





Drilling Spares and Services Limited is a private firm founded in 1989 by Mr. Kumar Pal Bhalla. Mr. Bhalla was formerly the Chief Geologist in the Ministry of Water in the Kenya government.

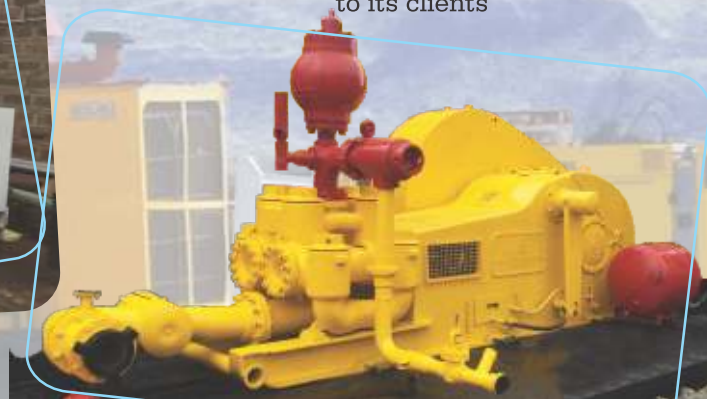
The company has grown to become the premier water well drilling company in East Africa and has undertaken both private and government work in Kenya, Uganda and Tanzania. Drilling Spares and Services Ltd today operates seven rotary drilling rigs including two Foremost DR24 dual rotary rigs and a Schramm T130XD deep well rig. DSS also operates 4 test pumping units with pumping capacities of up to 400m³/hr.



Drilling Spares and Services Limited operates a drilling rig manufacturing unit to cater for the needs of the water well market in Africa. The Simba range of water well drill rigs are designed to operate trouble free in the unforgiving terrain of remote Kenya and other regional countries. The deliberate use of simple but rugged technologies provide a machine of high capacity and superior maintainability.

Drilling Spares and Services employs a staff of 85 personnel including Geologists, Mechanical Engineers, Engineering workshop technicians, Drillers, Site Supervisors, Hydraulic Engineers and General support staff.

Drilling Spares and Services has become known in its native market as the drilling company to send in when everyone else fails, this is due to the ingrained ethics that have filtered down from the top management to the most basic worker. The company strives to engineer solutions to challenging drilling problems and maintains a strong commitment to its clients



Health and Safety

Leading from the front

Our in-house engineering and fabrication support team are focused on complementing our extensive operational drilling experience with equipment safety innovation and productivity. Recent successes have included the removal of manual handling incidences thanks to the construction of automatic, hydraulic drill rod and pipe handling systems. This is seen on our use of Loadsafe rod handlers on our T130XD machine.

Our teams have also created completely automated breakout systems, clamps and 'roughnecks' on all of our new rigs and are constantly evolving ways of removing other hazards associated with hydrogeological drilling, like gravel packing and the dangers of working at heights.

Setting the standards others follow

We've engineered safety innovations into the design of our drilling rigs and support equipment. These safety features have made our equipment compliant with strict Oil/Gas and Mining standards.

Safety first when working at height

We use mast and access static lines as standard when workers have to access the mast in its horizontal position, and all equipment is fitted with complex systems of handrailing and access gates, complying with Australian Standards and the strictest mine site regulations across the nation. In an industry-first our Foremost rigs are fitted with access ladders/stairs and in-mast walkways which negate the requirement for the use of fall arrest systems.

Going above and beyond

We have incorporated the culture of safety into all our work processes and departments. A continuous in-house training regime furthers the understanding of the principals of safe work within our work force.





SIMBA MARK 1

“BUILT IN KENYA - BUILT FOR KENYA”

- LIGHTWEIGHT FOR HIGH MANOUVERABILITY
- ROBUST DIRECT FEED MAST DESIGN
- HIGH TORQUE ROTARY HEAD
- 6 METER ROD AND CASING HANDLING CAPACITY
- ADVANCED THERMOSTAT CONTROLLED COOLING SYSTEM
- ROTARY HEAD TILTING SYSTEM FOR EASY ROD HANDLING
- ROTARY HEAD SLIDING SYSTEM FOR CASING INSTALLATION



SIMBA MARK 1 SPECIFICATIONS

DECK ENGINE

- Cummins B-series: B5.9 TA
- 180 Horsepower

TRUCK

- TATA 2516 6 X 4
- Cummins B5.9 TA engine
- 6-speed gearbox
- 160 HP @ 2500rpm
- 650 Nm @ 1500 rpm

Top Head Rotation

- Compact design
- Drill motor configuration
- No additional gear or bearings
- Performance: 5000 ft lbs
- Maximum torque available at all speeds
- 4" spindle bore
- Tilt and slide function
- Floating sub fitted

