deep borehole construction.

**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.





Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2000	
Max. drilling depth	m	68/54	①
<b>Rotary drive</b>			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~32	
<b>Crowd system</b>			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	5000	
<b>Main winch</b>			
Lifting capacity	kN	275	
Wire rope diameter	mm	32	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	6UZ1	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	
<b>Overall machine</b>			
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	Standard
	Φ445×4×14	10300	50	
	Φ445×4×15	11000	54	
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.

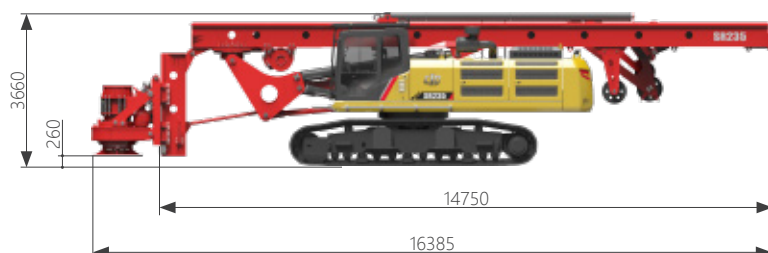
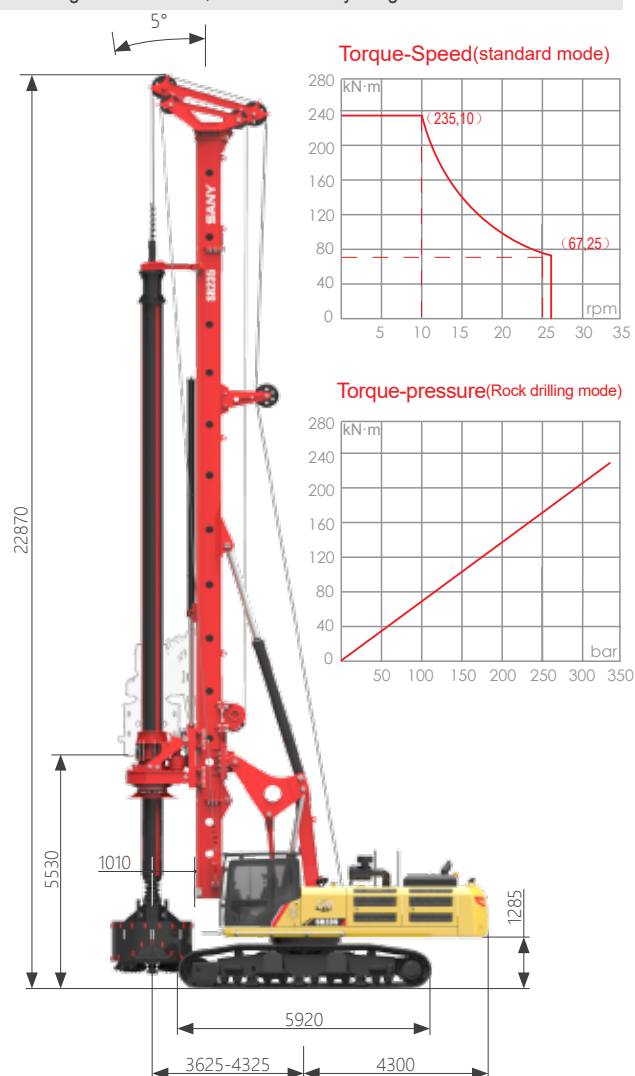
**Strong power:** imported large displacement EFI engine, equipped with high-power main pump, adopting power optimization control technology and real-time power distribution, the machine has fast response speed, high fuel efficiency, and a comprehensive energy saving of 10% - 15%.

**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.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2200	
Max. drilling depth	m	73/58	①
<b>Rotary drive</b>			
Rated output torque	kN·m	265	
Rotation speed	rpm	5~25	
<b>Crowd system</b>			
Crowd force	kN	230	
Line pull	kN	275	
Stroke	mm	5000	
<b>Main winch</b>			
Lifting capacity	kN	275	
Wire rope diameter	mm	32	
Max. line speed	m/min	80	
<b>Auxiliary winch</b>			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6UZ1	
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	
<b>Overall machine</b>			
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	Standard
	Φ445×4×15	11300	54	
	Φ445×4×16	12000	58	
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.

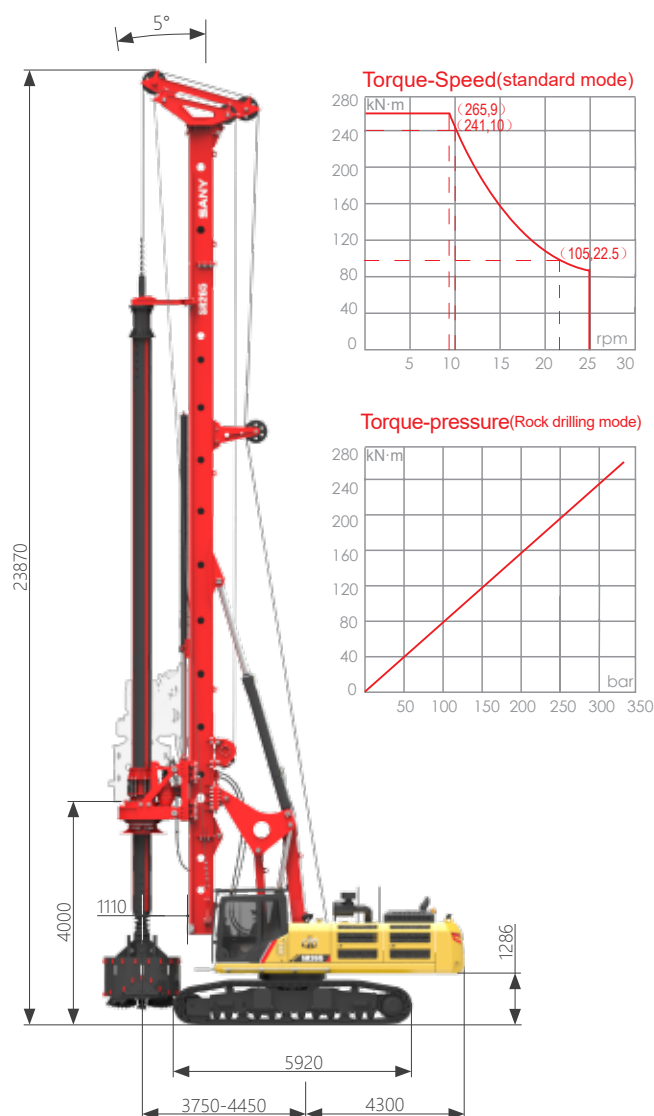
**Strong power:** Imported large-displacement EFI engine, equipped with high-power main pump, using power optimization control technology, real-time power distribution, fast response speed, high fuel efficiency, saving energy by 10%~15%.

**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.





Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2300	
Max. drilling depth	m	94/61	①
<b>Rotary drive</b>			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~24	
<b>Crowd system</b>			
Crowd force	kN	260	
Line pull	kN	335	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	72	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMIII/R96	
Engine displacement	L	15.68	
Chassis length	mm	7475	
Extension width	mm	4760	
Track shoe width	mm	800	
Swing radius	mm	4530	
<b>Overall machine</b>			
Overall height	mm	25425	
Operating weight	t	100	
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	Φ508×3×15	13900	46	Standard
	Φ508×4×16	13100	57	
	Φ508×4×17	13700	61	
Friction kelly	Φ508×6×16	15300	88	
	Φ508×6×17	15900	94	

**High-efficiency in rock drilling:** The medium-sized Sany rotary drilling rig with the largest sales volume, 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 fuel consumption.

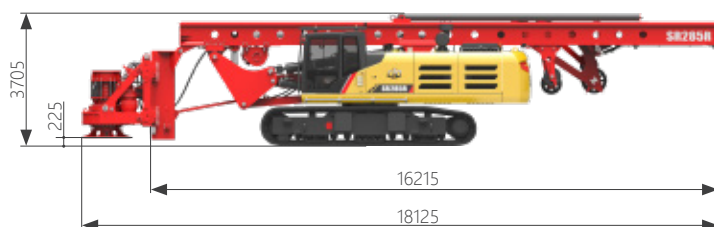
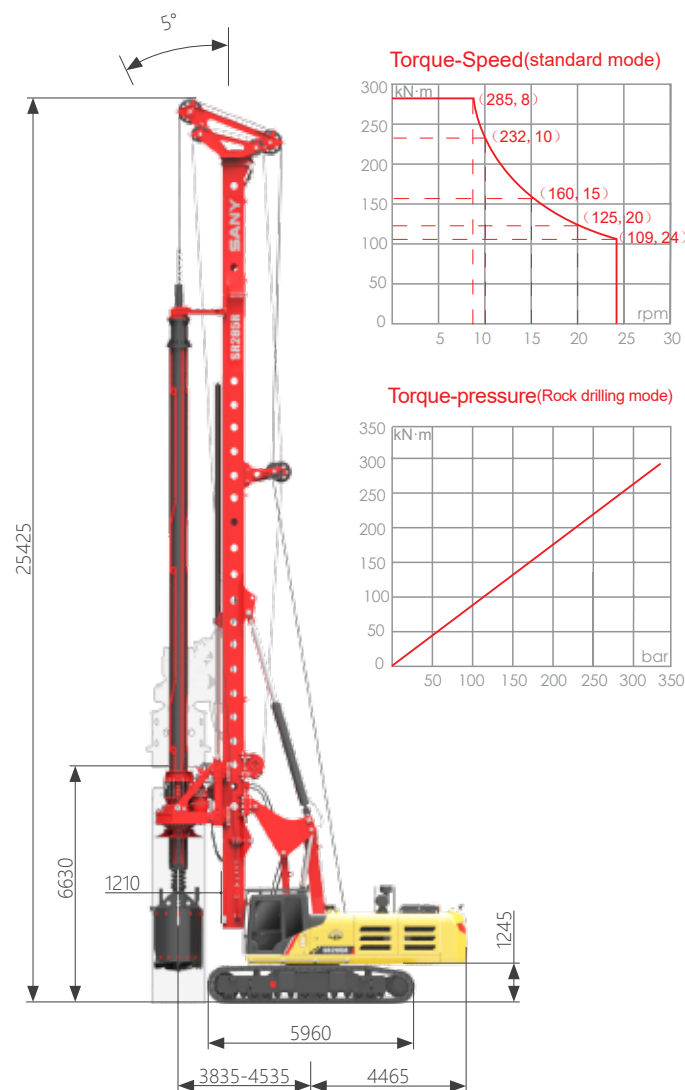
**Step drum:** Single layer wire rope winding for interlock Kelly bar; free of mutual extrusion and wear to increase service life by 35%.

**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.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500/2000	①
Max. drilling depth	m	100/65	②
<b>Rotary drive</b>			
Rated output torque	kN·m	335	
Rotation speed	rpm	5~27	
<b>Crowd system</b>			
Crowd force	kN	275	
Line pull	kN	335	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	350	
Wire rope diameter	mm	36	
Max. line speed	m/min	72	
<b>Auxiliary winch</b>			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Standard
	Φ508×4×17	13700	61	
	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%.

