

# DE700 series heavy duty core drills







## Powerful drill rigs with efficient footprints

### EXPERIENCED AND PROVEN

Sandvik has brought together some of the industry's most outstanding expertise, products and experience to provide a unique offering in the area of exploration drilling. The Sandvik heavy duty DE700 series consists of two dedicated and powerful diamond core drills for surface exploration applications - the DE710 and DE740. They are designed for deep hole drilling and can be found in a wide range of drilling operations such as mineral exploration, directional drilling and geotechnical drilling all over the world - from easy-access open pit mines to the remotest of areas. Thanks to close cooperation with customers, these heavy duty drill rigs for deep hole drilling can meet requirements in an impressive range of applications.

### CONFIGURED TO YOUR APPLICATION

The smaller in the series, the DE710, still has a remarkable depth capacity up to 1126 m (3693 ft) with N size rods. The DE740 is bigger and stronger with a depth capacity up to 1837 m (6025 ft) with N size rods. The DE700 series is available in a range of configurations which make the drills uniquely suitable for operational and environmental demands globally. The drills can be truck-mounted for greater maneuverability and ease of relocating the drills between sites or can be fitted on crawler tracks, powered from the rig hydraulic system, making the drills self-propelled units for areas with difficult site access. The space efficient design has proven a great benefit on sites where a small footprint is required.

Select the right model and configuration to meet your applications needs in core drilling. With strategically located Sandvik regional offices around the world to support you with spare parts and service, drilling can be carried out with minimal downtime.



#### DE710

The DE710 is a space efficient and powerful diamond core drill with a heavy duty base frame. The versatile DE710 is available in a range of different configurations to suit global operational and environmental demands.

- P-size rotation head chuck drive
- 6 m (20 ft) rod pull capacity
- Pull down 53,2 kN (12 000 lbf)
- Pull back 91,2 kN (20 500 lbf)
- Capacity of 1000 m (3280 ft) of 6 mm (15/64") wire rope
- Depth capacity up to 1126 m (3693 ft) with N-size rods
- Packed for shipment in a standard 40 ft shipping container

#### DE740

The powerful DE740 has a design that allows pulling and running of rods and casings in 9 m (30 ft) lengths. With its efficient design and possibility to telescope the mast making it 1,8 m (6 ft) shorter, it can be configured to suit your transportation needs.

- HWT chuck drive C40
- 9 m (30 ft) rod pull capacity
- Pull down 67 kN (15 000 lbf)
- Pull back 133,5 kN (30 000 lbf)
- Capacity of 1800 m (5900 ft) of 6,5 mm (1/4") wire rope
- Depth capacity up to 1837 m (6025 ft) with N-size rods



