

INNOVATION LEADS TO VALUE



SUNWARD

SWDM45 ROTARY DRILLING RIG

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ROTARY DRILLING RIG
SWDM45

SUNWARD

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@Sunward Group

The above parameters may be different due to product upgarding



SWDM45

MAIN TECHNICAL FEATURES

MAX. DRILLING DIAMETER:

1000 mm

MAX. DRILLING DEPTH:

21m

MAX. TORQUE:

45 kN·m

ENGINE:

EU stage V /US EPA Tire 4F :

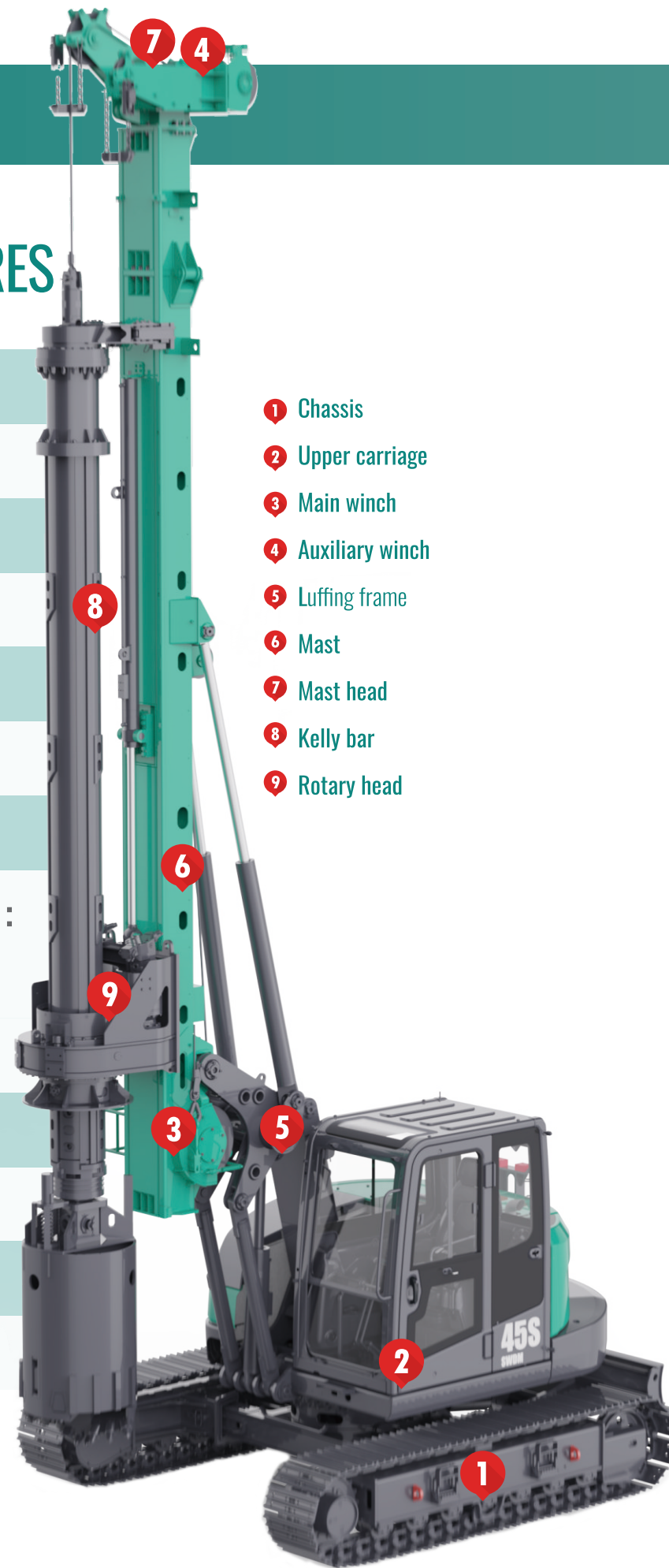
53.7 kW @ 2100 rpm

MAX. HEIGHT:

9.6 m

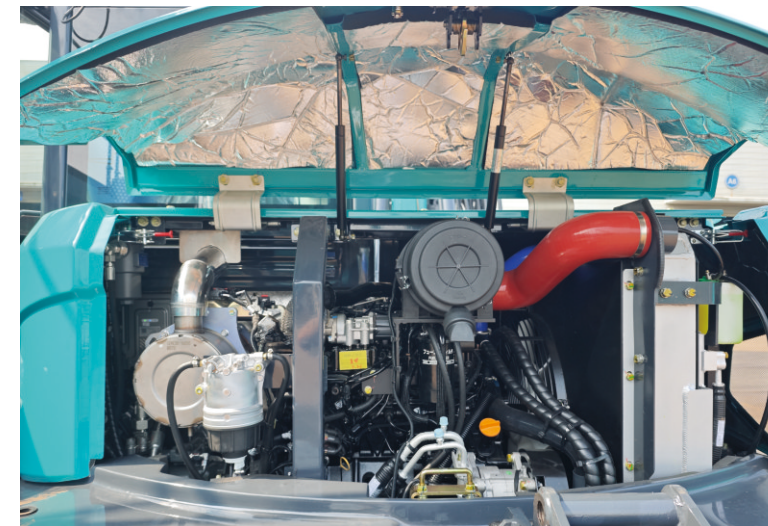
OPERATING WEIGHT:

17.6 t

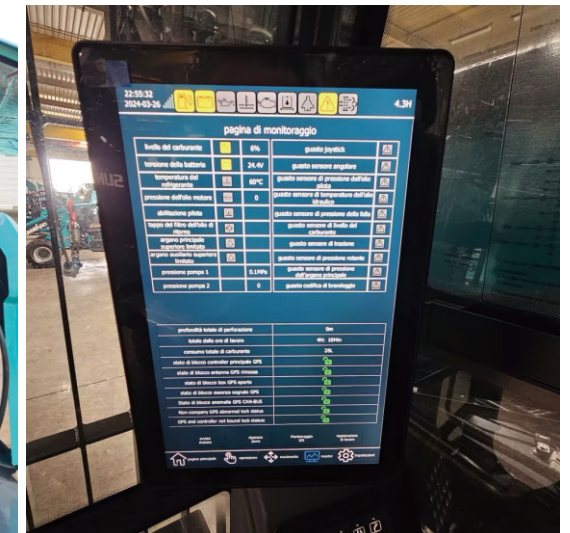


- 1 Chassis
- 2 Upper carriage
- 3 Main winch
- 4 Auxiliary winch
- 5 Luffing frame
- 6 Mast
- 7 Mast head
- 8 Kelly bar
- 9 Rotary head

HIGHLIGHTS



EFFICIENT, POWERFUL AND RELIABLE ENGINE



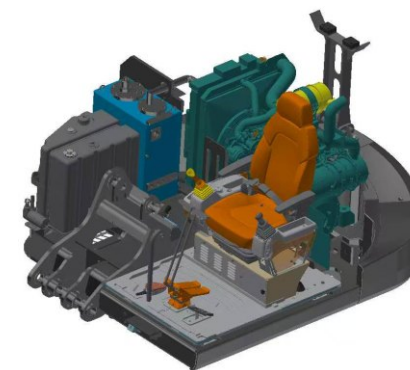
MULTI-LANGUAGE SUPPORT, VERSATILE FUNCTIONS,
MACHINE MONITORING, DIAGNOSTICS



SPACIOUS, QUIET & COMFORTABLE CAB
WITH A USER-FRIENDLY CONTROL SYSTEM



EMERGENCY STOP SWITCH,
GUARDRAIL AND OTHER SAFETY DEVICES



SMART LAYOUT,
EASY MAINTENANCE



POWER HEAD :
STANDARD WITH HIGH-SPEED SOIL THROWING , DRIVE KEY STRIP IS EASY TO MAINTAIN
ACCUMULATOR IMPACT PROTECTION SEAL, EXTENDING THE LIFE OF THE POWER HEAD MOTOR



ELECTRICAL SYSTEM:
1.ONE-TOUCH SOIL THROWING
2.ONE-TOUCH LIFTING
3.ROCK ENTRY MODE
4.ROTATION RESET

ROTARY DRILLING RIG



SWDM45 has been designed to work in LDP and CFA configurations, in very restricted access job sites, where compact and high performing machines are needed.

Designed for faster and effective set up on site including Quick Conversion from LDP to CFA and vice versa. It can also be transported without any limitations or road permissions.

- **Efficiency & Productivity**

Improved performance and functionality with many automatic solutions to simplify and protect the operator's job. Powerful engine, high performing rotary head, fast and powerful winches, are the key to improve efficiency and productivity onsite.

- **Environment Protections**

Powerful YANMAR Diesel Engine EU stage V / US EPA Tier 4f, with auto idle control system for fuel saving and low noise emission level, one of the lowest in its category.

- **SUNWARD Aftersales Quality System**

In Sunward we believe that a proactive and efficient after-sales organization is playing a pivotal role in our customers' success. This is the reason we globally invested in spare parts stock and skilled service engineers. Thanks to our Sunward Drill System, an electronic system for drilling equipment control, production supervision and fleet management, we can support our customers in their daily operations and trouble shootings onsite, wherever they are in the world.

