



SANDVIK DE140 COMPACT UNDERGROUND AND SURFACE CORE DRILL

TECHNICAL SPECIFICATION

The SANDVIK DE140 is a compact and powerful drill rig designed to meet the requirements of harsh underground environments. The lifting capacity and feed force have made this drill very strong in relation to its size.

The SANDVIK DE140 features a compact and modular design with a feed and pull force of 9.4 t (20,730 lbf).

- Direct feed (no feed chains)
- Depth capacity of 1,220 m (4,003 ft) N size
- Feed force of 9.4 tonnes (20,730 lbf)
- Pull force of 9.4 tonnes (20,730 lbf)

Sandvik recommends using only Sandvik quality manufactured parts. Sandvik does not guarantee the consistency or quality of other manufacturers.



Image for illustration purpose only, please refer to the order specification for exact rig.

SANDVIK DE140 COMPACT CORE DRILL RIG FOR UNDERGROUND AND SURFACE APPLICATIONS.

KEY FEATURES

- CE marked to meet European standards (Conformité Européenne)
- Rotating rod guard with interlock
- Direct feed to rotation unit with no chains
- Synchronized rod handling
- Load sensing hydraulic system for optimized power and efficiency
- Designed for easy set-up when fan drilling underground
- Direct feed push and pull of 9.4 tonnes
- Rod holder closes automatically by gas accumulator, and opens hydraulically
- Mechanical feed boom lineal adjustment allowing the feed boom to contact ground
- All hydraulic operation
- Control panel – central control of all drilling operations
- 360 degree turn table attached to the rig base

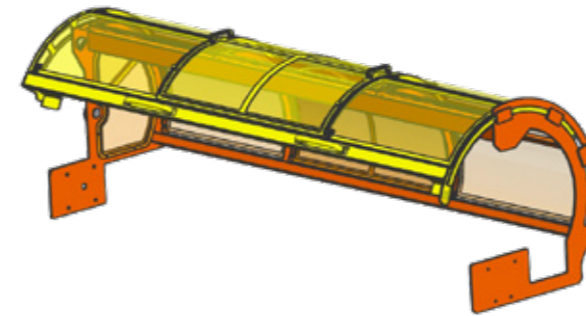
OPTIONS

- Rod holder / rod clamp 150 mm
- H size rotation unit
- N size rotation unit - high torque

STANDARD FEATURES

ROTATING ROD GUARD

Rotating rod guard supplied	Yes
Feed boom fully enclosed	Yes
Interlock to stop rotation on open	Yes



DEPTH CAPACITY*

	Metric	Imperial
TK46**	2,473 m	8,114 ft
A**	2,000 m	6,562 ft
TK56	1,918 m	6,293 ft
B	1,592 m	5,223 ft
TK66	1,843 m	6,047 ft
N	1,220 m	4,003 ft
TK76	1,323 m	4,340 ft
H***	830 m	2,730 ft
P		N/A

*Calculations are based on machine capacity, which in some cases may exceed the rated hole depth of the down hole tooling. Sandvik does not guarantee that these results will be achieved in all drilling conditions. Practical up-drilling capacity is approximately 50% of down-drilling capacity.

**Not suitable with H-size rotation unit option.

*** Requires H-size rotation unit option.

ROTATION UNIT N SIZE 1600 RPM

	Metric	Imperial
Hollow spindle - Id (N)	77 mm	3 in
Torque @ 50 RPM	447 Nm	330 lbf ft
Torque @ 1600 RPM	146 Nm	108 lbf ft
Rotation speed	0 - 1,600 RPM	
Number of jaws	8	
Gripping range	30 - 76 mm	1.18 - 3 in
Gripping range	10 mm	0.39 in

ROD HOLDER / ROD CLAMP

	Metric	Imperial
Number of jaws	2	
Gripping range	30 - 106 mm	1.8 - 4.17 in
Gripping range/set of jaws	20 mm	0.79 in
Maximum opening (No jaws)	136 mm	5.35 in
Open jaws	Hydraulic	
Close jaws	Accumulator	

Clamping by accumulator action, open hydraulically. Rod holder and chuck work with inverted action. Exchangeable rod guide and jaws for standard drill rods casings and core barrels.

