

# D45KS and D50KS blasthole drills

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.





## Solid performance in mid-range drills

### BUILT TO LAST!

Rotary blasthole drills from Sandvik set the standard for productivity, durability, and cost effectiveness. These machines are built for continuous drilling in some of the harshest operating environments in the world. Proven designs, rigid lattice style masts, heavy duty pulldown chains, and durable power groups place these rigs in a class of their own. Structural strength, easy maintenance, and world-wide support, all maximize drilling time and keep you on top of your production schedule. Sandvik also offers the world's widest range of tools and accessories for rock drilling. Equip these drills with products that are renowned for quality and high performance and you build a complete drilling system unmatched in productivity. Choose the right Sandvik rig for your needs and count on it to perform for years to come.

### PROVEN DRILLS FOR DEPENDABLE OPERATION

The D45KS and D50KS are two of the most trusted mid-range diesel powered, self propelled crawler mounted blasthole drills. Based on the same platform, but with different standard configurations and well developed options, each machine is built for optimum performance in a broad range of mining applications. With their heavy duty frames and undercarriages, it is no wonder they have built such a reputation for longevity and solid performance. First pass capability is 8,7 m (28' 6").

Consider Sandvik your source for equipment that meets the challenges of adapting to rugged mining environments. The D45KS and D50KS have proven their worth around the world in the mines and quarries of Australia, North and South America, Africa, and Asia, most commonly in coal, gold, and iron ore. These drills are rugged, and dependable, with downtime at a minimum. Plenty of power to get the job done. With these aggressive drills in your fleet you can focus on your real work. Production.



#### D45KS

The D45KS comes with low pressure air for rotary drilling. It can be equipped with high pressure air for down-the-hole (DTH) drilling, most commonly in gold mining or quarrying. The drill also excels in any application where a combination of DTH and rotary drilling is used and maximum reliability is a requirement

- 152 to 229 mm (6" to 9") diameter holes
- Drilled depths up to 63 m (208')
- Pulldown 200 kN (45 000 lbf)
- Bit load up to 244 kN (55 000 lbf)

#### D50KS

The D50KS comes with a low pressure compressor for rotary drilling. Thanks to its upgraded and heavy duty hydraulic system, the D50KS delivers the rotary horsepower for maximum productivity throughout its hole size range. It is often found in coal mining applications

- 152 to 229 mm (6" to 9") diameter holes
- Drilled depths up to 45 m (148')
- Pulldown 222 kN (50 000 lbf)
- Bit load up to 267 kN (60 000 lbf)

