

# SCX DE881

DESIGNED BY SANDVIK

**SCX**  
SUNNY CORNER  
EXPLORATION

## MULTI-PURPOSE SURFACE DRILL

### TECHNICAL SPECIFICATION

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

- ▶ Depth capacity of 3,200 m (10,411) N size  
*(coring)*
- ▶ Depth capacity 525 (1,723 ft) 4 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

- Hands free rod handling system DA555 diamond/RC rod loader
- Hands free breakout tool
- Jaws for N, H and P sizes rod loader and rod clamps
- Starter rods included N H P one of each
- Rotating rod guard with interlock
- FOPS certified for driller
- Cummins QSL9 inline 6 cylinder Tier 3 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
- Mid mount rig engine is at the front of the base
- Multiple guarding to reduce risk of moving components and rotating rod injury
- Rod Bin, onboard rod storage on the right hand side of the rig
- Remote wedge interlock kit
- 3000 meter deck mounted wire line winch
- Wireline counter/cleaner/overrun cut out - keeps rig cleaner and prevents overwind during wireline operations

- Large driller work platform
- 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

- Safety spin rod joint torque/make/break device
- Fitment options for multiple trucks
- Air compressor not fitted to rig
- Arctic heating package
- Fire suppression system fitted in country

### 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
Mast access area fully enclosed	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

\*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.

## ROD LOADING

	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		

## 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	SCX 25 K	
Hydraulic motor	160cc variable displacement	
Torque (max) low gear	14324 Nm	10564 lbf ft
Torque (max) high gear	3209 Nm	2367 lbf ft
Rotation speed low gear	0 - 220 rpm	
Rotation speed high gear	0 - 1500 rpm	
Torque @ 900 rpm	1750 Nm	1291 lbf ft
Oil jet lubricated hardened gears and bearings. Stepless speed control with two speed gearbox. Speed infinitely variable.		

## ROD HOLDER / ROD 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

Type	Hydraulic cylinder over ropes
Feed force	
Pull force	
Feed length ( <i>Stroke</i> )	
Speed up	
Speed down	
Sophisticated microfeed system providing fine feed control over a wide range (25 mm/min to 4 m/min). System has auto rod balancing and bit weight control.	

## CONTROL CONSOLE

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.

## 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	5076 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	65USgpm
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.	

## 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.		

# DIMENSIONS



## 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.		

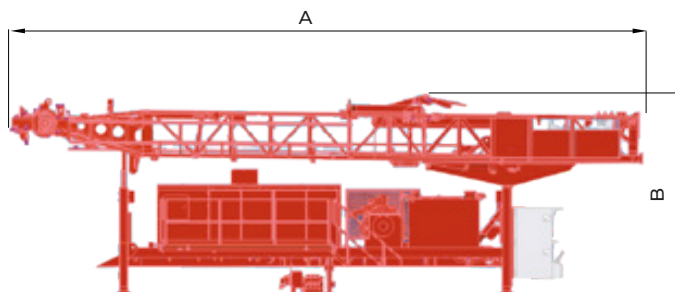
## ROD HANDLING BOOM

	Metric	Imperial
Safe working load	200 kg	440 lb
The boom has a hydraulic winch, boom slew and boom tilt functions operated from control console.		

## TRANSPORT DIMENSIONS TRUCK CONFIGURATION

	Metric	Imperial
A	12.57 meter	41.24 foot
B	3.87 meter	12.69 foot
Width	2.50 meter	8.2 foot
Weight (excludes truck)	21 500 kg	47 400 lb

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



## AUXILIARY HYDRAULIC OUTLETS

Three auxiliary hydraulic outlets

## OPERATING FOOTPRINT

	Metric	Imperial
A	3.58 meter	11'8 foot
B	13.20 meter	43'4" foot
Width	2.50 meter	8'2" foot

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 (NO MOUNT - STANDARD)

Mercedes truck mount

MAN truck mount

Non-standard truck mount (*PLM approval required*)

## REVERSE CIRCULATION AIR PACKAGE INCLUDING; 4.5"

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*)  
Incl Support Arm Assembly

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" subs /inner tubes

Remet 4.5" subs /inner tubes

## COMPRESSOR PACK TRAILER MOUNT

Doosan Silenced portable XHP1250/375PSI 4 Pole Isolator

Additional E-Stops

Sealed Deutz Cable loom

Safety check Rad cap etc

After-cooled

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.

### SCX GEOLOGICAL CONSUMABLES

- 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