# Robust and reliable for high productivity



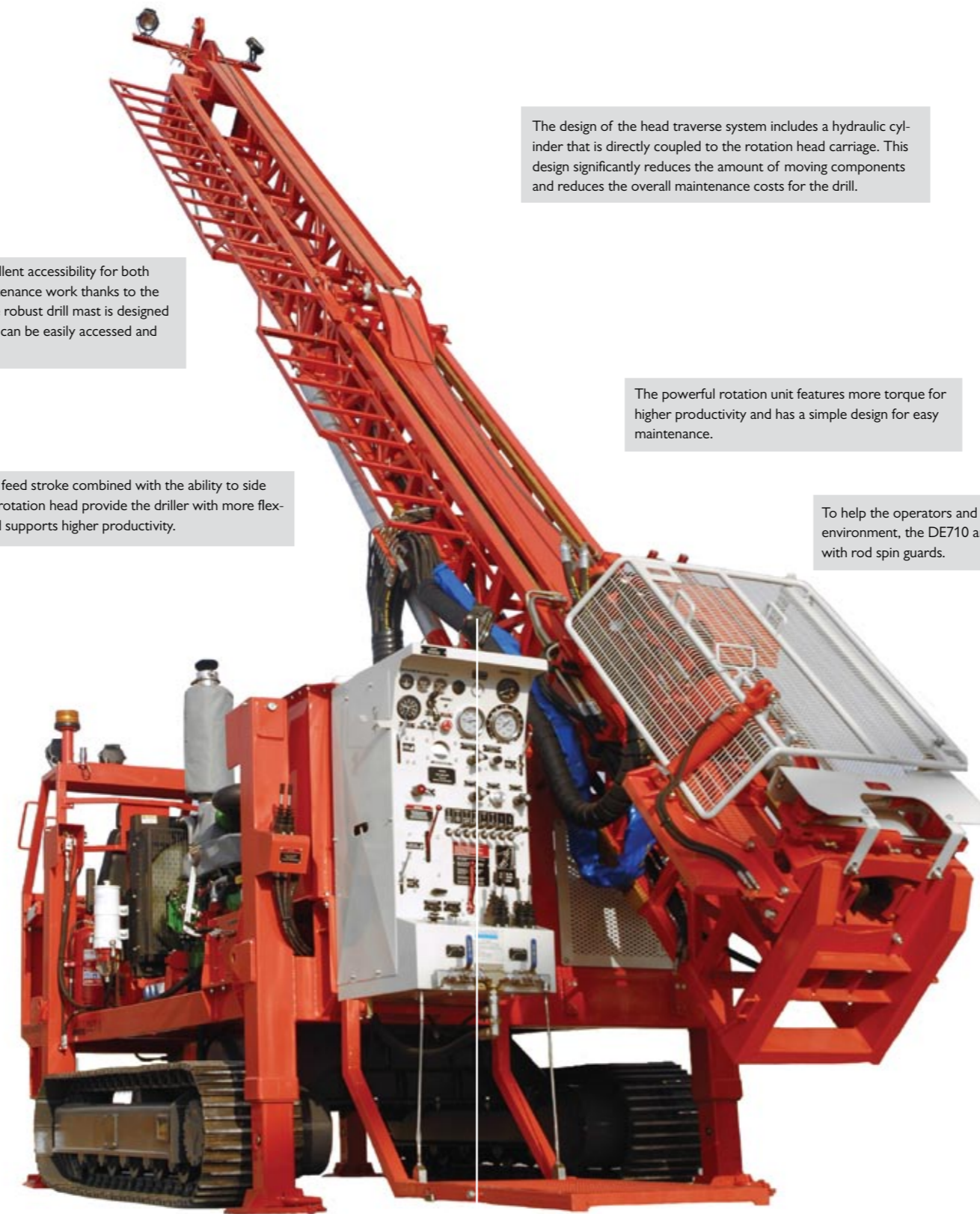
## ROBUST AND RELIABLE MAST

- Capacity to angle drill between vertical and 45°
  - Flexible drilling
- Mast dump stroke is 1067 mm (3'5")
  - Ensures the mast is always able to make contact with the ground
  - Flexible drilling even at acute angles or uneven drill pad
  - Allows the mast to be as low as possible to ground level, for ease of operation by driller and helpers
- The design allows for pulling of core tubes and casings up to 6 m (20 ft) for DE710 and up to 9 m (30 ft) for DE740
  - Improves productivity
  - Longer continuous core runs without drilling stoppage
- Telescoping upper mast for DE740
  - Lowers to near horizontal position and telescopes 1,8 m (6 ft) shorter for transportation



## ROTATION UNIT FOR THE JOB

- A variable displacement hydraulic motor drives the rotation head gearbox
  - Pilot-adjustable torque-speed control
  - Controlled by operator from control panel
- High/low manual gear change
- Stepless speed control
  - Speed control can be very precise
  - Improves life time on bit
  - Easier to spin
- Air to oil lubrication, oil cooler fitted
- Efficient hydraulics for maximum output torque
  - Higher productivity



The operator has excellent accessibility for both minor and major maintenance work thanks to the drill's open design. The robust drill mast is designed so the parts at the top can be easily accessed and maintained.

The long feed stroke combined with the ability to side rack the rotation head provide the driller with more flexibility and supports higher productivity.

The design of the head traverse system includes a hydraulic cylinder that is directly coupled to the rotation head carriage. This design significantly reduces the amount of moving components and reduces the overall maintenance costs for the drill.

The powerful rotation unit features more torque for higher productivity and has a simple design for easy maintenance.

To help the operators and to provide a safer working environment, the DE710 and DE740 are equipped with rod spin guards.

Hydraulic leveling jacks make set-up fast and easy and provide an ideal drilling position.