FEED BOOM

	Metric	Imperial
Feed force	92.2 kN / 9.4 t	20,730 lbf
Pull force	92.2 kN / 9.4 t	20,730 lbf
Feed length (Stroke)	1,710 mm	5 ft 7 in
Total length	3,018 mm	10 ft
Feed rate, rod running max	0.6 m/s	24 in/s

Standard feed boom is made of stiff and resistant steel profile and has full range adjustment from vertical down to vertical up. Setting up is simplified with a hydraulic tilt cylinder and a mechanical lineal feed boom adjustment.

CONTROL PANEL

Central control of all drilling operations, including flush pump, wireline hoist and boom tilt.

Gauges for:

- Hydraulic system pressure
- Feeding force
- Water pressure
- Water flow

POWER UNIT - ELECTRIC 55 KW (75 HP)

	Metric	Imperial
Power	55 kW	75 hp
Maximum working pressure	250 bar	3,625 psi
Maximum oil flow	142 l/min	38 US gpm
Tank volume (Oil)	80 l	21 US gal
Cooler	Water	

- Other information
- Y/D connector
 - Oil level indicator
 - Filter indicator
 - Thermometer
 - Hand pump for oil fill
 - Pressure and return filter

WATER PUMP

	Metric	Imperial
Type	Hydraulic drive Bean1122	
Maximum flow	100 l/min	26 USgpm
Maximum pressure	69 Bar	1000 psi

WIRELINE HOIST

	Metric	Imperial
Drum capacity	1,200 m x 5 mm	3,937 ft x 0.2 in
Pulling force, empty drum	12,4 kN	2,700 lbf
Speed full drum	2.7 m/s	9 ft/s
Cable leveler	Yes	

WIRELINE MAST

	Metric	Imperial
Length	1,000 mm	3.28 ft

Wireline mast includes a rod support and wireline sheave wheel assembly. The wireline mast is expandable with different length sections.

MOUNTING FRAME

- Mounting frame, 180° tilt
- Rear supports, including mounting brackets
- Wall mounting bracket
- Fork lift "pockets"
- Safety bracket for water hose
- 360 degree turn table attached to the rig base

WEIGHT

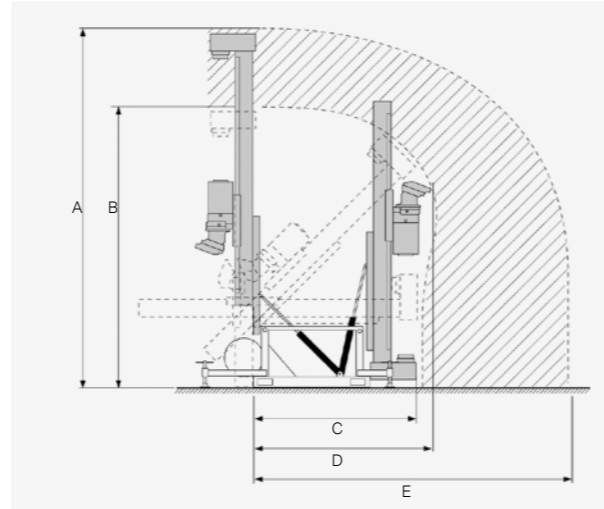
	Metric	Imperial
Drill unit (Including feed boom, rod holder, rotation unit (N), and wall bracket)	695 kg	1,530 lb
Drill unit (Including feed boom, rod holder, rotation unit (H), and wall bracket)	847 kg	1865 lb
Mounting frame (Including tilt cylinder and support legs)	225 kg	496 lb
Control panel	110 kg	242 lb
Power unit - electric standard	640kg	1411 lb
Hydraulic hoses	80 kg	176 lb
Wireline hoist - 1,200 m (Excluding rope)	107 kg	236 lb

Note: Weights and dimensions are approximate only.