6 MACHINE KEY FEATURES

SPECIALIZED CHASSIS

HIGH EFFICIENCY

INTELLIGENT CONTROL



SUNWARD ONLINE CLOUD

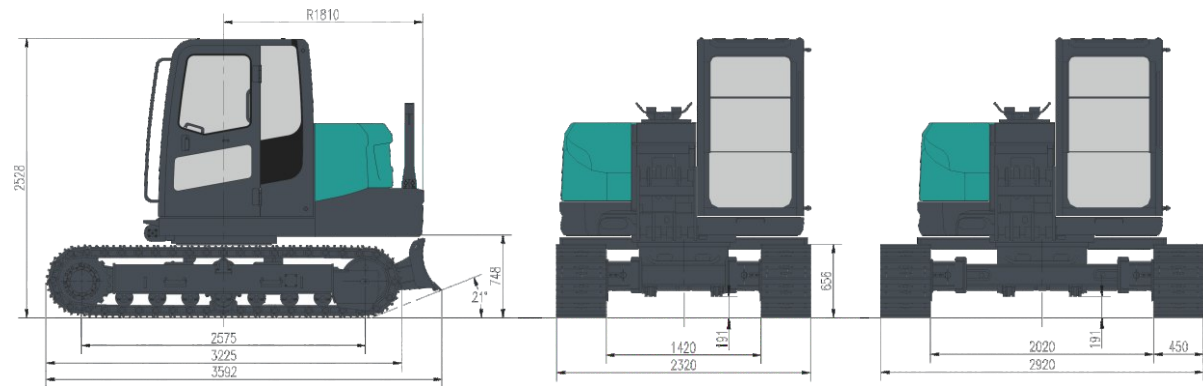
DIGITIZATION

OPERATION FRIENDLY

SWDM45 TECHNICAL PARAMETER

UNDERCARRIAGE

OVERALL WIDTH WITH RETRACTED CRAWLERS	2320 mm
OVERALL WIDTH WITH EXTENDED CRAWLERS	2920 mm
WIDTH OF TRIPLE GROUSER TRACK SHOES	450 mm
OVERALL LENGTH OF CRAWLERS	3225 mm
TRACTION FORCE (EFFECTIVE / NOMINAL)	93 / 110 kN
TRAVELLING SPEED	3.0 km/h



ENGINE

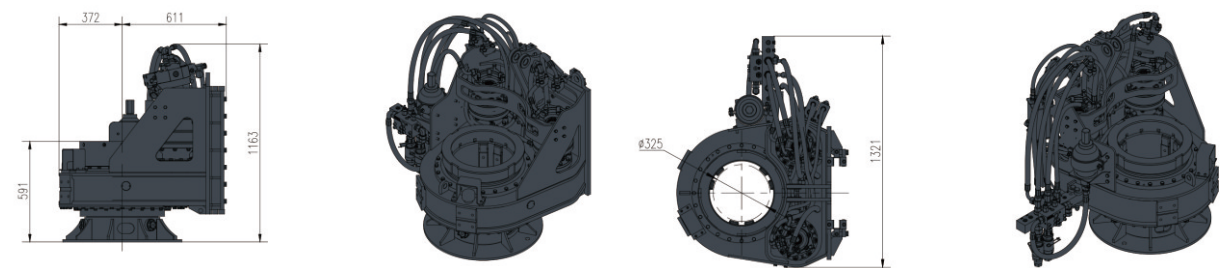
ENGINE MODEL	Yanmar 4TNV98CT
POWER RATING	53.7 KW @ 2100 RPM
ENGINE EMISSION	EU STAGE V/US EPA TIRE 4F
FUEL TANK CAPACITY	108 L
AD BLUE TANK CAPACITY	/