Operator's platform allows the driller to have an ergonomic work place.



## HIGHLY EFFICIENT HYDRAULICS

- Highest quality axial and radial piston pumps and motors used in three independent open loop circuits
- Full flow 10 micron Beta rated return oil filtration
- Larger than typical hoses and control valve sizes used
  - Highest possible circuit efficiency
  - Greater flexibility
  - Precise control of critical drilling functions
  - Proven reliability over thousands of hours



## DIESEL ENGINES FOR TOP PERFORMANCE

- Peak power rating of 134 kW (180 hp) at 2200 rpm for DE710 and 194 kW (260 hp) at 2200 rpm for DE740
  - Complies with Tier 3 emissions standards
  - Provides low emission output combined with fuel efficiency and performance
  - Low weight and high performance engine
- The cooling system has been design for operations in ambient temperatures up to 50°C (122°F)
- Hydraulically powered waterpump with a capacity of 140 l/min (37 GPM) at pressures up to 7000 kPa (1000 PSI)
  - Flow rate is controlled and is infinitely variable
  - All controls are located in the operator's control panel



# User-friendly design with high efficiency



## USER-FRIENDLY AND FLEXIBLE

- Flexible for alternative carriers
  - Truck or crawler configuration
- All components mounted on one platform
  - Self-contained drill rig
  - Makes it easier moving from drill site to drill site
  - Allows a small footprint on site
- The whole drilling procedure is controlled from one control panel
  - The control panel is placed at the back of the drill rig and allows the operator to have an excellent overview of the drill site
  - The control panel is intuitive and easy to learn and operate

## EFFICIENT AND SECURE ROD HANDLING

- Wide range of rod clamps, supplied for B, N, H and P sizes
  - 44,5 mm to 177,8 mm (1 3/4" to 7")
  - Flexibility in drilling
  - Easy to remove jaws
  - Hydraulically operated
- Rod spin guard that cages off the rotation rods from the operator and is hydraulically interlocked with rotation
  - Reduces the rotation speed to 100 rpm when cage is opened
  - Contribute to a safer and more comfortable working environment
- Safety spin designed as a compact tool capable of making up and breaking out of drill rod threads during rod tripping operations
  - Reduces injury risks resulting from operator fatigue
  - Provides consistent pre-torque joint for every joint in the drill string, increasing drill rod thread life

DE710 popular options	Benefits
- High altitude boost system	- Enables operation above 3000 m (10 000 ft)
- Mast platform	- Allows stacking of drill rods and casings in 6 m (20 ft) lengths; ease of service
- Upper rod breaker	- Float up to break out a drill rod joint or float down to make up a drill joint, increases productivity
- Fire suppression system	- Effective system to help protect the drill and crew
- Truck or crawler options	- Flexibility for different applications and environments

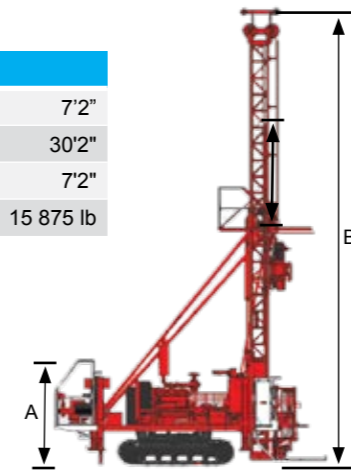
DE740 popular options	Benefits
- High altitude boost system	- Enables operation above 3000 m (10 000 ft)
- Fire suppression system	- Effective system to help protect the drill and crew
- Truck or crawler options	- Flexibility for different applications and environments
- Hydraulic folding walkaways	- Ease of maintenance work
- Hydraulic leveling jacks	- For easy and fast set-up of drill unit