# Top performance in mid-range drills



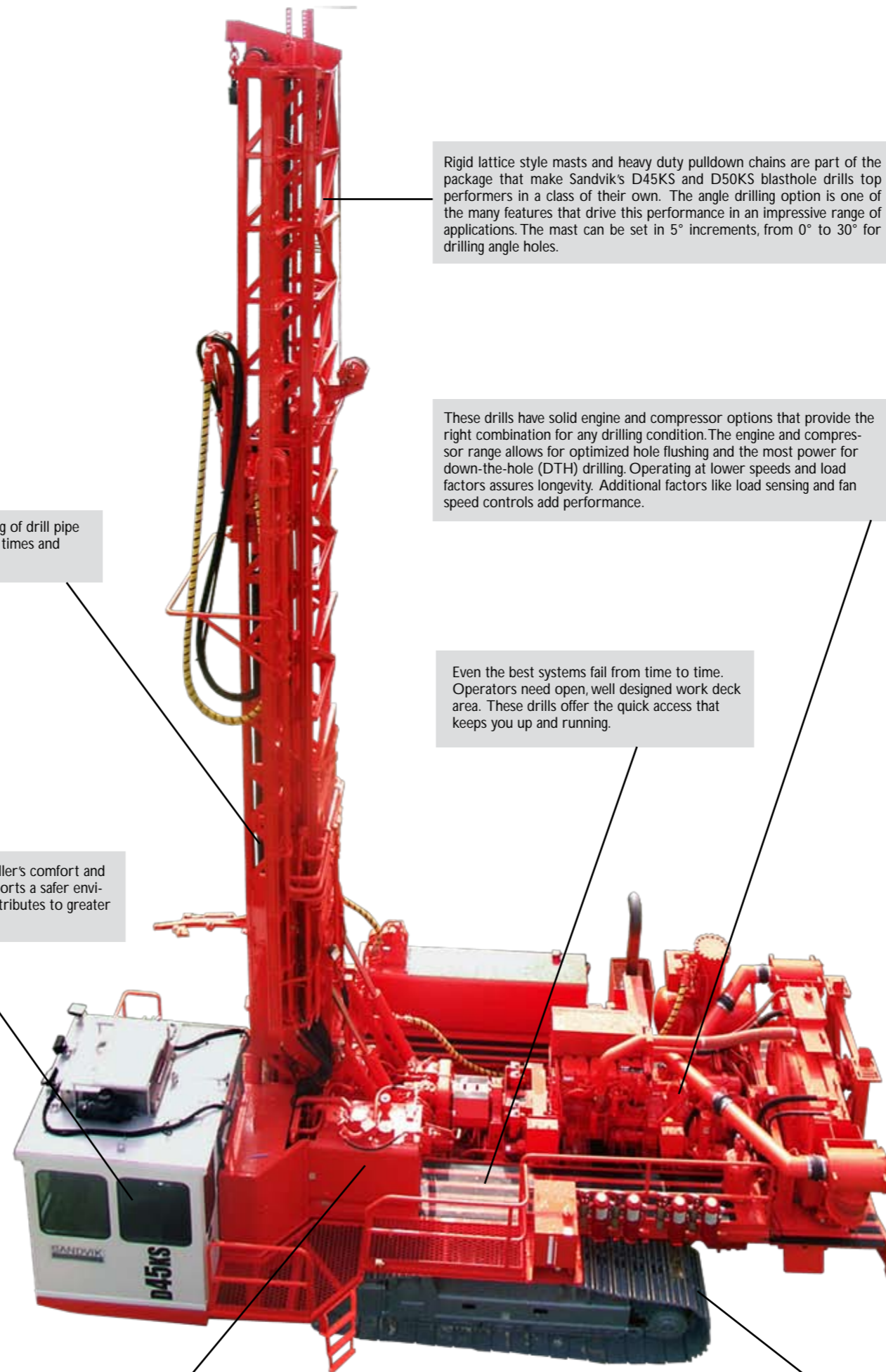
## PRODUCTIVE OPERATOR'S ENVIRONMENT

- Excellent visibility of the drilling operation
- Higher productivity with quicker hoisting
  - Fast set-up for drilling
- Comfortable environment with shock mounted cab
- Roller sunshades to reduce glare
- Thermal insulation and noise reduction to 81,8 dBA
- Drill controls arranged logically on the console
  - Ease of operation
  - Intuitive fast learning
- Air conditioning/heating/pressurizing unit for operator comfort with less fatigue
- FOPS approved in compliance with mining safety requirements
- Extended cab provides ample work space for a trainer



## POWERFUL DRILLING PLATFORM

- Wide flange I-beam rails on main frames
  - WF 14 X 74, ASTM alloy A572, grade 50 steel
  - Solid support for mounted components
- 330 class undercarriage
  - Excellent stability for the drill
  - Total reliability on difficult grades
  - Hydrostatic drive power: 130 kW (175 hp) per track (D45KS - D50KS)
  - Delivers top slewing power for faster hoisting
- Fixed axle under the mast pedestal
- Equalizer axle at the other end of the tracks
  - Effective side to side movement
  - Stress reduction on the frame for longer frame life
  - More fatigue resistance and increased mobility



Rigid lattice style masts and heavy duty pulldown chains are part of the package that make Sandvik's D45KS and D50KS blasthole drills top performers in a class of their own. The angle drilling option is one of the many features that drive this performance in an impressive range of applications. The mast can be set in 5° increments, from 0° to 30° for drilling angle holes.