HYDRAULIC SYSTEM

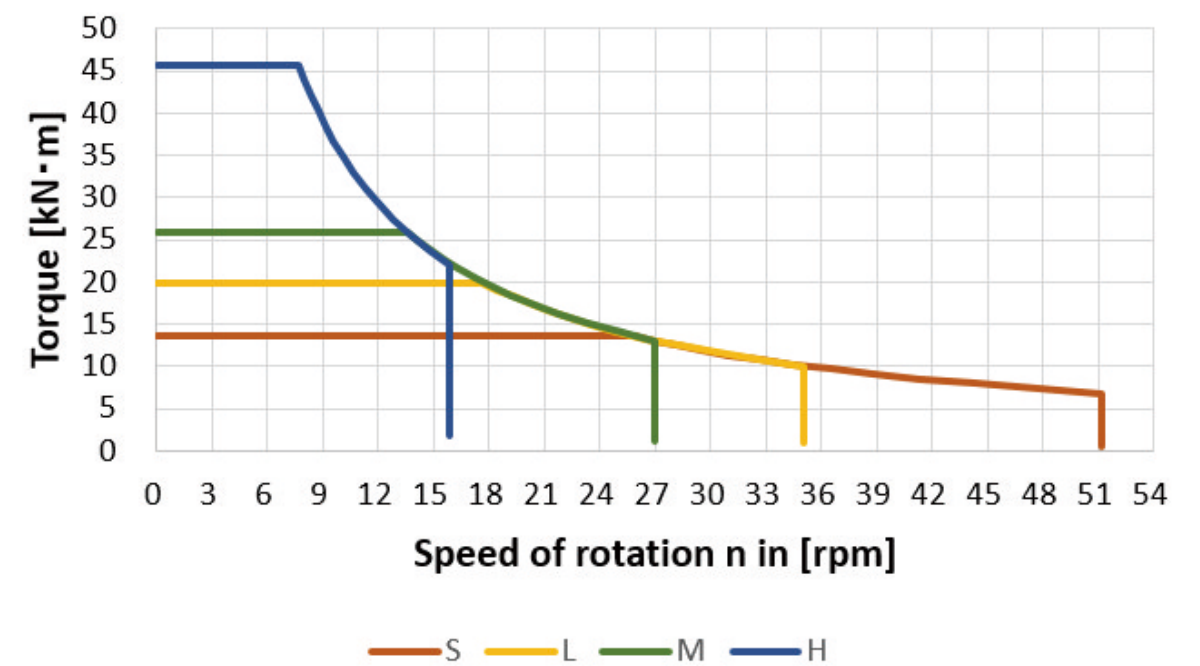
MAIN PUMPS FLOW @1900 RPM	120 L/min
HYDRAULIC OIL TANK CAPACITY	113 L
HYDRAULIC PRESSURE	320 bar

ROTARY HEAD

MAX. NOMINAL TORQUE	45 kN.m
SPEED OF ROTATION	6~35 rpm
MAX. SPEED	50 rpm
WEIGHT	1.2 T



Rotary head



SWDM45 TECHNICAL PARAMETER

MAIN WINCH

FIRST LAYER LINE PULL (EFFECTIVE)	52 kN
LINE SPEED (MAX.)	60 m/min
ROPE DIAMETER	16 mm

AUXILIARY WINCH

FIRST LAYER LINE PULL (EFFECTIVE)	20 kN
LINE SPEED (MAX.)	40 m/min
ROPE DIAMETER	10 mm

NOISE EMISSION

SOUND PRESSURE LEVEL IN CABIN – STAGE V (EN 16228, ANNEX B)	LPA 75 db
SOUND POWER LEVEL (2000/14/EC AND EN 16228, ANNEX B)	LWA 99 db

CYLINDER CROWD SYSTEM

STROKE	2000 mm
CROWD FORCE PULL (NOMINAL)	70 kN
CROWD FORCE PUSH	60 kN
SPEED UP (MAX.)	26 m/min
SPEED DOWN (MAX.)	12 m/min

SWDM45 STANDARD CONFIGURATION & OPTIONS

NOTE: ● STANDARD; ○ OPTION;

GCS2-line CFA

UNDERCARRIAGE

Variable gauge, telescopic side frames	●	●
Machine anchor points for transport	●	●

UPPER STRUCTURE

Diesel engine EU stage V - US EPA Tire 4f	●	●
On-board lighting system LED	●	●
Air-conditioning system	●	●
Radio	●	●
Air-cushioned operator's seat (no seat heating)	●	●
Protective roof guard	●	●
Engine diagnostic system	●	●
Front protective grille	●	●
Rearview mirrors	●	●
Lighting system in front of the job	●	●