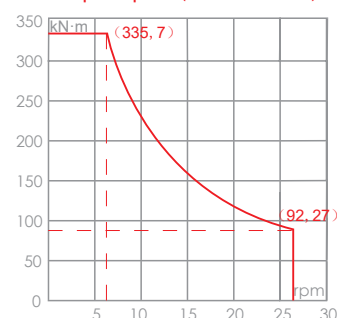
**High reliability:** High standard design for mast and luffing boom to make it more strong and durable, no cracking in 20,000 hours operation test; high configuration reducer with large torque to guarantee high efficiency, safer operation and wider working scope.

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

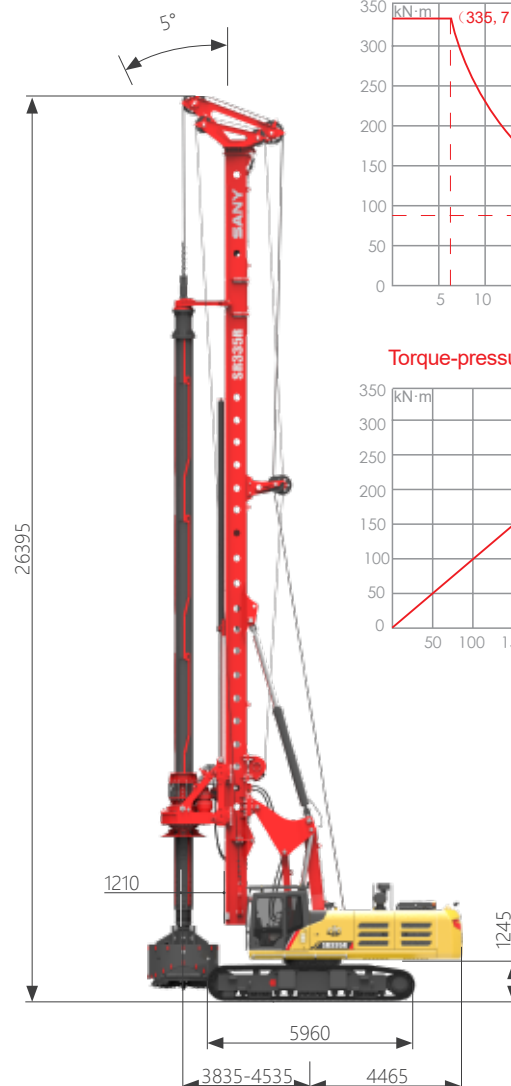
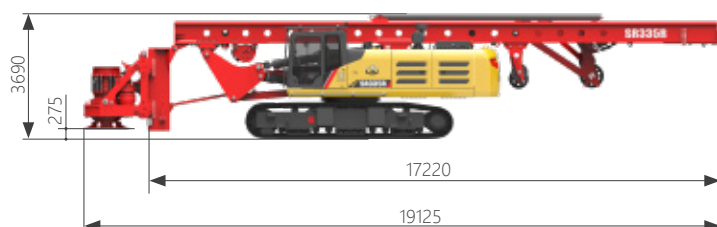
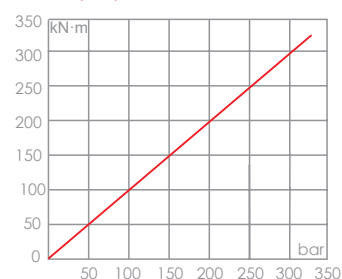
**Convenient maintenance:** The external driving key of rotary drive facilitates maintenance and replacement; the main winch wire rope end is fixed by wedge easy to disassemble and assemble. The special lubrication point connected with outlet hose to facilitate butter injection.

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

Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



## NOTE

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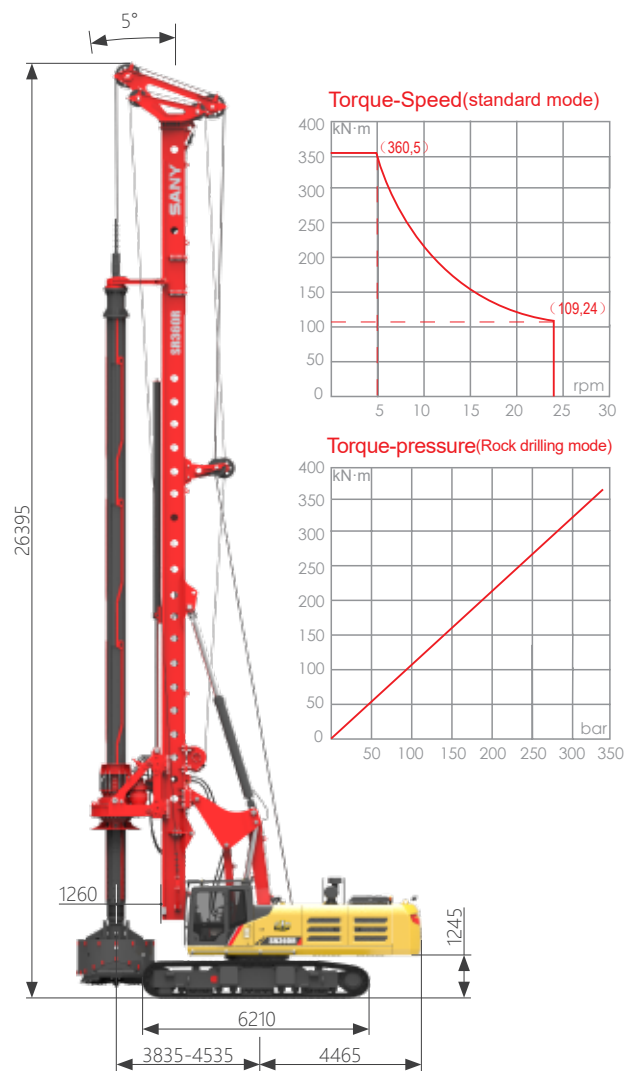
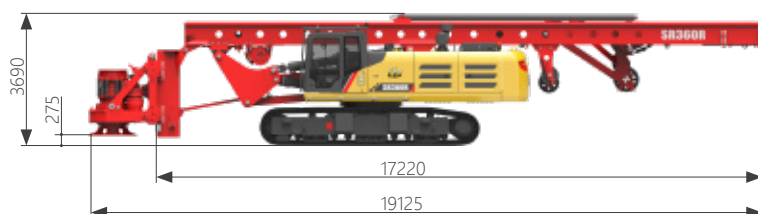
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INGENUITY, PURSE FOR PERFECTION

Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500	
Max. drilling depth	m	100/65	①
<b>Rotary drive</b>			
Rated output torque	kN·m	360	
Rotation speed	rpm	5~24	
<b>Crowd system</b>			
Crowd force	kN	275	
Line pull	kN	335	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	72	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Φ508×3×15	13900	Standard
	Φ508×4×17	13700	
	Φ508×4×18	14600	
Friction kelly	Φ508×6×17	15900	
	Φ508×6×18	16800	



**Large construction scope:** Facing the rental market, low investment and high return. The max. dia. can be up to 2.5m, the max. depth can be up to 100m, covering more than 90% of the construction field; equipped with the sixth-generation Kelly bar of upgraded material, the integrated locking device, powerful construction.

**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 in wire rope layers 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.



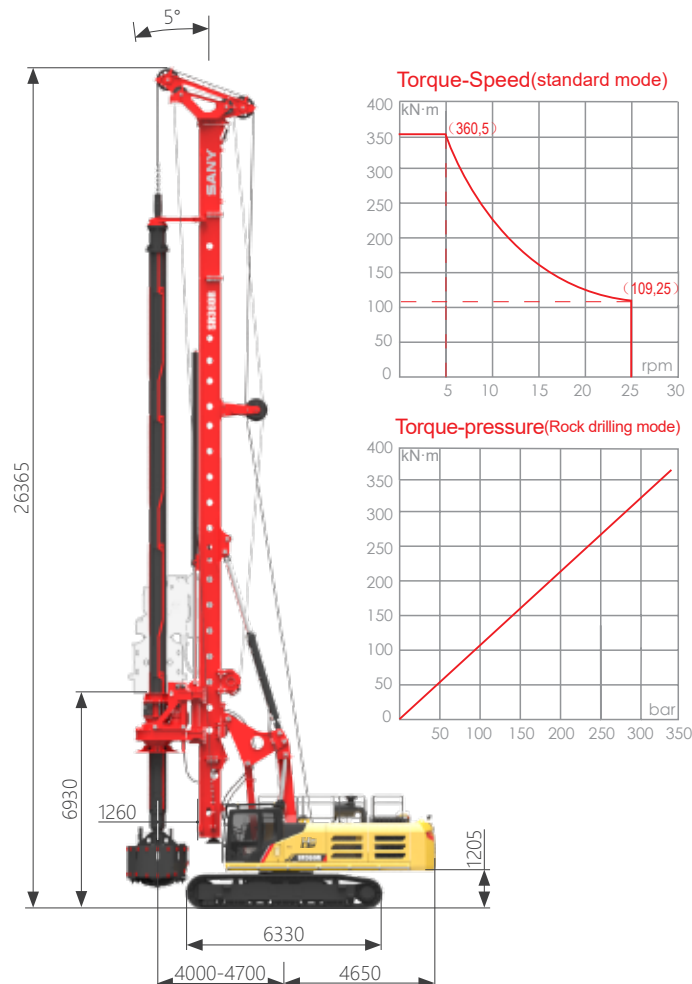
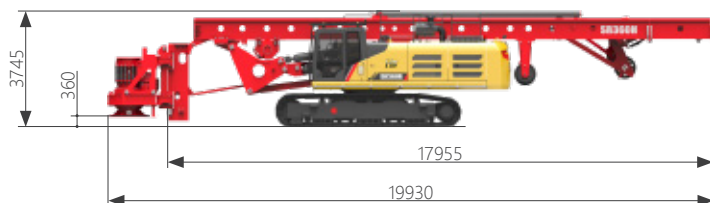
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ASCEND THE STAIRS,SWEEP THE WORLD

Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500	
Max. drilling depth	m	100/65	①
<b>Rotary drive</b>			
Rated output torque	kN·m	360	
Rotation speed	rpm	5~25	
<b>Crowd system</b>			
Crowd force	kN	290	
Line pull	kN	335	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	360	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Standard
	Φ530×4×17	16000	
	Φ530×4×18	16800	
Friction kelly	Φ530×6×17	17400	
	Φ530×6×18	18300	



**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.

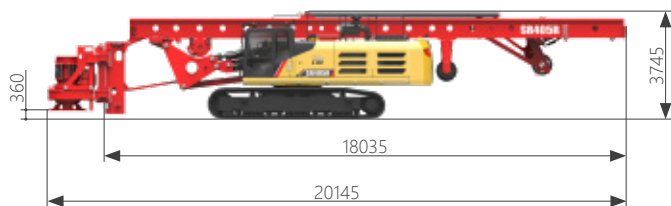
**Safe and secure:** 360° full-field monitoring, sound and light alarm.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2800	
Max. drilling depth	m	106/69	①
<b>Rotary drive</b>			
Rated output torque	kN·m	405	
Rotation speed	rpm	5~23	
<b>Crowd system</b>			
Crowd force	kN	320	
Line pull	kN	335	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	400	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
Engine power	kW/rpm	377/1800	
Emission regulation	/	COMIII	
Engine displacement	L	15.68	
Chassis length	mm	7825	
Extension width	mm	4860	
Track shoe width	mm	800	
Swing radius	mm	4700	
<b>Overall machine</b>			
Overall height	mm	27420	
Operating weight	t	122	
Transport width	mm	3550	
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	Standard
	Φ530×4×18	17300	65	
	Φ530×4×19	18100	69	
Friction kelly	Φ530×6×18	18300	100	
	Φ530×6×19	19200	106	



**Large construction capacity:** Expert in large-diameter deep borehole construction with the maximum drilling diameter 2.8 meters and the maximum drilling depth 106 meters; main winch with large lifting force to ensure stable operation.

