

SCX DE881

DESIGNED BY SANDVIK

SCX
SUNNY CORNER
EXPLORATION

MULTI-PURPOSE DRILL RIG FOR SURFACE APPLICATIONS TECHNICAL SPECIFICATION

The SCX DE881 HC is a heavy duty multipurpose exploration drill rig, it is the industry benchmark in performance. The drill rig offers more depth capacity in both diamond and reverse circulation drilling compared to its rivals. It is the most powerful drill rig in the SCX range of exploration drills. The DE881 is recognized by those who demand industry leading performance.

- ▶ Depth capacity of 2223 m (7291 ft) N size (coring)
- ▶ Depth capacity 446 (1,463 ft) 4.5 in size (reverse circulation)
- ▶ Feed force of 11.4 tonnes (25,350 lbf)
- ▶ Pull force of 23 tonnes (50,700 lbf)

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

DE880 model showed, please refer to specification as quoted.



Version 1

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



SCX DE881

Multi-Purpose Drill Rig For Surface Applications

KEY FEATURES

- DA555 Diamond/RC Rod Handler for hands free rod handling
- Hands free breakout tool
- FOPS fitted over the control panel
- Jaws for N, H and P sizes rod handler and rod clamps
- Starter rods included for N, H, and P sizes
- Rotating rod guard with interlock
- Cummins QSL9 inline 6 cylinder Tier 3 engine
- Front mount diesel engine
- Sophisticated microfeed system
- Water/Mud pump
- Water swivel
- Acoustic enclosure on the engine
- Powerful top drive rotation unit
- Self-energizing rod clamp
- One rod clamp can support B, N, H, P and S rod sizes, 44.5 to 177.8 mm (1-3/4 to 7 in)
- Auxiliary hydraulic outlets
- Multiple guarding to reduce risk of moving components and rotating rod injury
- Onboard rod storage
- Remote wedge interlock kit
- Deck mounted wire line winch
- Wireline counter/cleaner/overrun cut out
- Left-hand hydraulic operated walkway with stairs

- Fluid catch tray under engine
- High pressure filter kit
- Hose sleeving on high risk hoses
- Air line oiler

OPTIONS

- Safe-T-Spin rod joint torque/make/break device
- Fitment options for multiple trucks
- Auxiliary air compressor
- Arctic heating package
- Fire suppression system - suitable for subzero climates

RC OPTION INCLUDES

- Sample hose assembly
- Air and mud swivel
- Blast box
- Blow down system
- Rig mounted RC sampling cyclone

STANDARD FEATURES



ROTATING ROD GUARD

Rotating rod guard supplied	Yes
Interlock to stop rotation on open	Yes

DEPTH CAPACITY*

	Metric	Imperial
N	3,200 m	10,499 ft
TK76	3,259 m	10,690 ft
H	2,125 m	6,970 ft
P	1,436 m	4,710 ft
4 in (RC)	525 m	1,723 ft
4.5 in (RC)	446 m	1,463 ft

*Calculations are based on machine capacity, which in some cases may exceed the rated hole depth of the down hole tooling. SCX does not guarantee that these results will be achieved in all drilling conditions.

ROD HANDLING

	Metric	Imperial
Hands free		Yes
Diamond rod sizes	N, H, and P sizes	
RC rod sizes	3.5 in and 4.5 in RC sizes	
Max rod weight	200 kg	440 lbs
2.875 inch and 4 inch RC sizes are available separately		

ONBOARD ROD STORAGE

Rod sizes	Metric	Imperial
N	6 m	96
H	6 m	60
P	6 m	40
4.5 in (RC)	6 m	40

ROD BREAKOUT TOOL

Hands free	Yes
Diamond rod	Yes
RC rod	Yes

This breakout tool is integrated with the mast and DA555 rod loader, is hands free operation.

ROTATION UNIT

	Metric	Imperial
Type	Top drive spindle, 3.5" API IF thread, 50 mm float, direct coupled to drill rods.	
Water swivel	25 K	
Hydraulic motor	160cc variable displacement	
Torque (max) low gear	14,324 Nm	10,564 lbf ft
Torque (max) high gear	3,209 Nm	2,367 lbf ft
Rotation speed low gear	0 - 220 rpm	-
Rotation speed high gear	0 - 1,500 rpm	-
Torque @ 900 rpm	1,750 Nm	1,291 lbf ft

Oil jet lubricated hardened gears and bearings. Stepless speed control with two speed gearbox. Speed infinitely variable.