These drills have solid engine and compressor options that provide the right combination for any drilling condition. The engine and compressor range allows for optimized hole flushing and the most power for down-the-hole (DTH) drilling. Operating at lower speeds and load factors assures longevity. Additional factors like load sensing and fan speed controls add performance.

The effective handling of drill pipe means shorter cycle times and more holes drilled.

Even the best systems fail from time to time. Operators need open, well designed work deck area. These drills offer the quick access that keeps you up and running.

Increasing the driller's comfort and functionality, supports a safer environment and contributes to greater work output.

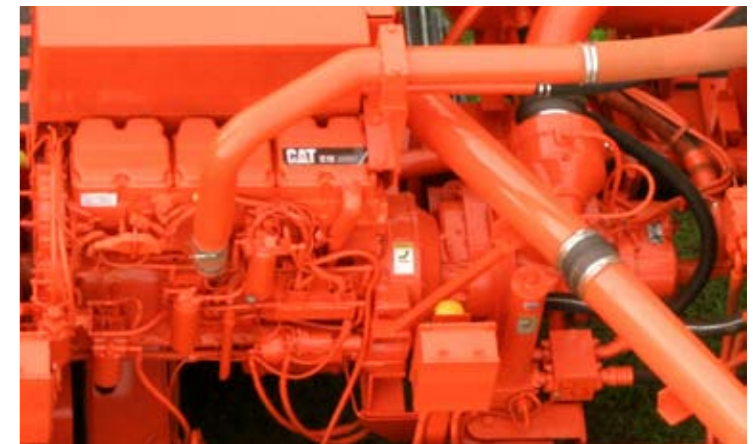
Sandvik hydraulic systems manage power operation with few moving parts, produce abundant power, work under extreme operating conditions, and are self lubricating.

Moving and set-up are important parts of the drilling cycle. To overcome the rugged terrain in a mining environment, Sandvik drills deliver top performance from strong, structurally sound undercarriages and heavy duty frames.



## EFFICIENT HYDRAULICS

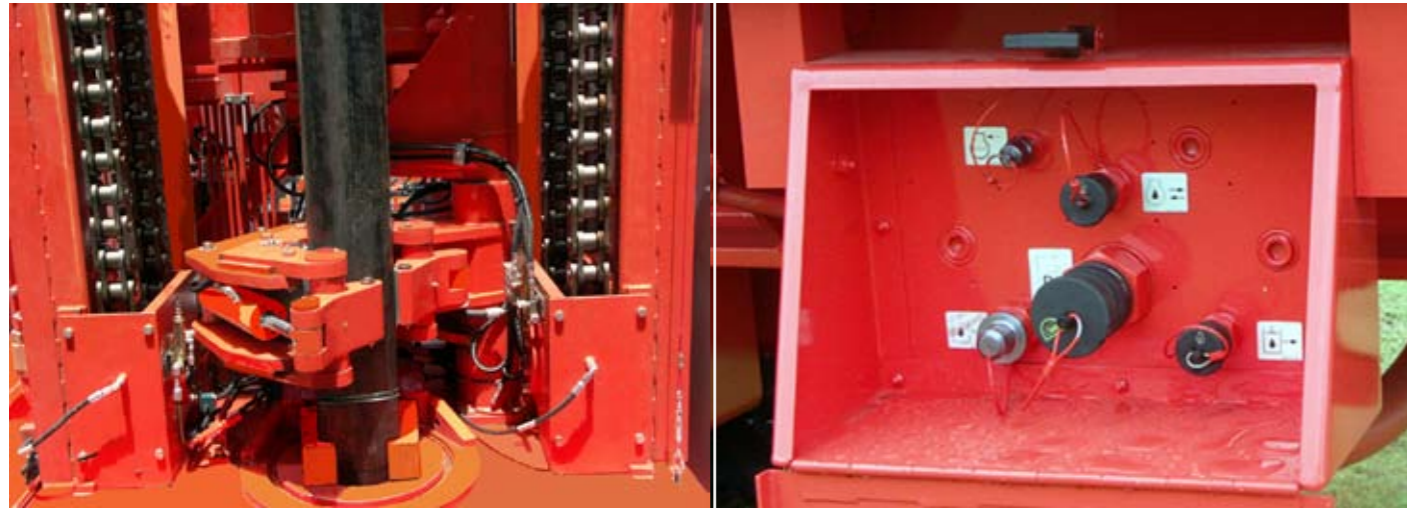
- Closed loop system for rotation, feed, track and fan circuits
  - Lowers operating costs
  - Reduces power consumption
- Large 511 L (135 gal) pressurized hydraulic oil reservoir
  - Reduces the number of oil cycles
  - Lowers oil temperatures
  - Extends service intervals
- 3 µm (3 micron) filtration
  - Insures cleaner system
  - Extends component life
  - Lowers maintenance costs