**Fast construction speed:** The 377kW high-power engine matches the A8V large displacement main pump. The speed of main winch, rotary drive and swing fast, construction efficiency is increased by more than 17%.

**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%.

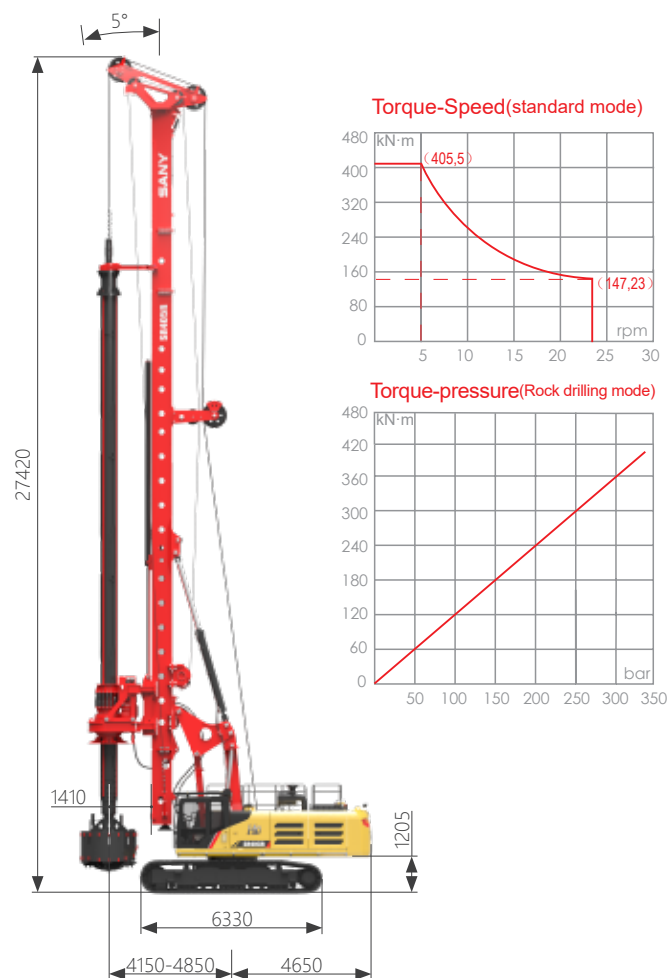
**Intelligent upgrade:**

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.

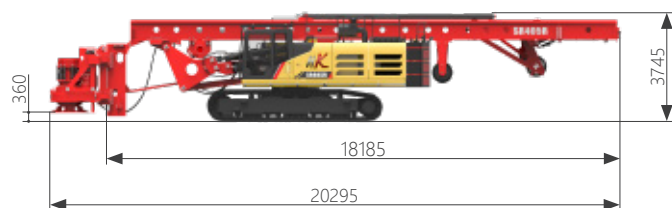
**Safe and secure:** 360° full-field monitoring, sound and light alarm.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2800	
Max. drilling depth	m	106/85	①
<b>Rotary drive</b>			
Rated output torque	kN·m	405	
Rotation speed	rpm	5~25	
<b>Crowd system</b>			
Crowd force	kN	340	
Line pull	kN	380	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	400	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	4/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Standard
	Φ580×4×18	19500	65	
	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:** Adopt 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.

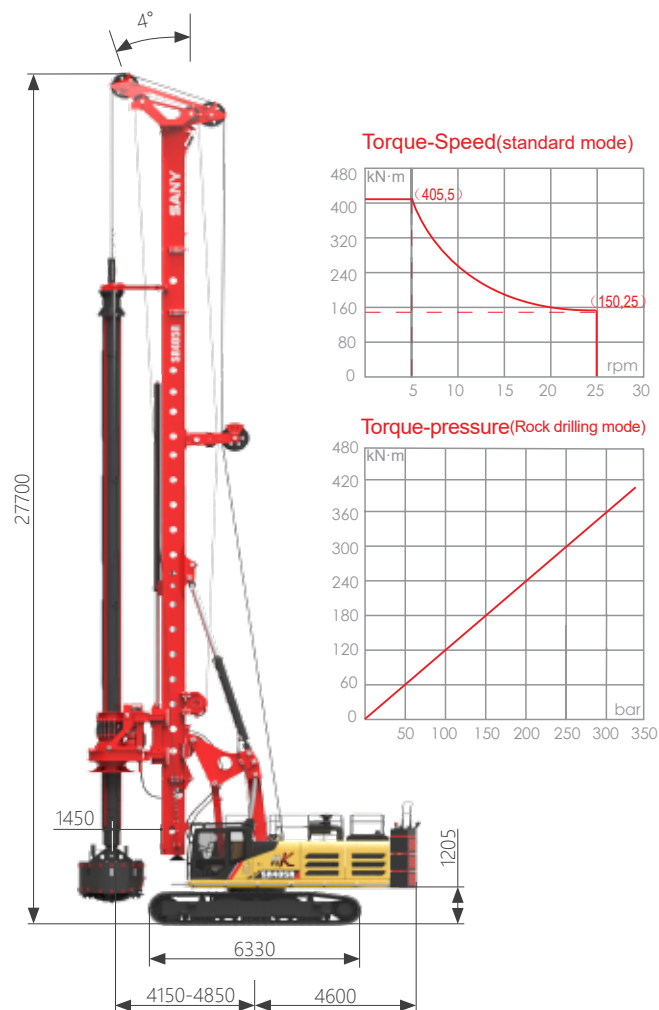
**Innovative technology:**

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.

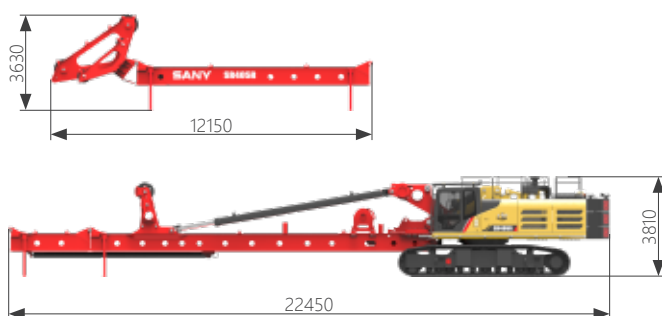
**Convenient maintenance:** Automatic centralized lubrication and combined counterweight, reduce dismantling time and improves transmission efficiency.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	3000	
Max. drilling depth	m	110/90	①
<b>Rotary drive</b>			
Rated output torque	kN·m	415	
Rotation speed	rpm	4~23	
<b>Crowd system</b>			
Crowd force	kN	360	
Line pull	kN	360	
Stroke	mm	6000	
<b>Main winch</b>			
Lifting capacity	kN	520	
Wire rope diameter	mm	40	
Max. line speed	m/min	63	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Standard
	Φ580×4×20	20100	72	
	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%.

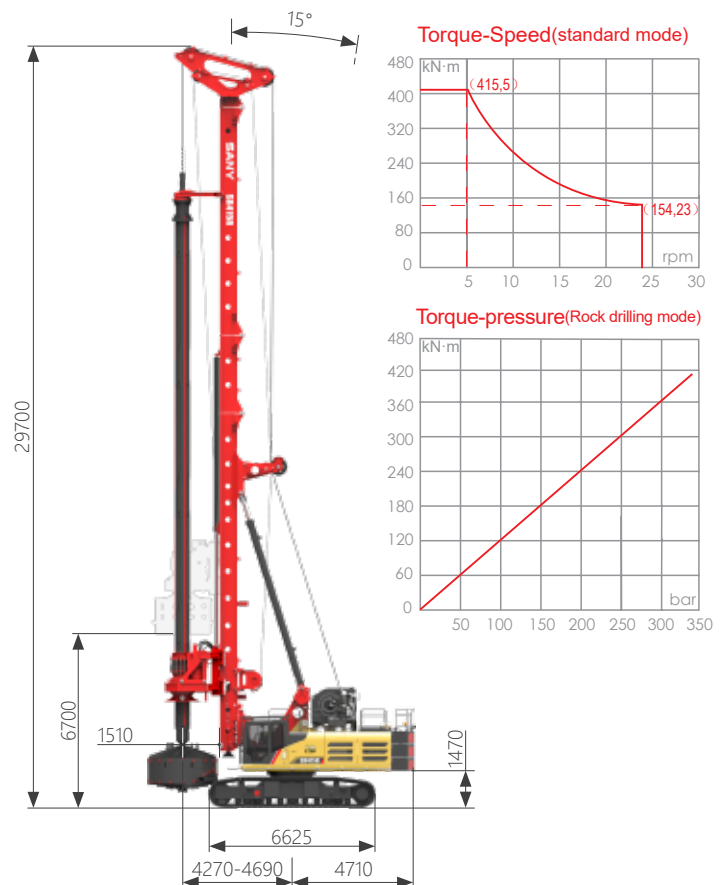
**High reliability:** Large professional chassis, thick steel plate welding, large width of crawlers, stable and reliable; professional structure parts for rock drilling, anti-vibration, anti-damage, anti-crack; single-layer large diameter drum, no extrusion between the rope, no wear and tear, longer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

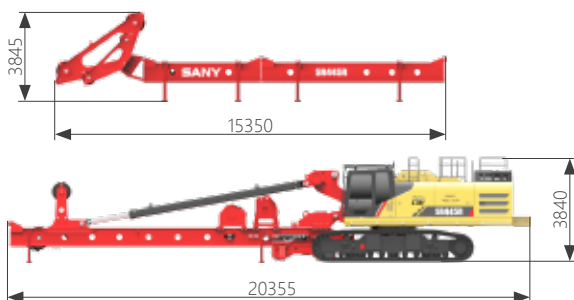
**Easy maintenance and service:** Standard automatic centralized lubrication system, fixed-point and quantitative maintenance, saving labor and reducing cost. Cylinder pressure, pressure more stable, easy to operate. Combined counterweight facilitates disassembly and transportation.



Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	3000	
Max. drilling depth	m	116/95	①
<b>Rotary drive</b>			
Rated output torque	kN·m	445	
Rotation speed	rpm	4~22	
<b>Crowd system</b>			
Crowd force	kN	400	
Line pull	kN	400	
Stroke	mm	10000/21000	
<b>Main winch</b>			
Lifting capacity	kN	560	
Wire rope diameter	mm	40	
Max. line speed	m/min	60	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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	Standard
	Φ580×4×21	22100	
	Φ580×5×21	25300	
Friction kelly	Φ580×6×20	23000	
	Φ580×6×21	23600	



**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.

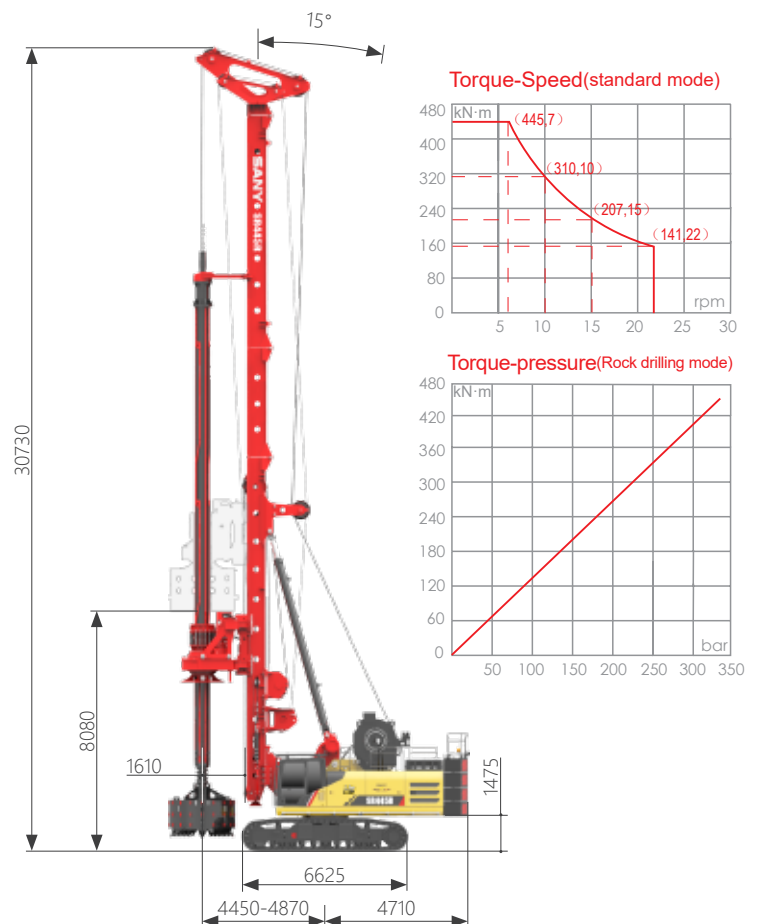
**Intelligent upgrade:**

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.

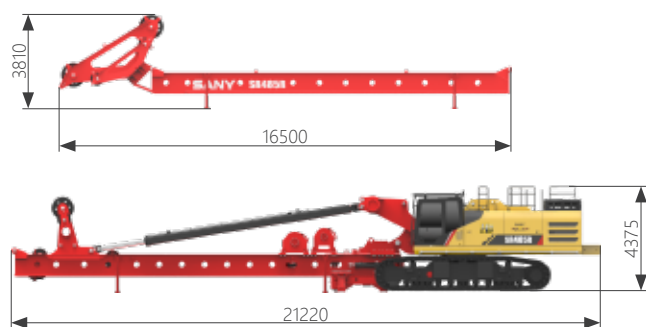




Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	3200	
Max. drilling depth	m	120/100	①
<b>Rotary drive</b>			
Rated output torque	kN·m	485	
Rotation speed	rpm	5~18	
<b>Crowd system</b>			
Crowd force	kN	475	
Line pull	kN	475	
Stroke	mm	10000	
<b>Main winch</b>			
Lifting capacity	kN	600	
Wire rope diameter	mm	46	
Max. line speed	m/min	50	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	CAT C15	
Engine power	kW/rpm	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	
<b>Overall machine</b>			
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	Standard
	Φ630×4×22	28800	80	
	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:**

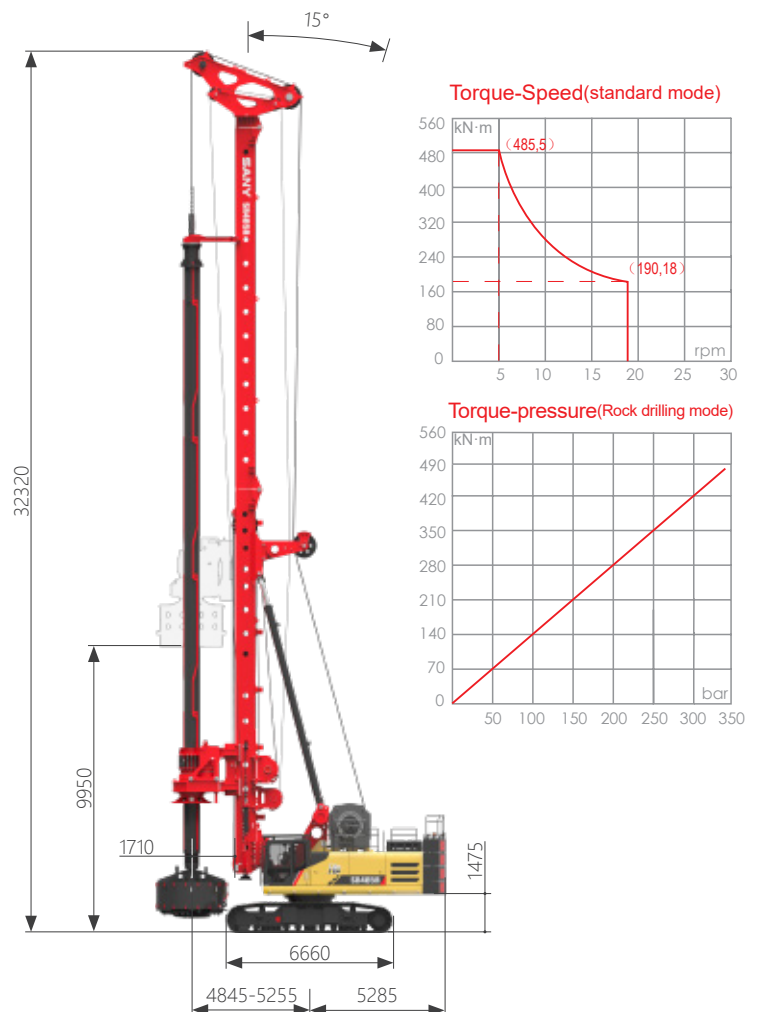
1) HD touch screen, 3ms refresh frequency, no visual delay.

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.



## NOTE

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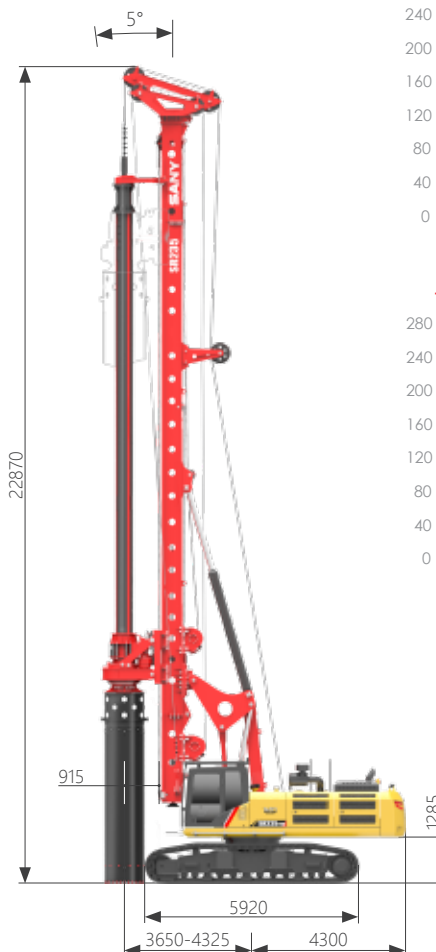
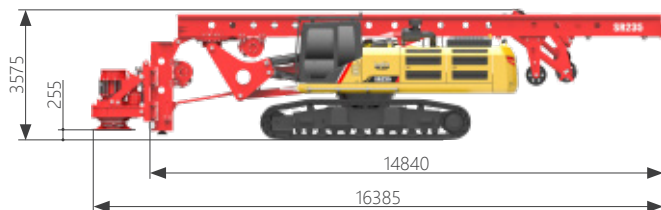
HIGH QUALITY, NEW INNOVATION

Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2000/1500	①
Max. drilling depth	m	68/54	②
<b>Rotary drive</b>			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~27	
<b>Crowd system</b>			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	15000	
<b>Main winch</b>			
Lifting capacity	kN	235	
Wire rope diameter	mm	32	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6UZ1	
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	
<b>Overall machine</b>			
Overall height	mm	22870	
Operating weight	t	81	
Transport width	mm	3540	
Transport height	mm	3575	

①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ445×3×15	10300	40	Standard
	Φ445×4×14	10600	50	
	Φ445×4×15	11300	54	
Friction kelly	Φ445×5×14	10300	63	
	Φ445×5×15	10900	68	



**Efficient construction:** The preferred model in the field of industrial and civil foundation construction, with fast construction speed and large capacity; 6th-generation new material 445 Kelly bar, integrated locking device, drilling capacity increased by 25%, suitable for various formation construction.

**Strong power:** Imported large displacement e-jet engine, equipped with high-power main pump, adopts power optimization control technology, real-time power distribution, fast action response, high fuel efficiency, comprehensive energy saving of 10%~15%.

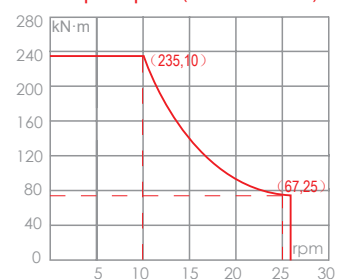
**Step drum:** Single layer winding, which can meet the drilling depth of 54 meters; without extrusion and wear, the service life of the wire rope is increased by 35%.

**Full stroke compression:** Using the crowd winch system, 15m extra-long stroke, fast crowding, rotary drive display function, suitable for all casing construction in beach, pebble, backfill formation.

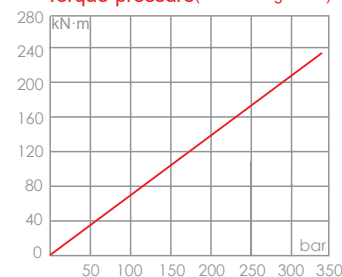
**Intelligent upgrade:** HD touch screen, 3ms refresh frequency, smooth animation display.

**Convenience:** The rotary drive key bar is exposed for easy service and replacement; the main winching wire rope is fixed by wedge, which is easy to disassemble and assemble. Some lubrication point are exposed for easy service.