ROTARY HEAD

Rotate high speed	●	
Trigger plate	●	
Exchangeable Kelly drive keys	●	●

MEASURING AND CONTROL EQUIPMENT

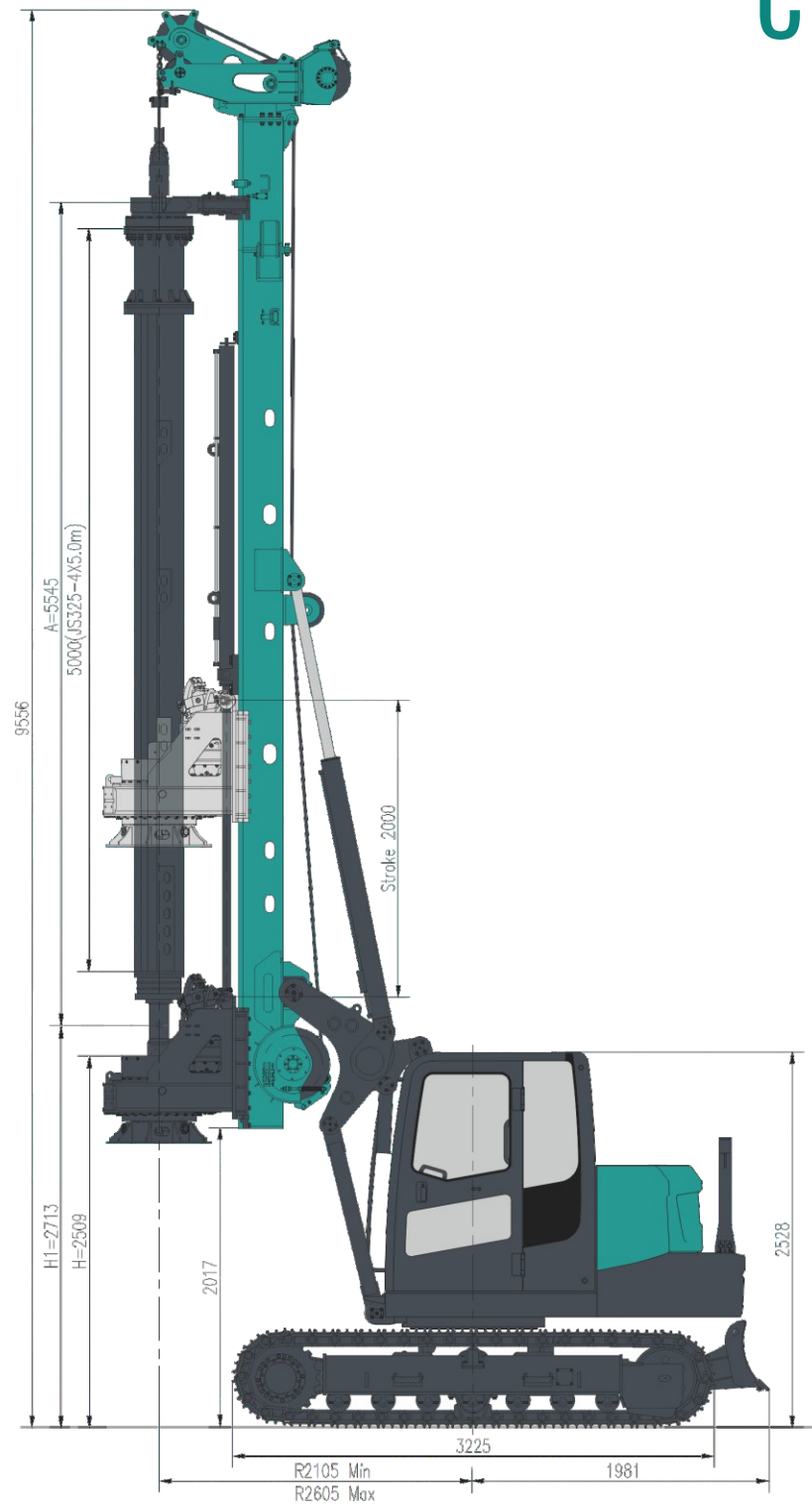
Mast inclination measurement on x/y axes	●	●
Electric load sensing on main rope	●	●
Speed sensing device on Rotary Drive	●	●
Automatic crowd control	●	
Slewing angle display for upper carriage	●	●

ATTACHMENT

H-type kinematic system	●	●
Swivel for main rope	●	●
CFA kit	○	●
Upper Kelly guide	●	

SWDM45 WORKING DIMENSION

CCS



Drawing not to scale. All technical data are purely indicative and subject to change without notice.