OPERATING FOOTPRINT

	Metric	Imperial
A	4,250 mm	167 in
B	3,500 mm	138 in
C	1,900 mm	75 in
D	2,100 mm	83 in
E	3,750 mm	148 in

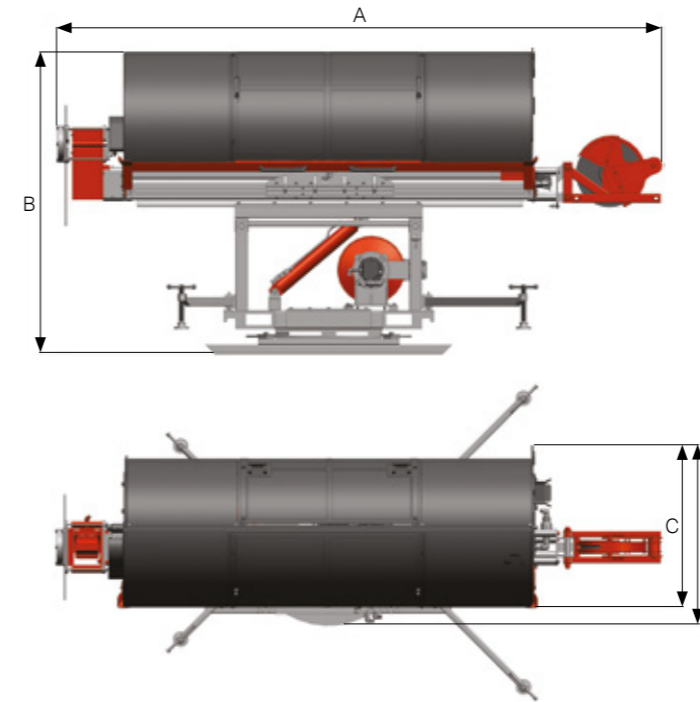
Note: Drawing shows working range for SANDVIK DE140 without the wireline mast mounted. With mast and sheave wheel mounted the measurements should be adjusted.



Note: Weights and dimensions are approximate only.

DIMENSIONS DRILL UNIT - -WITHOUT WL MAST

	Metric	Imperial
A	4,039 mm	-
B	2,006 mm	-
C	1,079 mm	-
D	1,195 mm	-



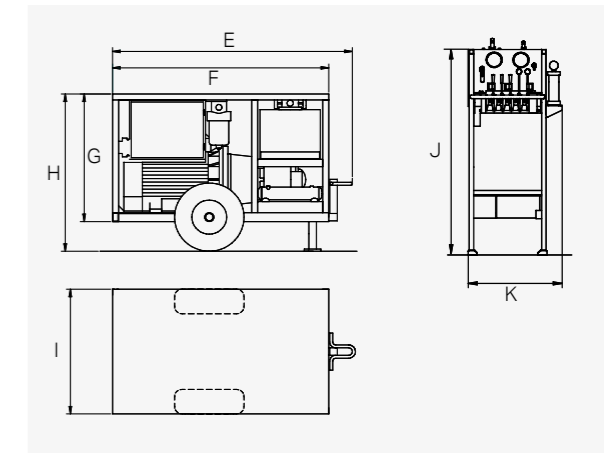
DIMENSIONS POWER UNIT

55 KW - ELECTRIC		
	Metric	Imperial
E	1,600 mm	63 in
F	1,430 mm	56 in
G	860 mm	34 in
H	1,040 mm	41 in
I	840 mm	33 in

DIMENSIONS - CONTROL PANEL

	Metric	Imperial
J	1,165 mm	46 in
K	525 mm	21 in
Depth	480 mm	19 in

Note: Weights and dimensions are approximate only.