ROD HOLDER / CLAMP

	Metric	Imperial
Number of jaws	2	
Gripping range	44.5 - 177.8 mm	1.75 - 7 in
Gripping range/set of jaws	B, N, H, P and S	
Maximum opening (<i>no jaws</i>)	224 mm	8.8 in
Open jaws	Hydraulic	
Close jaws	Hydraulic - self energizing	

18 inch slips table available as an option. Rod clamp can be removed for handling large diameter casing.

FEED BOOM

	Metric	Imperial
Type	Hydraulic cylinder over ropes	
Feed force	113 kN (11.4 t)	25,350 lbf
Pull force	226 kN (23 t)	50,700 lbf
Feed length (<i>Stroke</i>)	7.32 m	24 ft
Speed up	65.4 m/min	215 ft/min
Speed down	49 m/min	161 ft/min

Sophisticated microfeed system providing fine feed control over a wide range (25 mm/min to 4 m/min). System has bit weight control.



POWER UNIT - HYDRAULICS

	Metric	Imperial
Power	242 kW @ 1800 rpm	325 hp @ 1800 rpm
Diesel engine	Cummins QSL9 (<i>inline 6 cylinder</i>)	
Emission rating	EEU Stage III CARB/EPA Tier 3	
Engine filtration	Standard plus 30 µm rated remote fuel filter	
Hydraulic filtration	Full flow 10 µm rated return oil filter	
Maximum working pressure	350 bar	5,076 psi
Maximum oil flow (<i>rotation hydraulic oil</i>)	290 L/min	77 USgal
Tank volume (<i>hydraulic oil</i>)	650 L	172 USgal
Cooler engine	Water cooled with pressure relief cap	
Cooler hydraulics	Air cooled	
Electrical system	24 Volt	

WATER PUMP

	Metric	Imperial
Type	Hydraulic drive L1118-SC	
Maximum flow	246l/min	65 US gpm
Maximum pressure	124 Bar (13,800 kPa)	1800 psi

MAST

	Metric	Imperial
Rod pull capacity (<i>Rod loader</i>)	6 m	20 ft
Rod pull capacity (<i>Main winch</i>)	9 m	30 ft
Core pull capacity	6 m	20 ft
Mast dump stroke	1,300 mm	51 in
Mast length	12.3 m	40.4 ft
Mast angle	90 - 45° angle holes	
Breakout tool	Built in, hands free, capable of handling B to P sizes, up to 19,540 Nm torque.	
Mast jack	Mast dump and mast jack provides ground contact for the mast at all drilling angles.	
Mast lock	Incorporates a dual point mast pivot frame and hydraulic locking system.	
Work platform	Heavy-duty operator work area platform provides safer access around mast base.	

CONTROL PANEL

The entire drilling process is controlled from a single control panel providing the operator with an excellent overview of the drill site. The control panel is intuitive and easy to learn and operate.

WIRELINE HOIST

	Metric	Imperial
Drum capacity	3,200 m x 8 mm	10,500 ft x 5/16 in
Pulling force, empty drum	21,4 kN	4,800 lbf
Speed full drum	215 m/min	705 ft/min
Cable leveler	Yes	

Wireline cleaner/overrun cutout keeps rig cleaner and prevents overwind during wireline operations.

MAIN HOIST

	Metric	Imperial
Pull capacity, max	216 kN (22 t)	48,000 lbf
Speed, max	137 m/min	450 ft/min
Cable diameter	26 mm	1.02 in
Travel limiter	Prevents the winch from over-winding	

Mast top mount single line pull.

ROD HANDLING BOOM

	Metric	Imperial
Safe working load	320 kg	705 lb

The boom has a hydraulic winch, boom slew and boom tilt functions operated from control console.

AUXILIARY HYDRAULIC OUTLETS

Three auxiliary hydraulic outlets

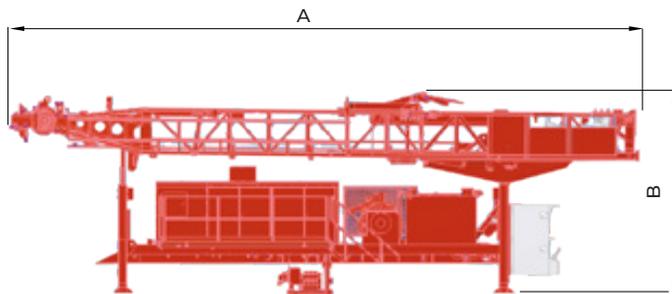
DIMENSIONS



TRUCK CONFIGURATION

	Metric	Imperial
A	12.57 m	41.2 ft
B	3.87 m	12.7 ft
Width	2.5 m	8.2 ft
Weight (excludes truck)	21,500 km	47,400 lb

Note: Weights and dimensions are subject to change depending on options selected.