## BASIC FACTS

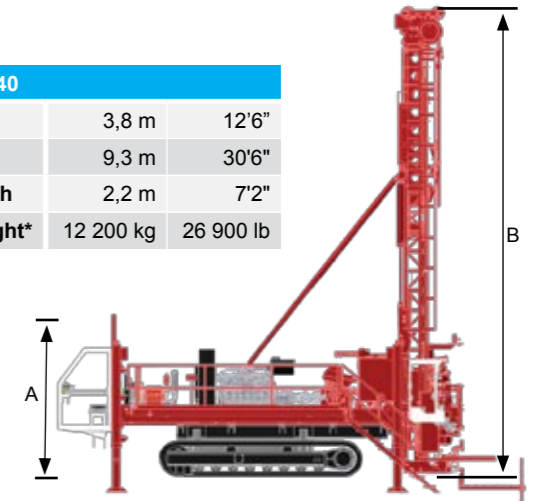
	DE710	DE740
<b>Drill mast</b>	6 m (20 ft) rod pull capacity 1067 mm (3'6") hydraulic mast dump P chuck drive	9 m (30 ft) rod pull capacity 1067 mm (3'6") hydraulic mast dump HWT chuck drive C40
<b>Rotation head</b>	High - low manual gear change 100 - 1500 rpm step less speed control Lube oil filter fitted on rig base	High - low manual gear change 10 - 1500 rpm step less speed control Air to oil lubrication oil cooler
<b>Head traverse</b>	Direct coupled to rotation head 3,45 m tracers (11'3") Max. speed of 30 m/min (100 ft/min) up or down Pull down 53,2 kN (12 000 lbf) Pull back 91,2 kN (20 500 lbf)	Direct coupled to rotation head 3,45 m tracers (11'3") Max. speed of 30 m/min (100 ft/min) up or down Pull down 67 kN (15 000 lbf) Pull back 133,5 kN (30 000 lbf)
<b>Wireline winch</b>	Capacity of 1000 m (3280 ft) of 6 mm (15/64") wire rope Variable speed control Max. pull 7,8 kN (1750 lbf) bare drum Max. speed 270 m/min (887 ft/min) full drum	Capacity of 1800 m (5900 ft) of 6,5 mm (1/4") wire rope Variable speed control Max. pull 21,4 kN (4800 lbf) bare drum Max. speed 430 m/min (1411 ft/min) full drum
<b>Water pump</b>	140 l/min (37 GPM) at pressures up to 7000 kPa (1000 PSI)	140 l/min (37 GPM) at pressures up to 7000 kPa (1000 PSI)
<b>Diesel engine</b>	134 kW (180 hp) at 2200 rpm	194 kW (260 hp) at 2200 rpm
<b>Rod clamp</b>	B, N, H and P rod clamp jaws Hydraulically operated and self energizing Range of optional jaws available from 44,5 mm to 177,8 mm (1 3/4" to 7") 224 mm (8 3/4") rod clamp body opening	B, N and H rod clamp jaws Hydraulically operated and self energizing 44,5 mm to 177,8 mm (1 3/4" to 7") 224 mm (8 3/4") rod clamp body opening

## Dimensions and weights

DE710		
<b>A</b>	2,25 m	7'2"
<b>B</b>	9,1 m	30'2"
<b>Width</b>	2,2 m	7'2"
<b>Weight*</b>	7200 kg	15 875 lb



DE740		
<b>A</b>	3,8 m	12'6"
<b>B</b>	9,3 m	30'6"
<b>Width</b>	2,2 m	7'2"
<b>Weight*</b>	12 200 kg	26 900 lb



\*Approximate weight for bare drill on hydraulic jack-up tray

## Depth capacity

Model	Drill rod, m (ft)				
	A	B	N	H	P
<b>DE710</b>	1841 (6038)	1440 (4723)	1126 (3693)	754 (2473)	509 (1670)
<b>DE740</b>	N/A	2350 (7708)	1837 (6025)	1230 (4034)	831 (2726)

These calculations are based on feedback from field operatives and can be reasonably expected with vertical, water filled holes, by a well-trained drilling crew using high quality drilling tools. Sandvik cannot guarantee that these results will be achieved in all drilling conditions.

All dimensions and weights are approximate. Please see technical specification for more details and options.

Sandvik is a high-technology engineering group with world-leading positions in selected areas – tools for metal working, advanced materials technology, and mining and construction. We are represented in 130 countries.

Sandvik Mining and Construction represents one third of the overall Sandvik Group and serves a broad range of customers in construction, mineral exploration, mining and bulk materials handling. Our construction expertise covers quarrying, tunneling, demolition and recycling, and other civil engineering applications. Our mining products and services support customers on the surface and under ground, in all mineral, coal and metal mining applications from exploration to ore transportation.