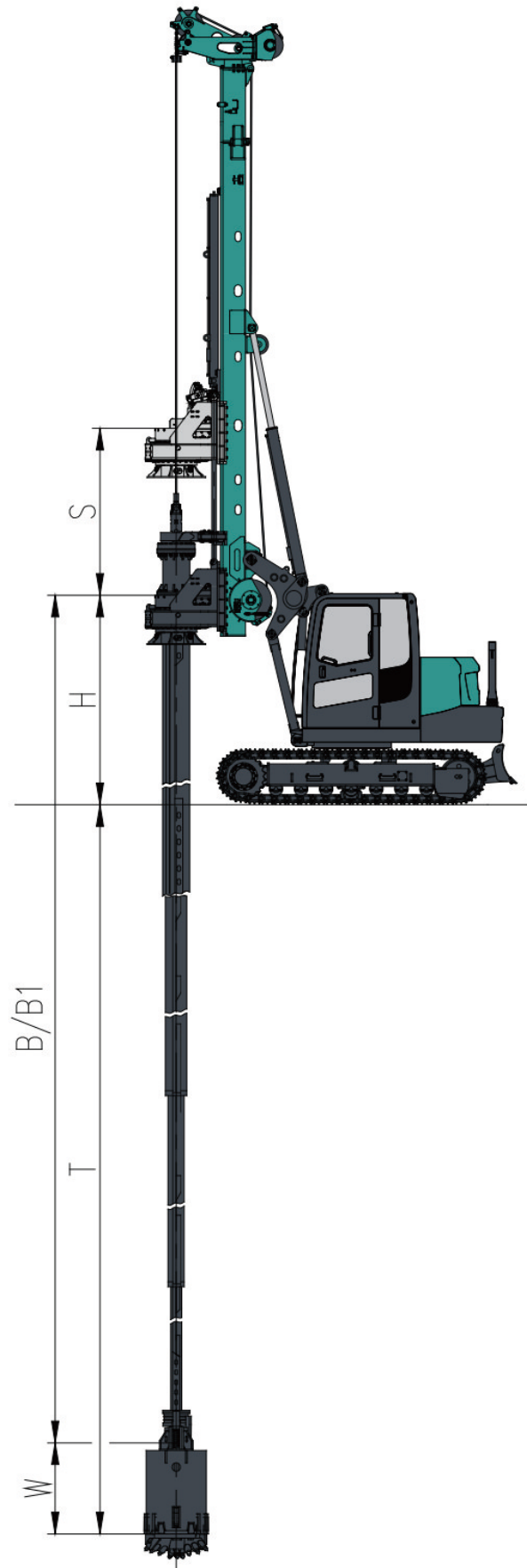
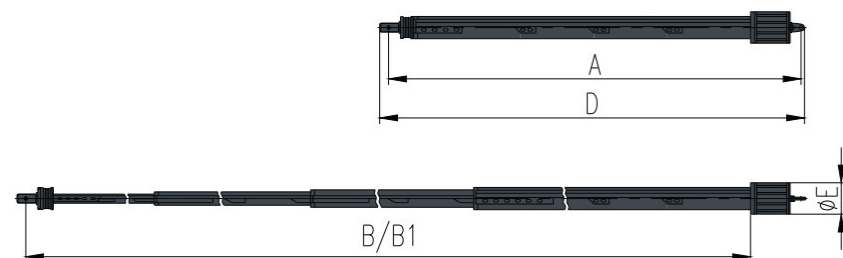
SWDM45 DRILLING TOOLS INFORMATION

CALCULATION OF DRILLING DEPTH

S	STROKE OF CROWD SYSTEM
H	HEIGHT OF ROTARY DRIVE ABOVE GROUND LEVEL
W	LENGTH OF TOOL
B	LENGTH OF KELLY BAR FULLY EXTENDED. FRICTION
B1	LENGTH OF KELLY BAR FULLY EXTENDED. LOCKED
T	DRILLING DEPTH
$T=B+W-H$	MAX. DEPTH FRICTION KELLY BAR
$T=B1+W-H$	MAX. DEPTH LOCKED KELLY BAR