## OPTIMIZED POWER DELIVERY

- Diesel engines, matched for high or low pressure compressors and required volume
  - Long life and lower fuel consumption
- Tier III C15, C18 or QSX15 engines rated 354 - 470 kW (475 - 630 hp)
  - Most effectively operate at 1800 rpm
  - Provide optimum power at lower cycling times and better efficiency
- Full range of compressors producing
  - 25,5 - 37,4 m³/min (900 - 1323 SCFM) @ 6,9 or 24,1 Bar (100 - 350 psi)
  - Compressor is mounted directly to the flywheel housing in line with the engine for efficient power transfer
- 54°C (130° F) ambient temperature cooling system
  - Direct drive fan
  - Fan is hydraulically delayed during start-up of engine for maximum torque
- Optional cold weather package lowers the temperature range from frigid conditions down to arctic weather

# Solid design for top production



## EFFECTIVE PIPE HANDLING

- The pipe size for the D45KS and D50KS is 9,14 m (30') long pipes in diameters 114 - 178 mm, (4 1/2" to 7") in alternative loaders
- Four-pod or six-pod loaders, both inside mast are available
  - Flexible hole sizes
  - Extended depth capacity
- Pipe loading is controlled from the operator's cab
- Holding wrench and optional hydraulic auto tong wrench and pipe thread greaser
  - Help to break loose tight pipe joints
- Hydraulic loader swing and indexing:
  - Simplicity of very few moving parts in the loader
  - Higher productivity
  - Lower maintenance and drill pipe cost

## EXCELLENT SERVICEABILITY

- D45KS and D50KS open in-line design - with all components very accessible
  - Ease in service and maintenance
  - Walkways are provided to reach major components
- Fluids service center option for filling fuel, hydraulics, and water and for hydraulic evacuation
  - Faster servicing
  - Greater availability of the drills
- Central greasing station options, manual or electric, available for lubricating
  - Reduce wear at main pivot points
  - Increase serviceability
  - Add to the availability of the drills
- Ease of service is a priority with Sandvik equipment

## D45KS popular options

Compressor options 28,3 m³/min (1000 SCFM) @ 24,1 Bar (350 psi), 32,8 m³/min (1160 SCFM) @ 24,1 Bar (350 psi)

Multiple dry dust collection and water injection systems

Extended mast

Various rotary head speed/torque combinations

Cold and arctic weather equipment

Extended cab and connecting walkway

## Benefits

Increased productivity with 6" hammer  
Improved hole cleaning

Advanced chip removal and dust suppression  
Meets or exceeds regulatory standards

Increased first pass capacity to 11m (36')

Capability to fine tune drilling in various ground conditions

Enables operation in extreme environments

Improved service access, comfort and efficiency

## D50KS popular options

Compressors available up to 34,7 m³/min (1323 SCFM) @ 6,9 Bar (100 psi), Cat or Cummins

Multiple dry dust collection and water injection systems

Various rotary head speed/torque combinations

Central lubrication and fluid systems

Drill monitoring system

Extended cab and connecting walkway

## Benefits

Capability of operating at high elevation  
Improved cleaning of large holes

Advanced chip removal and dust suppression  
Meets or exceeds regulatory standards