Torque-Speed(standard mode)



Torque-pressure(Rock drilling mode)



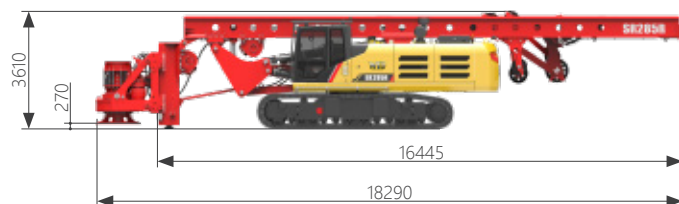


Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2200/1900	①
Max. drilling depth	m	94/61	②
<b>Rotary drive</b>			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~24	
<b>Crowd system</b>			
Crowd force	kN	260	
Line pull	kN	355	
Stroke	mm	17100	
<b>Main winch</b>			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMIII/R96	
Engine displacement	L	15.68	
Chassis length	mm	7475	
Extension width	mm	4760	
Track shoe width	mm	800	
Swing radius	mm	4530	
<b>Overall machine</b>			
Overall height	mm	25410	
Operating weight	t	105	
Transport width	mm	3475	
Transport height	mm	3610	

①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ508×3×15	12400	40	Standard
	Φ508×4×16	13100	57	
	Φ508×4×17	13900	61	
Friction kelly	Φ508×6×16	15300	88	
	Φ508×6×17	15900	94	



**High efficiency:** Large core parameters such as high torque and crowd force; fast line speed of main rope to ensure high drilling efficiency in hard soil layer; it is suitable for overpass, high-speed rail, large buildings and other large hole foundation fields.

**Full stroke crowd:** Adopt winch crowd system with 17-meter super long stroke, fast crowding, rotary drive display function, suitable for all casing construction in beach, pebble and backfill formation.

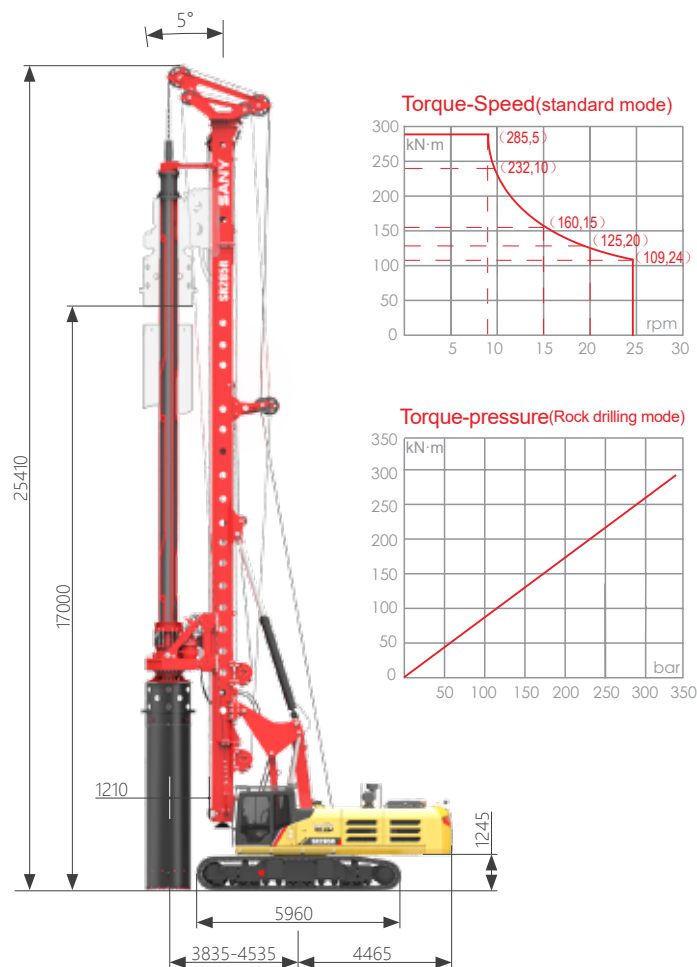
**Economy and energy saving:** Power optimization control technology is adopted to distribute power in real time with smooth and fast response of composite action; moreover, it has high fuel efficiency and low comprehensive fuel consumption.

**Step drum:** Adopt step drum structure with single layer to realize no crushing, no wear, and increase the service life of wire rope by 35%.

**High reliability:** 6th-generation new material 445 Kelly bar, integrated locking device, drilling capacity increased by 25%.

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

**Convenient maintenance:** High-mounted rotary drive key bar, the exposed oil outlet hose of reducer, easy to service; double access doors provide large maintenance space.

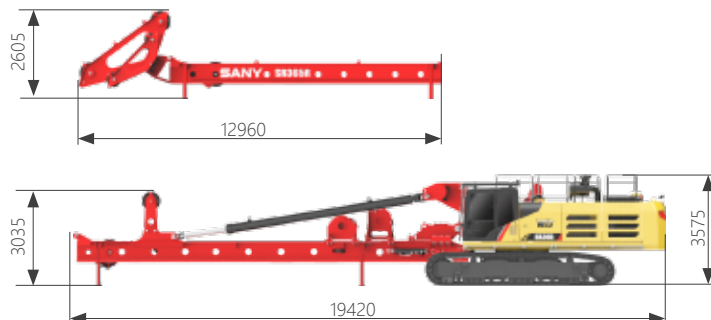


Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500/2200	①
Max. drilling depth	m	100/65	②
<b>Rotary drive</b>			
Rated output torque	kN·m	365	
Rotation speed	rpm	5~23	
<b>Crowd system</b>			
Crowd force	kN	340	
Line pull	kN	360	
Stroke	mm	9000/18000	
<b>Main winch</b>			
Lifting capacity	kN	390	
Wire rope diameter	mm	36	
Max. line speed	m/min	65	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMIII	
Engine displacement	L	15.68	
Chassis length	mm	7850	
Extension width	mm	4860	
Track shoe width	mm	800	
Swing radius	mm	4705	
<b>Overall machine</b>			
Overall height	mm	27105	
Operating weight	t	131	
Transport width	mm	3530	
Transport height	mm	3575	

①: uncased/cased

②: friction kelly depth / interlocking kelly depth

Kelly bar		Weight(Kg)	Depth(m)	Option
Inter-locking kelly	Φ530×4×16	15200	57	Standard
	Φ530×4×17	16100	61	
	Φ530×4×18	16900	65	
Friction kelly	Φ530×6×17	16900	88	
	Φ530×6×18	17400	100	



**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.

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

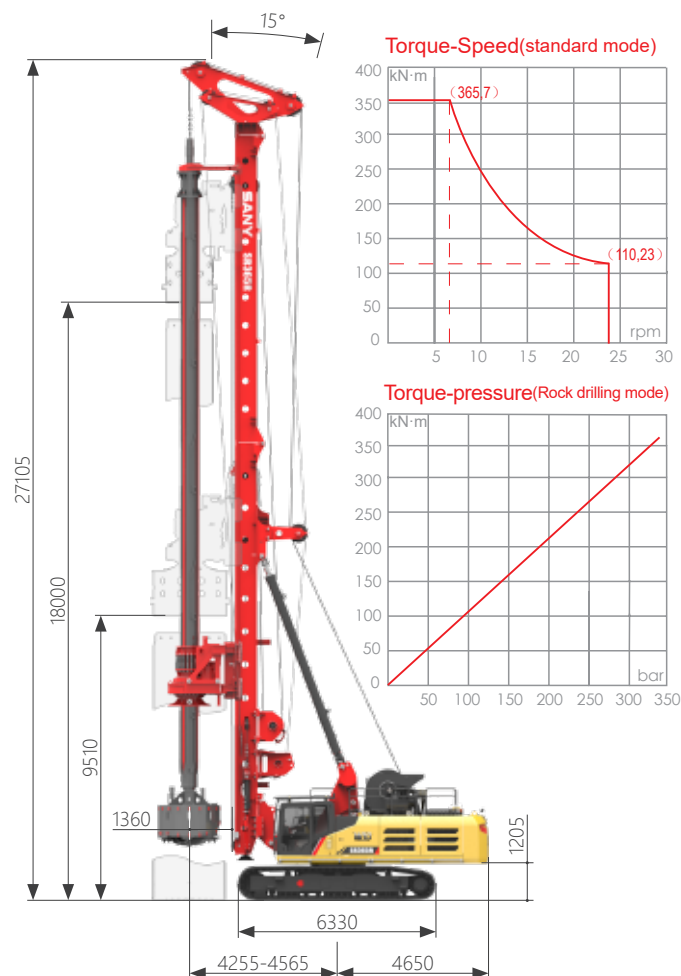
**The sixth generation of Kelly bar:** Integrated locking device, upgraded material, reinforced ring and other design, increase strength by 25%.

**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.

**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.



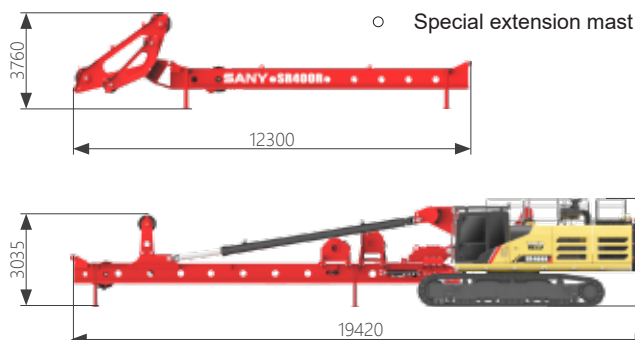
Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500/2200	①
Max. drilling depth	m	106/87	②
<b>Rotary drive</b>			
Rated output torque	kN·m	400	
Rotation speed	rpm	5~22	
<b>Crowd system</b>			
Crowd force	kN	350	
Line pull	kN	380	
Stroke	mm	9000/18000	
<b>Main winch</b>			
Lifting capacity	kN	410	
Wire rope diameter	mm	36	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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
Φ530×4×18	17500	65	Standard
Inter-locking kelly	Φ530×4×19	18500	○
	Φ530×5×18	19000	○
	Φ530×5×18	20000	○
Friction kelly	Φ530×6×18	18500	○
	Φ530×6×19	19500	○

○ 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.