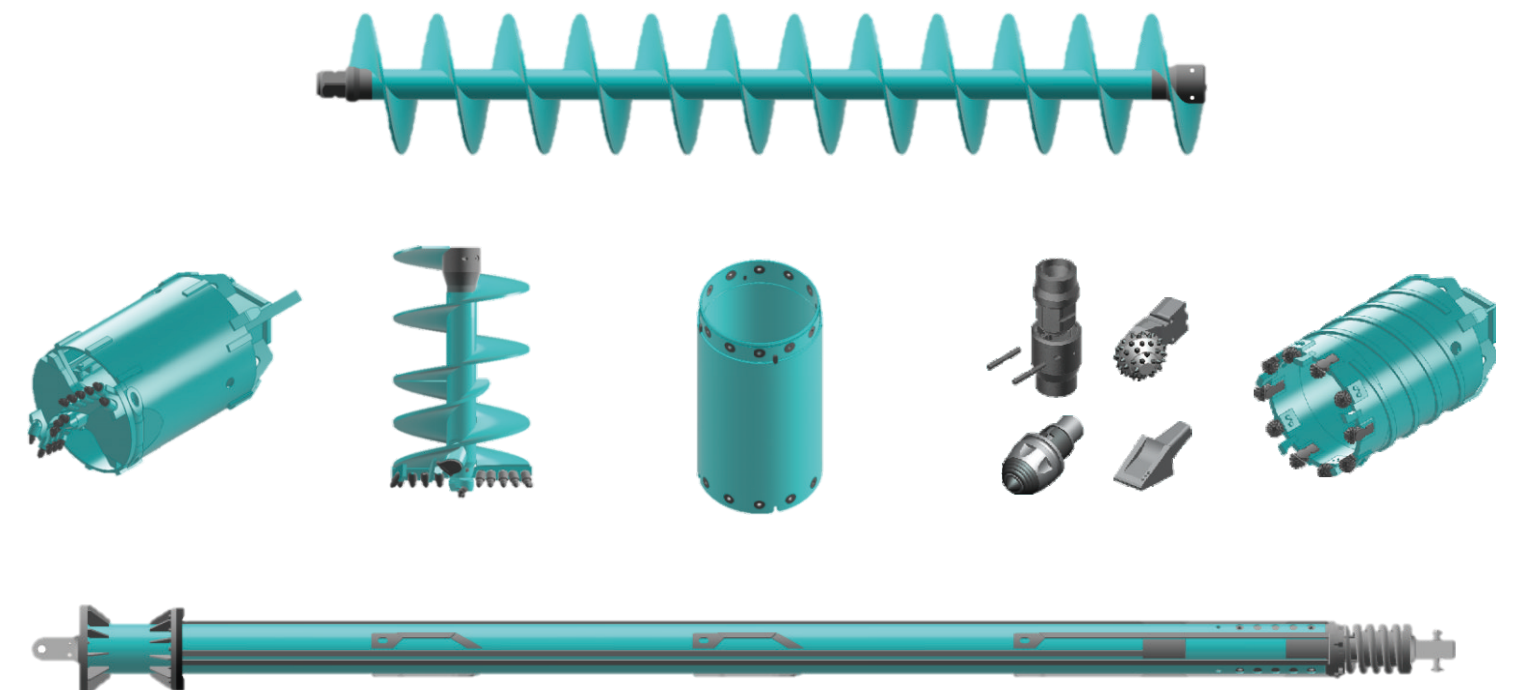
KELLY BAR

A	RETRACTED LENGTH
D	TRANSPORT LENGTH
$\varnothing E$	MAX. TRANSPORT DIAMETER
B	EXTENDED LENGTH
B1	EXTENDED LENGTH (LOCKED)