Feed system

- Direct feed cylinder with regeneration circuit
- No crown loads
- Single cylinder: 110mm X 80mm X 7200mm
- No cables, chains sheaves or pulleys
- Travel: 7100mm
- Pull-back : 20,000 kgs
- Pull-down: 8,000 kgs
- Fast up-feed: 18.9 m/min
- Slow up-feed: 12m/min
- Down feed: 33 m/min

Mast

- Tubular steel, all welded lattice type
- Total length: 9 meters
- Roller bearing guiding for Top drive unit

Tooling winch

- Planetary design
- Oil disc brake
- 5 ton S.W.L. rating

- 9.5 m/min (first layer)
- 35m capacity of 11 mm wire
- Make: Ramsey (USA)

Foam injection

- 45 liters per minute
- 800 psi maximum pressure
- Make: CAT (USA)

Hammer lubricator

- Positive displacement type
- Constant oil supply – unlike Venture type systems
- 55 liter oil capacity

Welding unit

- Hydraulically operated
- 200 Amp rating
- 240 volt output for accessories

Lighting Package

- Mast: 3 lights (60 watt)
- Deck: 1 light (60 watt)
- Control panel: 1 light (60 watt)

Rig Stabilizers

- Real: 125 mm bore X 1000mm stroke
- Front: 125mm bore X 1000mm stroke
- Real: individual control
- Front: self balancing single control
- All stabilizers fitted with cylinder lock valves

Hydraulic system

- Open loop system
- Suction and return filtration
- (10 micron)
- 500 liter oil reservoir
- Thermostatically controlled cooling system

Drill pipe and casing handling

- 6 meter maximum drill pipe length
- 6 meter maximum casing length
- Sliding rotary head
- Single breakout cylinder

Accessories

- Side mounted lockable tool box

These specifications are based on theoretical calculations and industry standards. Performance will vary according to actual drilling condition. Drilling Spares and Services Ltd. (DSS) continuously improves designs and its reserves the right to change specifications, design, prices and terms at any time without notification or obligation. These specifications do not extend any warranty, expressed or implied, nor do they make or imply any representation of the machines merchantability or fitness for a particular purpose.



SCHRAMM



FOREMOST DR24HD



FOREMOST DR24



SIMBA



KLR 1500



KLR DTHR 450



MUD PUPPY MP 255-2SC



ELGI 350 / 1100



ATLAS COPCO XRV 1200



ATLAS COPCO B7-41
BOOSTER



MAD PUMP



BOREHOLE BLOGGER



T130XD

ENERGY ■■■

EXPLORATION ■■■

MINE RESCUE ■■■

WATER WELL ■■■

RANGE III CAPABILITY IN A COMPACT OVER THE ROAD DRILLING RIG

The T130XD is the drilling contractor's rig of choice for energy, mineral exploration, mine rescue and large diameter municipal water well drilling applications around the world.

Thanks to its patented Telemast® design, the T130XD offers Range III tubular capability in a fully portable over the road package that can be set up in a matter of hours upon arrival to the drilling site. In addition, its small footprint dramatically reduces environmental impact.

When supplied with a tilting top head, this rig is fully compatible with LoadSafe®, Schramm's trailer mounted, fully automated pipe handling system. LoadSafe® offers the highest degree of operator safety available in the industry today.

Any climate, any terrain, Schramm rigs are built your way, delivering maximum performance and reliability in the most extreme environments on earth.

- Equipped with Schramm patented Telemast® for easy portability and fast set up
- Up to 130,000 lbf (578 kN) pullback and Range III tubular capability
- Precise hydraulic weight on bit control
- Drill compressor selectable air at 1,150 cfm @ 500 psi or 1,350 cfm @ 350 psi (32.6 m3/min @ 35.5 bar or 38 m3/min @ 24.1 bar)
- Compact 43 ft (13.1 m) transport length with less than 6 - 8 ft (1.8 - 2.4 m) overhang
- Optional trailer mounted configuration available
- Additional options include variable angle mast, casing rotator and LoadSafe® automated pipe handling system



T130XD

SPECIFICATIONS



DECK ENGINE

- Detroit Diesel DDC/MTU 12V-2000TA DDEC
- 760 bhp (567 kw) @ 1800 rpm
- 2 x 110 gallon (415 l) fuel tanks
- Air or electric start available

STANDARD COMPRESSOR

- Variable volume two-stage, oil flooded rotary screw compressor
- Selectable air: 1,150 cfm @ 500 psi or 1,350 cfm @ 350 psi (32.6 m³/min @ 35.5 bar, 38 m³/min @ 24.1 bar)
- Schramm patented air-Control

COOLING

- Three core, side by side heat exchanger with variable speed cooling fan
- 117°F (47°C) ambient design temperature

CARRIER

- CCC 8 x 4 carrier
- Cummins engine rated 425 hp @ 2,100 rpm
- 44,000 lb (19,955 kg) front axle
- 21,500 lb (9,750 kg) pusher axle
- 52,000 lb (23,587 kg) full locking rear axle
- 117,500 lb (53,298 kg) GVWR