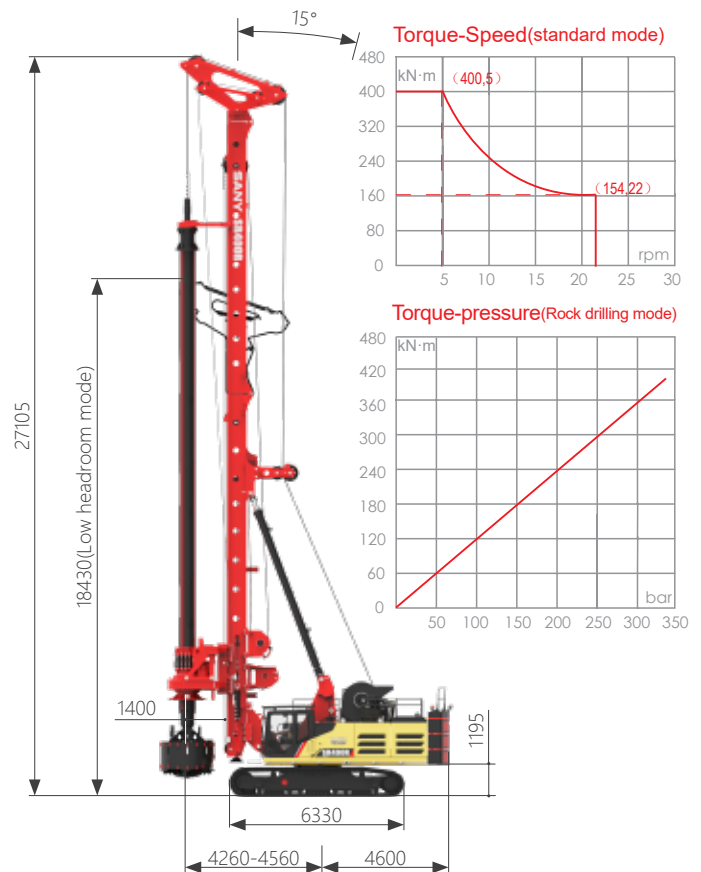
**Innovative Technology:**

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.

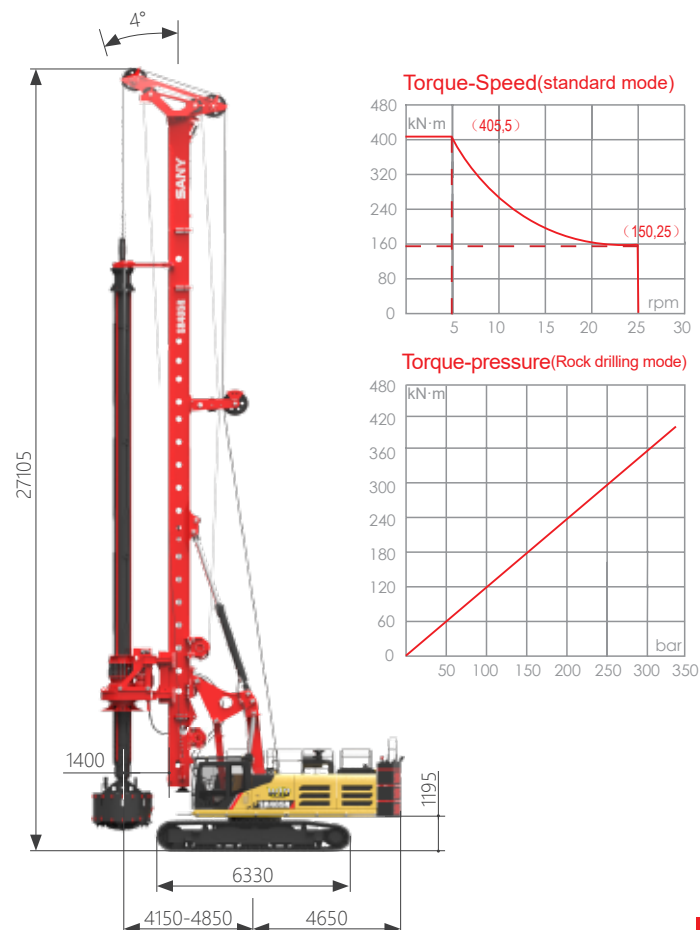


Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2500/2200	①
Max. drilling depth	m	106/87	②
<b>Rotary drive</b>			
Rated output torque	kN·m	415	
Rotation speed	rpm	5~25	
<b>Crowd system</b>			
Crowd force	kN	350	
Line pull	kN	400	
Stroke	mm	13000	
<b>Main winch</b>			
Lifting capacity	kN	400	
Wire rope diameter	mm	36	
Max. line speed	m/min	75	
<b>Auxiliary winch</b>			
Lifting capacity	kN	105	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	4/90	
Lateral	°	±3	
<b>Main Chassis</b>			
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	
<b>Overall machine</b>			
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	Standard
	Φ580×4×18	19500	65	
	Φ580×4×19	20200	69	
	Φ580×5×18	21000	82	
Friction kelly	Φ580×5×19	22000	87	
	Φ580×6×18	20500	100	
	Φ580×6×19	21400	106	



**Strong rock penetration:** the torque is upgraded to 415kN·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.





# SR235

# SANY

Main performances	Unit	Stage V	Com III
<b>Pile</b>			
Max. drilling diameter①	mm	2000	
Max. drilling depth②	m	73/58	
<b>Rotary drive</b>			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~30	
<b>Crowd system</b>			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	15000	
<b>Main winch</b>			
Lifting capacity	kN	235	
Wire rope diameter	mm	32	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	80	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±3	
<b>Main Chassis</b>			
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
<b>Overall machine</b>			
Overall height	mm	24060	24050
Operating weight	t	83	81
Transport width	mm	3550	3540
Transport height	mm	3755	3750

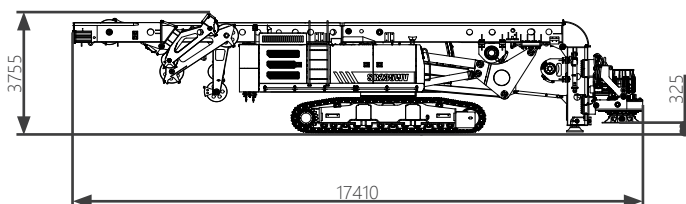
①: uncased/cased

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	Standard
	Φ445×4×15	11000	54	
	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.

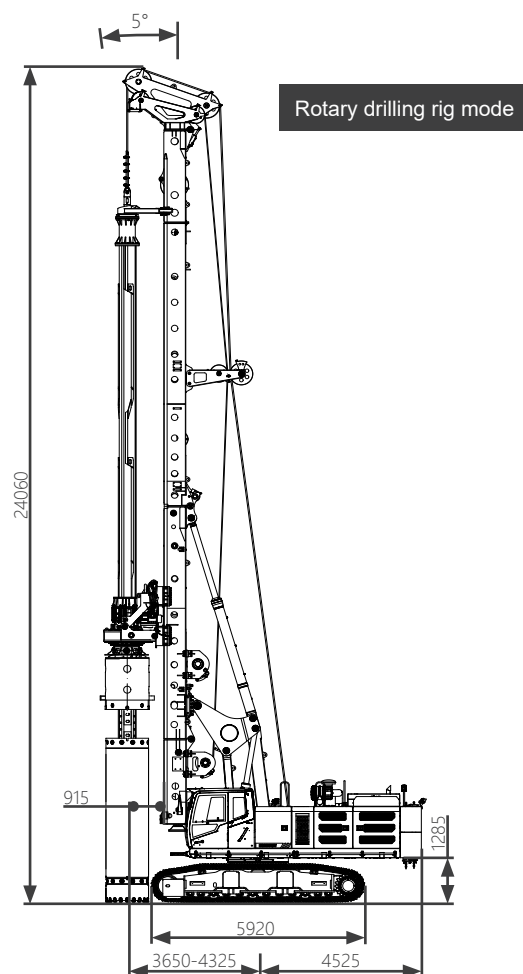
**Full stroke crowd system:** 15m extra-long stroke, featuring fast crowding and pulling function, suitable for long casing construction in beach, pebble, backfill formation.

**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.





Low headroom	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	2000	
Max. drilling depth	m	24	
<b>Rotary drive</b>			
Rated output torque	kN·m	235	
Rotation speed	rpm	5~30	
<b>Crowd system</b>			
Crowd force	kN	210	
Line pull	kN	270	
Stroke	mm	4775	
<b>Overall machine</b>			
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.

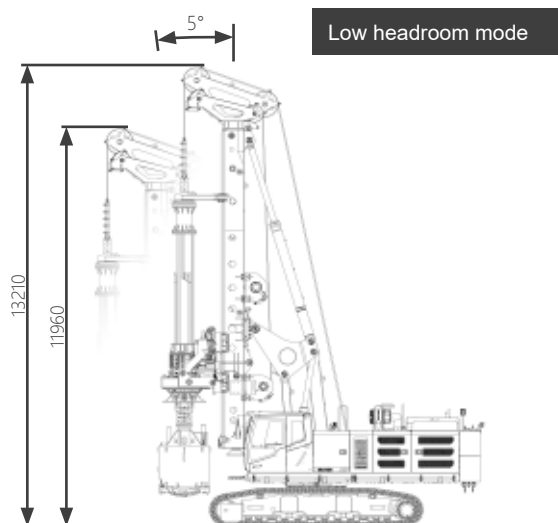
② the lower location of boom.

③ the other depth of kelly bar and diameter will be satisfied through custom-made.

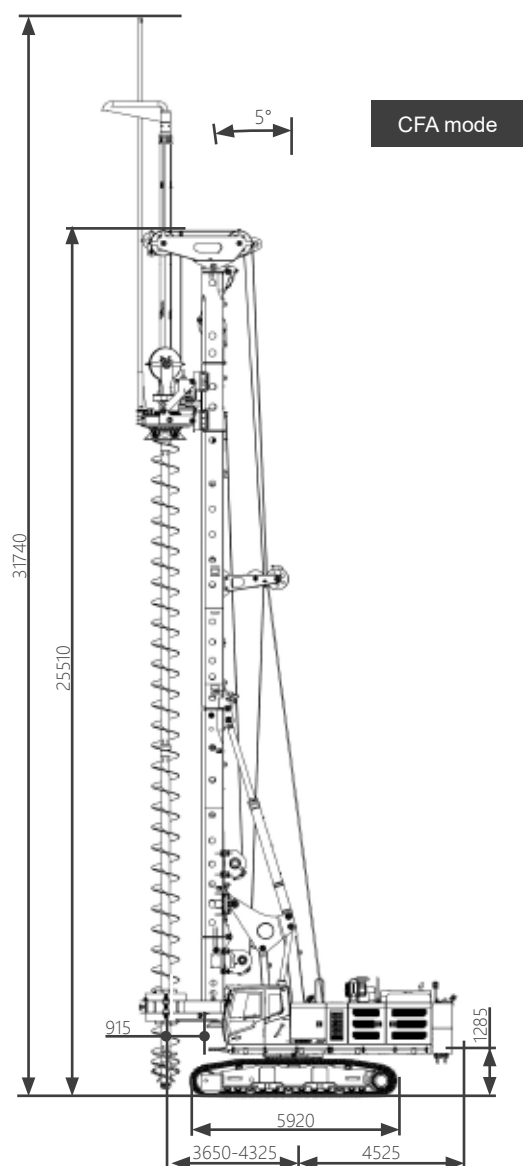
**Low headroom mode:** Standard mode can quickly switch to low headroom mode.