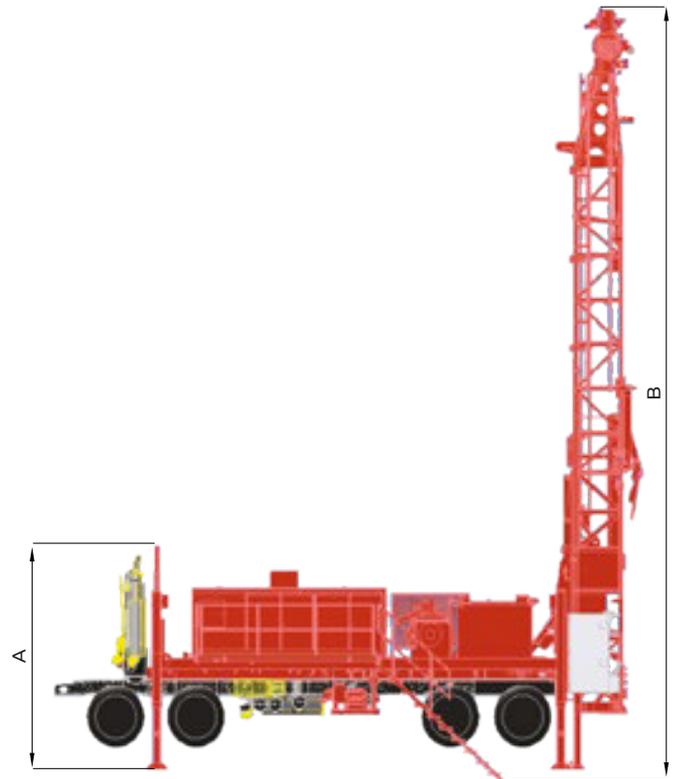


OPERATING FOOTPRINT

	Metric	Imperial
A	3.6 m	11.7 ft
B	13.2 m	43.3 ft
Width	2.5 m	8.2 ft

Note: Operating footprint is subject to change depending on options selected.

Note: Operating footprint dimensions have jack legs fully down, mast jack fully out, mast dump fully up.



OPTIONS



ARCTIC PACK

Arctic Pack for sub zero temperatures

CARRIER CONFIGURATION

Volvo 8 x 4 truck mount

MAN 8 x 4 truck mount

Custom truck mount

Crawler Track

REVERSE CIRCULATION AIR PACKAGE - 4.5 INCH

Reverse Circulation air package Includes:

Hydraulic powered spanner for DTH / RC rods

Compressor connection hose and whip checks

Sample hose assembly

Air and mud swivel blast box, blow down valve (Installation and valving)

RC sample hose support

Slips table

T-Piece

T-Piece hose kit

Onboard RC Sampling Cyclone 400-685 L/s (850-1450 cfm)

Rod Slips

Spanner Table

Spanner - Rod RC 4.5"

Slip Insert Set - RC 4.5"

Slips Table Assembly

Spanner Drive Assembly

RC Thread

MK 4.5 inch subs / inner tubes

Remet 4.5 inch subs / inner tubes

COMPRESSOR PACK

Trailer Mount

Doosan Silenced portable XHP1250/375PSI

4 Pole Isolator

Additional E-Stops

Sealed Deutz Cable loom

Radiator cap with relief valve

After-cooled air intake

Note: The air compressor cannot be fitted to rig and is supplied as a separate unit.

SAFE-T-SPIN

Diamond rod sizes

N, H, and P sizes

The safety spin is a device that makes/breaks the rod joints and completely screws or unscrews the thread

The rod joint make torque is fully adjustable to ensure the correct torque setting is used for each thread type

Break torque is set to maximum to break the joint



SCX TOOLS AND CONSUMABLES

SCX has a complete range of down hole tools and consumables to support exploration rigs for start up and continued operation, SCX 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

SCX AFTERMARKET

SCX has excellent aftermarket service and support with a global footprint.

AFTERMARKET AVAILABLE

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

SCX GEOLOGICAL CONSUMABLES

SCX has a 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