Capability to fine tune drilling in various ground conditions

Speed of servicing  
Cleaner operation

For preventative maintenance in operations

Improved training, comfort and efficiency

## Technical Data

D45KS	
Hole diameter	152 mm - 229 mm (6"-9")
Drill pipe	9,14 m (30')
Hole depth	63 m (208')
Undercarriage	330 class Excavator
Max pull-down	200 kN (45 000 lbf)
Bit load	244 kN (55 000 lbf)
Engine	354 kW (475 hp)
Compressor	25,5 m³/min (900 scfm) 6,9 Bar (100 psi)
Feed rate	0-38 m/min (0-125 fpm)
Hoist rate	0-49 m/min (0-160 fpm)
Rotation speed	0-126 RPM
Rotation torque	9934 Nm (87 921 in-lb)
Operating wt	47 727 kg (105 000 lb)

Shipping Dimensions	
Mast assembly length	14,22 m (46' 8")
Mast assembly width	1,98 m (6' 6")
Mast assembly height	2,29 m (7' 6")
Mast assembly weight	10 886 kg (24 000 lb)
Base/frame length	9,45 m (31' 0")
Base/frame width	3,81 m (12' 6")
Base/frame height	3,99 m (13' 1")
Base/frame weight (std)	32 659 kg (72 000 lb)

D50KS	
Hole diameter	152 mm - 229 mm (6"-9")
Drill pipe	9,14 m (30')
Hole depth	45 m (148')
Undercarriage	330 class Excavator
Max pull-down	222 kN (50 000 lbf)
Bit load	267 kN (60 000 lbf)
Engine	354 kW (475 hp)
Compressor	29,7 m³/min (1050 scfm) 6,9 Bar (100 psi)
Feed rate	0-38 m/min (0-125 fpm)
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Performance ratings are based upon optimum conditions. This capacity may vary according to operating location. Sandvik reserves the right to amend these specifications without notice. Shipping dimensions vary with option selected.

D45KS/D50KS		STANDARD MAST		EXTENDED MAST	
A	Mast up (height)	11,4 m	46' 5 1/2"	16 m	52' 7 1/2"
B	Bullshaft to drill table	9,9 m	32' 6 1/2"	12,3 m	40' 2"
C	Track to track inside measurement	2,2 m	7' 2"		
D	Outside deck to centerline drill table	2,6 m	8' 6"		
E	Track to track outside measurement	3,7 m	12' 1"		
F	Outside deck to opposite track (outside)	4,4 m	14' 6 1/2"		
G	Overall machine width (operating)	4,9 m	16' 4"		
H	Height ground to top work deck (mast down)	5,9 m	19' 5 5/8"		
I	Ground level to top of drill table (mast down)	4,8 m	15' 10"		
J	Ground level to top of air unit on cab	3,78 m	12' 4 5/8"		
K	Ground level to jack pad (jack retracted rear)	0,47 m	1' 6 1/2"		
L	Centerline of jack to idler sprocket (rear)	1,1 m	3' 7 1/4"		
M	Centerline of idler to drive sprocket (front)	3,6 m	11' 9 1/2"		
N	Centerline of rear jack to centerline front jack	6,9 m	22' 8"		
O	Ground level to jack pad (jack retracted front)	0,62 m	2' 1/2"		
P	Centerline idler to centerline axle	0,68 m	2' 2 7/8"		
Q	Drill length (mast up)	10,3 m	33' 11 1/4"		
R	Drill length to timing chain adjuster (mast down)	13,8 m	45' 5"	15,7 m	51' 4 3/4"
S	Drill length overall (mast down)	14,1 m	46' 4 7/8"	15,9 m	52' 4 7/8"
T	Ground level to deck frame (height)	1,37 m	4' 5"		
U	Ground level to top (head air piping) (mast down)	4,23 m	13' 10 3/4"		
V	Ground level to top safety hoop (mast down)	4,61 m	15' 1 5/8"		