**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.



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





Main performances	Unit	Stage V	Com III
<b>Pile</b>			
Max. drilling diameter①	mm	2200/1900	
Max. drilling depth②	m	94/61	
<b>Rotary drive</b>			
Rated output torque	kN·m	285	
Rotation speed	rpm	5~27	
<b>Crowd system</b>			
Crowd force	kN	260	
Line pull	kN	335	
Stroke	mm	17100	
<b>Main winch</b>			
Lifting capacity	kN	330	
Wire rope diameter	mm	36	
Max. line speed	m/min	70	
<b>Auxiliary winch</b>			
Lifting capacity	kN	90	
Wire rope diameter	mm	20	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	5/90	
Lateral	°	±4	
<b>Main Chassis</b>			
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
<b>Overall machine</b>			
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	Standard
	Φ508×4×16	13400	57	
	Φ508×4×17	14100	61	
Friction kelly	Φ508×4×12	15000	88	
	Φ508×4×13	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.

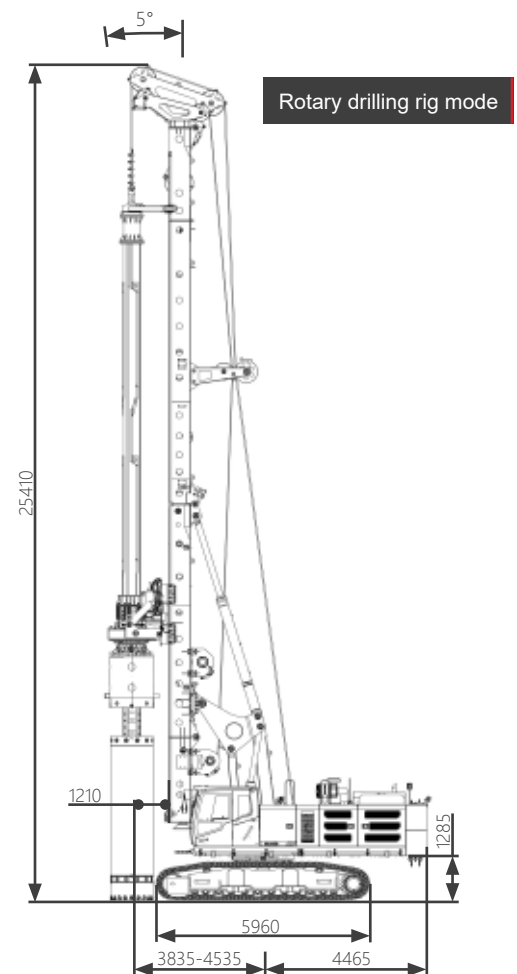
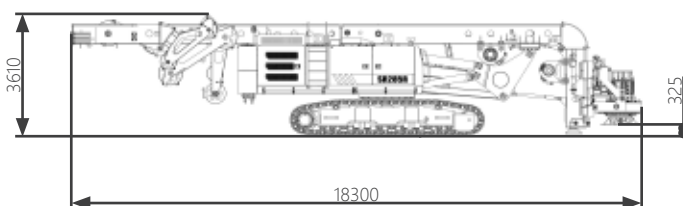
**Full stroke crowd system:** 17m extra-long stroke, featuring fast crowding and pulling function, suitable for long casing construction in beach, pebble, backfill formation.

**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.





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

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

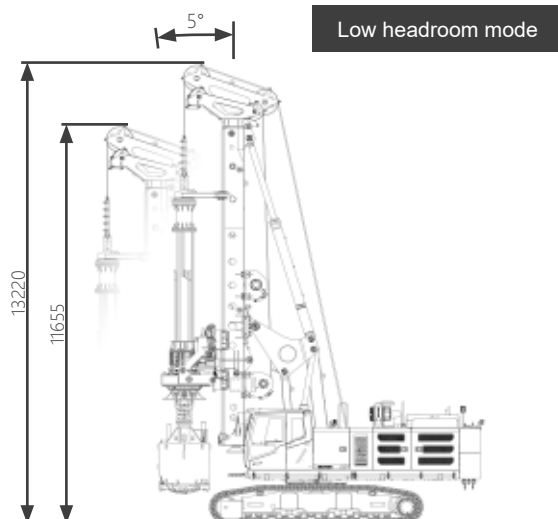
**Note:** ⑤ the higher location of boom.

⑥ the lower location of boom.

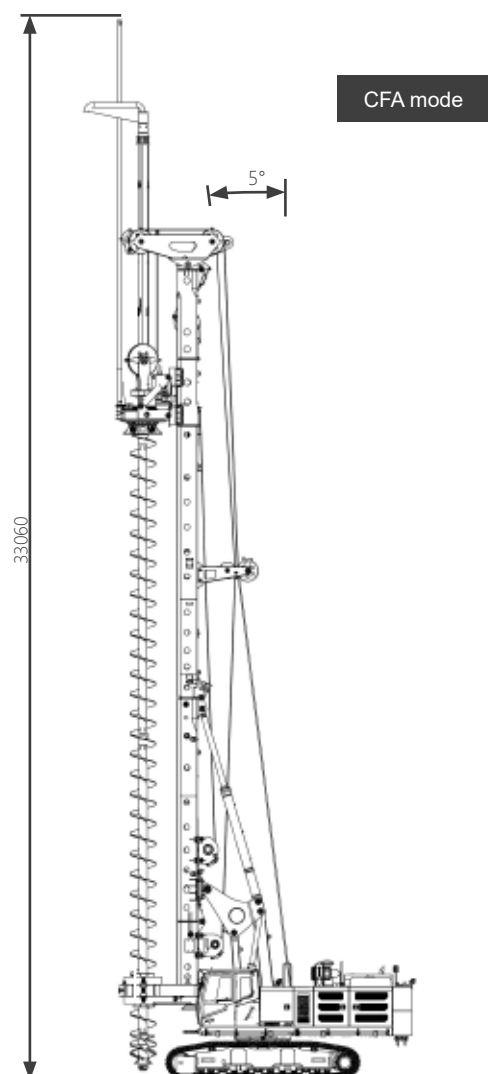
**Low headroom mode:** Standard mode can quickly switch to low headroom mode.

**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.



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





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WORKING TOGETHER FOR A SHARED FUTURE

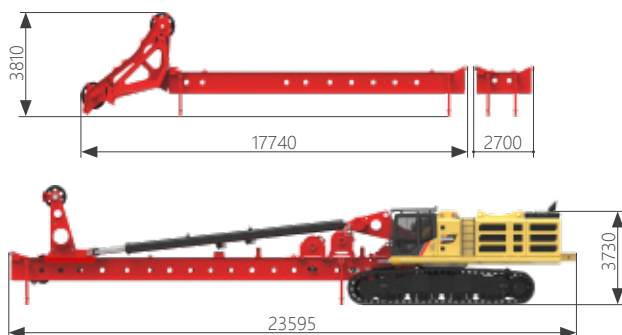


Main performances	Unit	Parameter	Remark
<b>Pile</b>			
Max. drilling diameter	mm	3500/4000	①
Max. drilling depth	m	150/125/100	②
<b>Rotary drive</b>			
Rated output torque	kN·m	580	
Rotation speed	rpm	6~38	
<b>Crowd system</b>			
Crowd force	kN	460	
Line pull	kN	550	
Stroke	mm	11500	
<b>Main winch</b>			
Lifting capacity	kN	800	
Wire rope diameter	mm	50	
Max. line speed	m/min	54	
<b>Auxiliary winch</b>			
Lifting capacity	kN	160	
Wire rope diameter	mm	26	
Max. line speed	m/min	70	
<b>Mast inclination</b>			
Forward/backward	°	90/15	
Lateral	°	±3	
<b>Main Chassis</b>			
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	
<b>Overall machine</b>			
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.

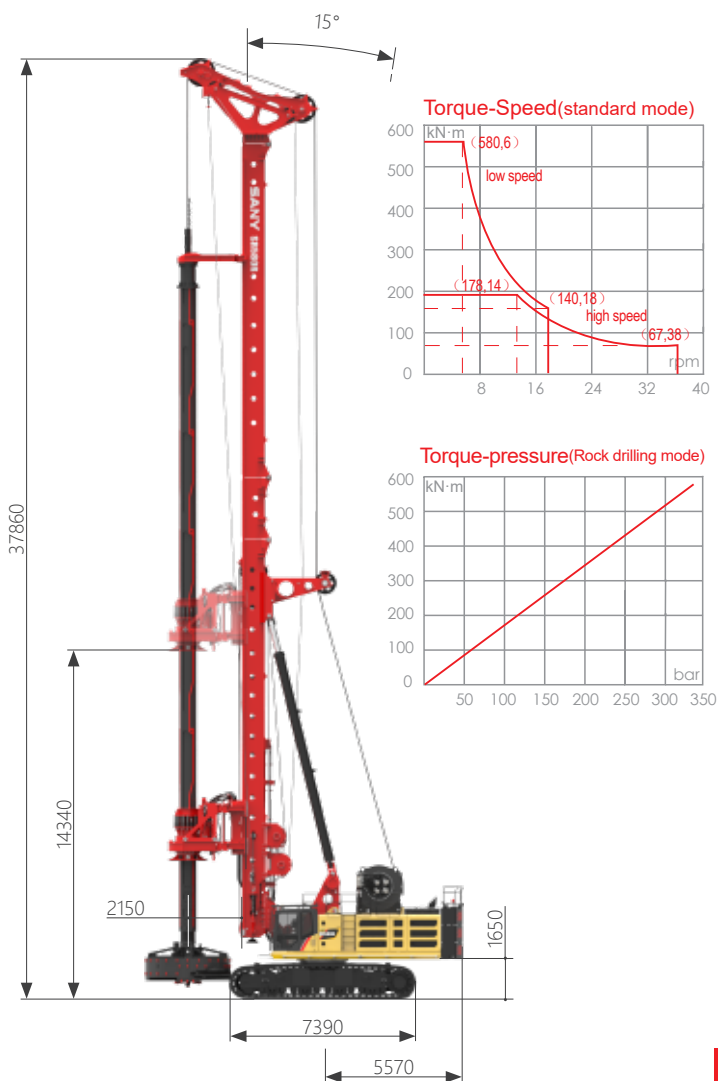
**High reliability:** The reinforced design of platform, mast and rotary drive which can bear more alternating load and cope with complex working conditions; four motor main winch, lifting force up to 80t; wire rope single-layer winding, longer service life.

**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.

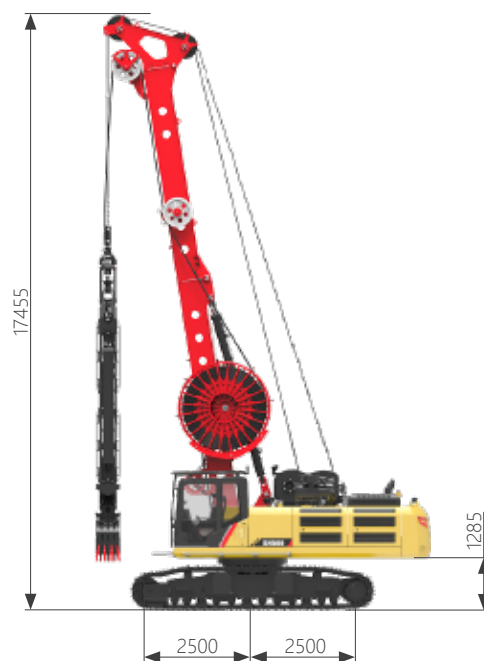
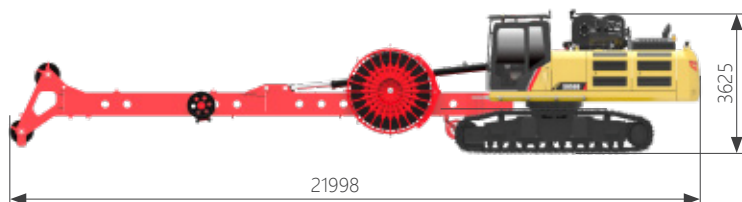
**Smart control:** 10 inch HD touch screen, fast response time, more convenient operation.