OPTIONS

ROTATION UNIT N SIZE 1100 RPM - OPTION

	Metric	Imperial
Hollow Spindle - Id (N)	77 mm	3 in
Torque @ 50 RPM	447 Nm	330 lbf ft
Torque @ 1100 RPM	212 Nm	156 lbf ft
Rotation Speed	0 - 1,100 RPM	
Number of Jaws	8	
Gripping Range	30 - 76 mm	1.18 - 3 in
Gripping Range	10 mm	0.39 in

ROTATION UNIT H SIZE 1100 RPM - OPTION

	Metric	Imperial
Hollow Spindle - Id (N)	103 mm	4 in
Torque @ 50 RPM	757 Nm	558 lbf ft
Torque @ 1100 RPM	271 Nm	200 lbf ft
Rotation Speed	0 - 1,100 RPM	
Number of Jaws	12	
Gripping Range	38 - 102 mm	1.50 - 4 in
Gripping Range	15 mm	0.59 in

ROD HOLDER / CLAMP 150MM - OPTION

	Metric	Imperial
Number of Jaws 2	2	
Gripping	36 - 150 mm	1.42 - 5.91 in
Gripping Range/set of jaws	87 mm	3.43 in
Maximum opening (no jaws)	150 mm	5.91 in

Clamp and open hydraulically. Exchangeable rod guide and jaws for standard drill rods casings and core barrels.

WIRELINE MAST - OPTION

	Metric	Imperial
Length	2,000 mm	6.56 ft

Wire line mast includes a rod support and wireline sheave wheel assembly. The wireline mast is expandable with different length sections. 500mm, 1000mm and 2000mm sections of wireline mast are available

POWER UNIT DIESEL TIER 2 - OPTION

	Metric	Imperial
Power	92 kW	123 hp
Type	Perkins	
Tier Rating	Tier 2	

Note: Tier 2 Diesel engine is not CE marked

Replaces electric power unit

POWER UNIT DIESEL TIER 3 - OPTION

	Metric	Imperial
Power	92 kW	123 hp
Type	Perkins	
Tier Rating	Tier 3	

Note: Tier 3 Diesel engine is not CE marked

Replaces electric power unit

SANDVIK TOOLS AND CONSUMABLES

Sandvik have a complete range of down hole tools and consumables to support exploration rigs for start up and continued operation, Sandvik can offer competitive tooling packages with the sale of drill rigs.

TOOLS AVAILABLE

- Underground core barrel systems
- Surface core barrel systems
- Core barrel and inner tube consumables. Full range available
- Overshot core retrieval systems
- Drill bits, reamers, PCD bits, casing shoes etc. Full range available
- Diamond rods and casing all sizes available
- Drill muds and additives
- Wedging tools
- Casing cutters
- Water swivels and hoisting plugs
- Full range of adaptor subs available

SANDVIK AFTERMARKET

Sandvik has excellent aftermarket service and support with a global footprint in 130 countries around the world.

AFTERMARKET AVAILABLE

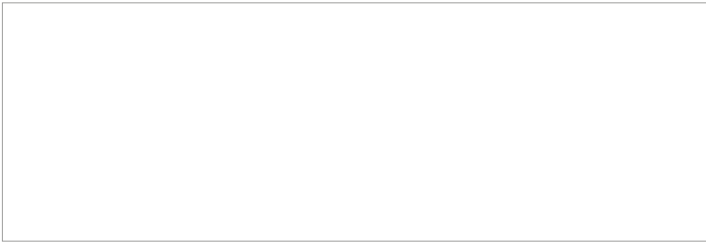
- All spare parts are available through Sandvik global warehouses
- Spare parts packages can be supplied with new rigs
- Sandvik can tailor service contracts to suit customer requirements

SANDVIK GEOLOGICAL CONSUMABLES

Sandvik has comprehensive range of over seven hundred geological products available for global distribution.

GEOLOGICAL PRODUCTS AVAILABLE

- Metal core trays
- Plastic core trays
- Core tray racking systems
- Automatic core saws and blades
- Manual core saws and blades
- Core handling systems
- Pipe wipers
- Orientation down hole tools
- Si-foam A and B
- Marking consumables
- Flagging tape
- Survey stakes
- Magnification tools
- Geo picks and hammers
- Compass and clinometers
- Chip sample boxes
- Calico bags
- Plastic bags
- Press seal bags
- Wetstrength bags
- Certified test sieves
- Over 700 products total



Photos and illustrations in this brochure may show equipment with optional extras. Equipment, equipment specifications and data on this data sheet subject to change without notice. Please contact a Sandvik representative for clarification on equipment, equipment specifications and data.