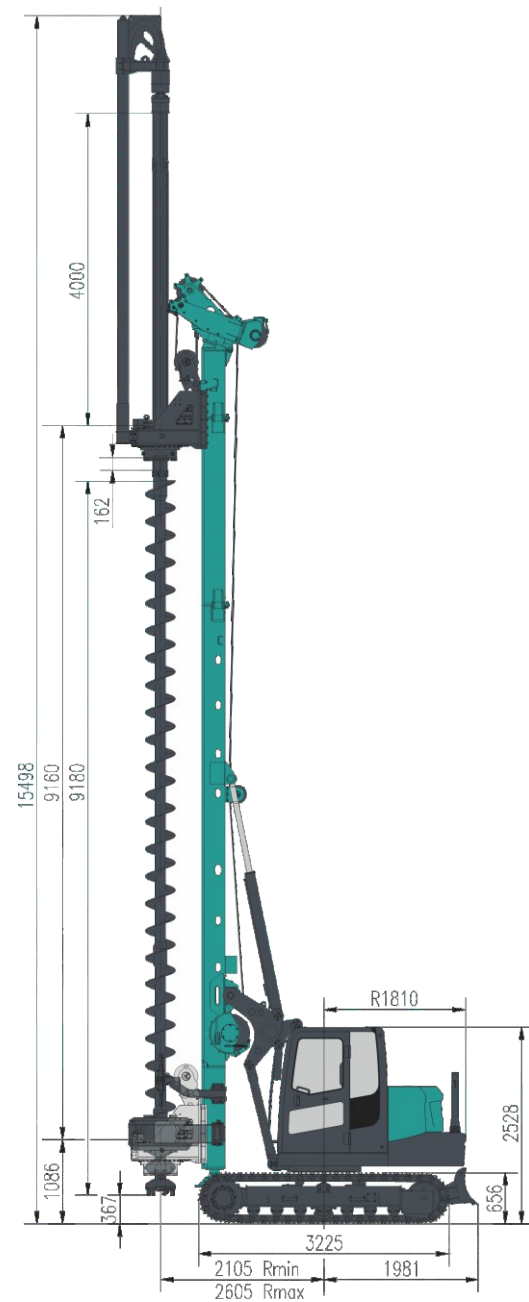


Kelly		A		B/B1		D		$\varnothing E$		Weight		Drilling depth		CCS H1	
Type	Dimension	mm	ft	mm	ft	mm	ft	mm	ft	kg	t(US)	m	ft	mm	ft
Locked	JS325-4X4.0m	4545	14.1	13575	44.6	4725	15.6	460	1.6	1730	1.9	12	39.4	3200	10.6
Locked	JS325-4X4.5m	5045	16.7	15575	51.1	5225	17.2	460	1.6	1930	2.1	14	45.1	3200	10.6
Locked	JS325-4X5.0m	5545	18.2	17575	57.8	5725	18.9	460	1.6	2130	2.3	16	52.6	2713	8.1
Locked	JS325-5X5.0m	5587	18.3	22714	74.6	5725	18.9	460	1.6	2240	2.5	21	68.1	2671	7.9

SWDM45 supports various drilling tools to meet construction site needs.



2-lines CFA

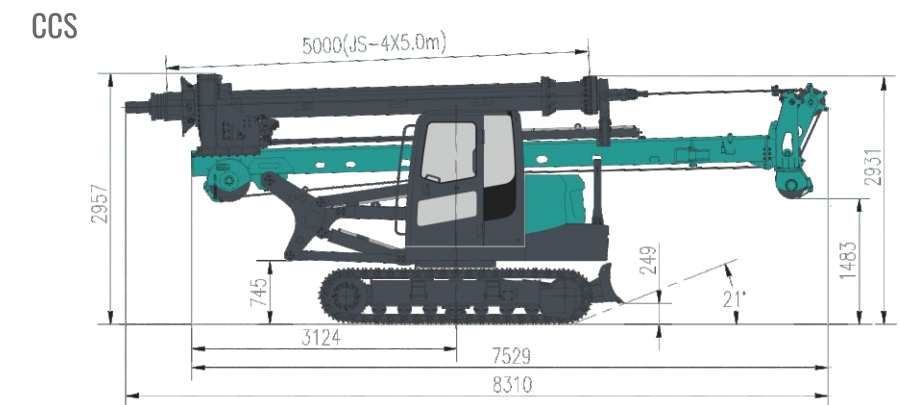


Diam.(mm)	Without extension depth (m)	With extension depth (m)
D350 -D600	8.6	12.6

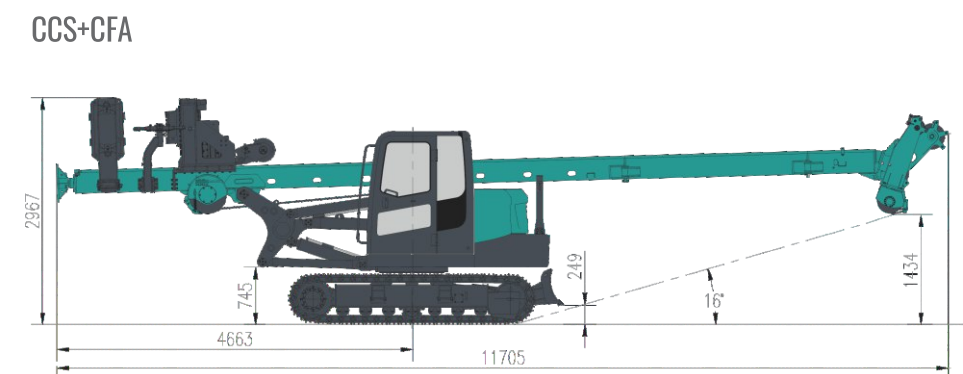
Note: The conditions of the maximum depth and the maximum diameter cannot be satisfied simultaneously.

TRANSPORT

G = Weight B = Width, overall



Note: G =16.4t B=2320mm Above drawing using Kelly bar JS325-4X5.0m.



Note: G =15.5t B=2320mm

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REFERENCE

Transportability

The SWDM45 is a 16.4-ton class machine, including the Kelly bar, and is designed to be easily transported without requiring special road permissions in most scenarios.

SWDM ROTARY DRILLING RIGS RANGE OVERVIEW-PRO SERIES



SWDM45

SWDM85

SWDM135

SWDM165

SWDM215

SWDM245

SWDM325

SWDM415