**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.



Main performances	Unit	Parameter	Remark
<b>Slot</b>			
Groove depth	m	80	
Groove width	mm	600-1200	
<b>Working equipment</b>			
Weight	t	15-25	
Max.closing force	t	165	
Open and close bucket time	s	7/7	
<b>Main winch</b>			
Lifting capacity	kN	2×270	
Wire rope diameter	mm	32	
Max.line speed	m/min	80	
<b>Mast angle</b>			
Max.working angle	°	82	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6UZ1	
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	
<b>Overall machine</b>			
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.

Main performances	Unit	Parameter	Remark
<b>Slot</b>			
Groove depth	m	80	
Groove width	mm	800-1500	
<b>Working equipment</b>			
Weight	t	15-35	
Max.closing force	t	220	
Open and close bucket time	s	9/9	
<b>Main winch</b>			
Lifting capacity	kN	2×355	
Wire rope diameter	mm	36	
Max.line speed	m/min	75	
<b>Mast angle</b>			
Max.working angle	°	81	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
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	
<b>Overall machine</b>			
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‰.

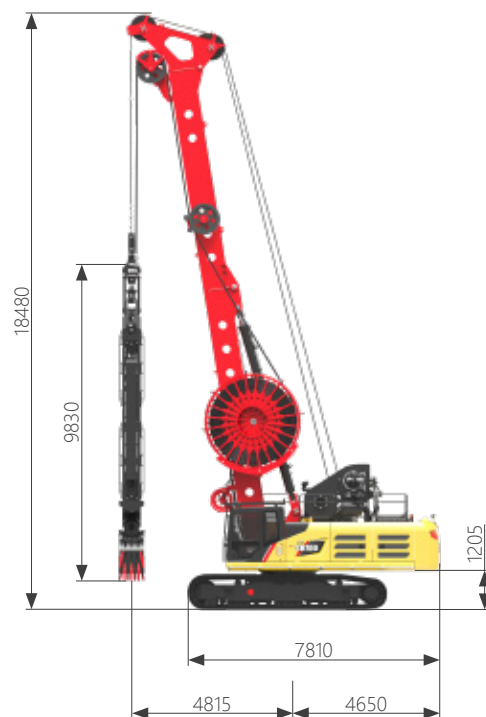
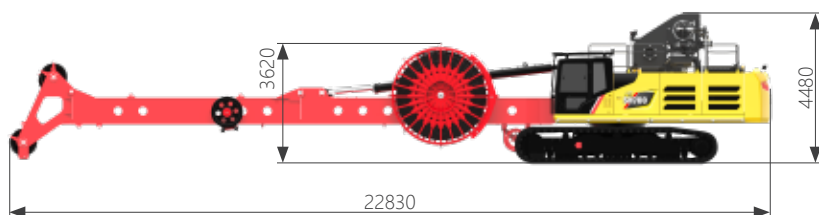
**Stable:** professional large gauge chassis, reduce rapid impact and shake, improve construction safety.

**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.



Main performances	Unit	Parameter	Remark
<b>Slot</b>			
Groove depth	m	120	
Groove width	mm	1000-3000	
<b>Working equipment</b>			
Weight	t	20-45	
Max.closing force	t	220	
<b>Main winch</b>			
Lifting capacity	kN	2×365	
Wire rope diameter	mm	36	
Max.line speed	m/min	75	
<b>Mast angle</b>			
Max.working angle	°	82	
<b>Main Chassis</b>			
Base engine	/	ISUZU 6WG1	
Engine power	kW/rpm	300/1800	
Emission regulation	/	COMIII	
Engine displacement	L	15.68	
Pump flow	L/min	2×144	
Chassis length	mm	7790	
Extension width	mm	4840	
Track shoe width	mm	800	
Swing radius	mm	4700	
<b>Overall machine</b>			
Overall height	mm	18480	
Operating weight	t	135	
Transport width	mm	3500	
Transport height	mm	3600	

**Professional:** the specialized chassis for grabber realized great construction stability, more comfortable when operating. The powerful Isuzu large displacement diesel engine could save as much as 180,000 yuan fuel spending.

**Deep:** The construction depth is 120 meters, the deepest in the same class.

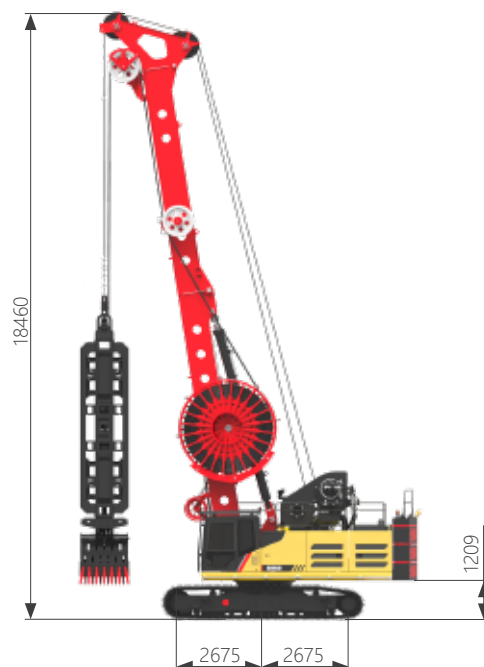
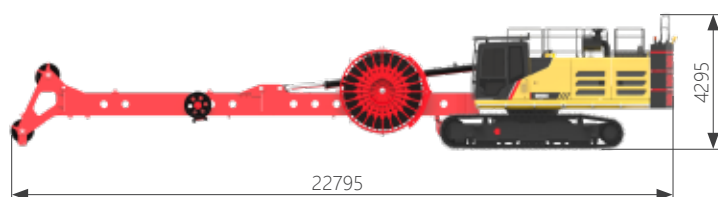
**Fast:** the lowering speed can reach 75m/min, increasing 10% construction efficiency.

**Large:** the diaphragm wall thickness can reach 2.0m, covering subway, skyscraper, dam and bridge projects construction.

**Economic:** The main winch adopts single-layer large drum, the rubber tube winding system adopts constant torque output, achieving 20% longer service life of wire rope and rubber tube.

**Time saving:** the switch time between different kinds of working devices is shorter, achieving quick disassembly.

**High-verticality:** Using the state of art perpendicularity detection technology, the perpendicularity of the groove can reach 1‰.



## NOTE

[illegible]



## ■ C10 Series



### **SR155**

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



### **SR165**

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



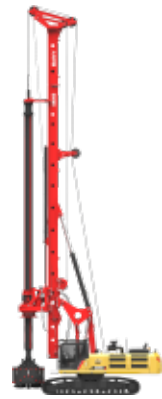
### **SR185**

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



### **SR215**

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



### **SR235**

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

## ■ W10 Series



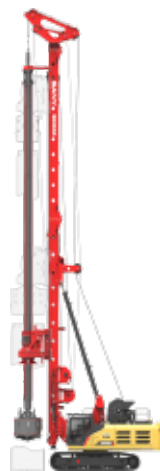
### **SR235**

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



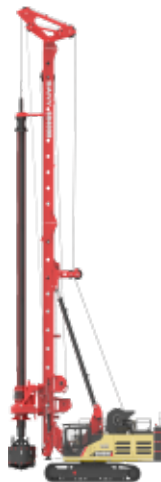
### **SR285R**

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



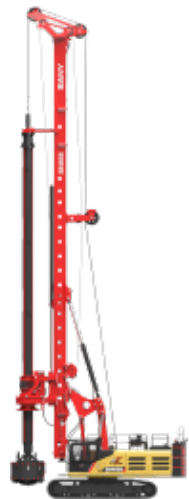
### **SR365R**

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



### **SR400R**

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



### **SR405R**

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

## ■ H10 Series



### **SR360R**

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



### **SR405R**

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



### **SR405RHK**

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



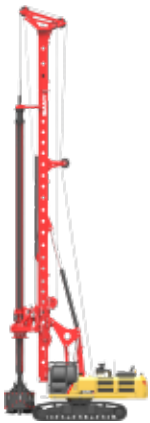
### **SR415R**

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



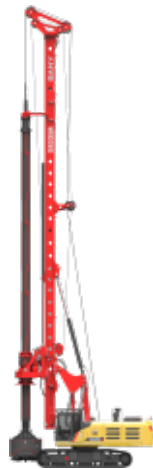
### **SR445R**

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



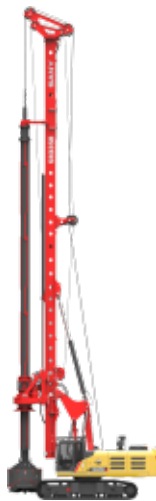
### SR265

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



### SR285R

Max. Drilling Depth: 94m  
Max. Drilling Dia. : 2,300mm



### SR335R

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

■ E10 Series

■ Hydraulic Grab



### SR360R

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



### SH500

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



### SH700

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



### SH950

Max. Drilling Depth: 120m  
Max. Drilling Dia. : 3,000mm

■ H11 Series

■ Multi-function rotary drilling rig



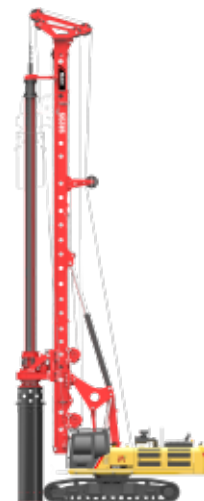
### SR485R

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



### SR580R

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



### SR235

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



### SR285R

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





## 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 the centre;  
During annular cutting, guide plates mill down the rocks;  
The capacity of soil conveying and orientation is better than common barrels;

Applicable layers: backfill, pebble layer and highly or medium 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

Beijing Sany took the lead to bring in the 6S central service mode in engineering machinery industry, and 26 6S centers at provincial level have been founded in succession. Sany has the first 4006 service calling system in Chinese piledriving industry.



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.



Global Customer Support Hotline :

0086-4006-09-8318

Global Customer Support Email :

[crd@sany.com.cn](mailto:crd@sany.com.cn)

Quality Changes the World



北京三一智造科技有限公司  
BEIJING SANY INTELLIGENT TECHNOLOGY CO., LTD.

Address: SANY Industry Park, Nankou Town, Changping District, Beijing, China  
Service Hotline: +0086-4006-09-8318  
E-mail: [crd@sany.com.cn](mailto:crd@sany.com.cn)  
Website: [www.sanyglobal.com](http://www.sanyglobal.com)

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