MAST

- Telescoping mast design permits long head travel and working height, yet short overall length in transport position
- Free-standing mast design
- Hydraulically operated adjustable mast feet
- 69 ft 9 inches (21.25 m) overall height fully extended
- 42 ft 9 inches (13 m) overall height retracted for transport

TOP HEAD DRIVE

- Heavy duty, single reduction gearbox with multiple disc valve type hydraulic motors
- Infinitely variable rotation speed via HRC control
- Maximum Torque: 8,884 ft-lbs (12,045 N-m)
- Rotation Speed: 0-143 RPM
- Maximum operating pressure: 3,000 psi (208 bar)

FEED SYSTEM

- 50 ft (15.24 m) head travel
- 130,000 lbf (578 kN) pullback
- 125 fpm (38.1 m/min) pullback speed
- 32,000 lbf (142 kN) pulldown
- 270 fpm (82.3 m/min) pulldown speed

DRILL TABLE

- Table Opening: 20 inches (508 mm) or 28 inches (711 mm) with table retracted
- Hydraulically retractable slip box

DRILL PIPE AND CASING

- Range III tubular capability
- 28 inch (711 mm) maximum diameter through the slip box

OUTRIGGERS

- Single Front - 5 inch (127 mm) bore x 41 inch (1.04 m) stroke
- Dual Rear - 5 inch (127 mm) bore x 41 inch (1.04 m) stroke

WINCH

- Planetary design with spring applied hydraulic release brake
- 9,600 lbf (42.7 kN) bare drum line pull
- 150 fpm (46 m/min) bare drum line speed

HYDRAULIC SYSTEM

- Open loop load sensing system
- 200 gallon (760 l) system capacity
- 7 micron filtration

WATER INJECTION SYSTEM

- 25 gpm (95 lpm) water pump
- Electric foam pump

TOOL LUBRICATOR

- Positive displacement, air operated piston type pump
- Oil flow: 0 - 5.0 g/hr (0 - 19 l/hr)

LIGHTING & ELECTRICAL SYSTEM

- 24 volt DC electrical system
- Mast - (4) 60 watt floodlights
- Control Panel - (2) 60 watt gauge floodlights
- Work - (3) 70 watt halogen

RIG WEIGHT AND DIMENSIONS

Note: For general illustration only, varies with rig configuration

- OA length, transport: 42 ft 9 inches (13 m)
- Front mast down transport overhang ranges 6 - 8 ft (1.8 - 2.4 m)
- OA width: 8 ft 6 inches (2.6 m)
- OA height, transport: 13 ft 6 inches (4.1 m)
- Typical GVWR: 100,000 - 110,000 lbs (45,359 - 49,895 kg)

STANDARD ACCESSORIES

- Tool box, pipe handling sling, breakout wrench, 50 hour maintenance kit

OPTIONAL EQUIPMENT

- Tilting top head
- High capacity top head
- Sliding angle mast with operating angle adjustable to 45 degrees
- Casing rotator
- Reverse circulation package
- LoadSafe® automated pipe handling system
- Single pipe loading arm
- Auxiliary winch controls
- CE mark for European requirements
- See your Schramm representative for additional available options

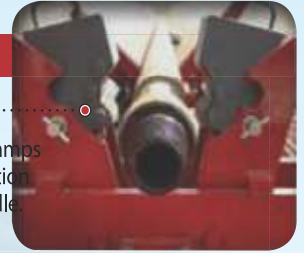
Rig performance is directly related to conditions encountered in the field. Rig specifications presented here illustrate equipment performance under factory test conditions. Schramm, Inc. continuously improves its products and reserves the right to change specifications, design, prices and terms at any time without notification or obligation. These specifications do not extend any warranty, expressed or implied, nor do they or Schramm, Inc. make or imply any representation of the machine's merchantability or fitness for a particular purpose.



Breaking Ground, Building Trust.



Hydraulic breakout-jaw system clamps pipe for quick and safe transition to the top head spindle.



Auto index device is designed to feed one pipe at a time.



Hydraulic racks stow on the loader for ease of transport. Racks can be positioned to load pipe from either side.



Trailer mounted design is easy to transport into tight spaces and can be set up and placed into full operation in a matter of minutes.



TRAILER

- Dedicated use tandem axle trailer is equipped with (8) 275 / 70R22.5 tires (44,400 lb or 20,140 kg rating) on 10 hole disc aluminum wheels
- 25K tandem axle air ride suspension, ABS brakes, DOT lights, 12 volt electrical system and 2 inch (51 mm) king pin

TUBULAR HANDLING

- Maximum tubular length 47 ft (14.33 m) Range III
- Maximum weight capacity 5,000 lbs (2,268 kg)
- Tubular diameter up to 30 inches (762 mm) with jaws removed
- Maximum jaw size 17 inches (432 mm)
- Slide travel 8 ft (2.4 m)

LoadSafe performance is directly related to conditions encountered in the field. Specifications presented here illustrate equipment performance under factory test conditions. Schramm, Inc. continuously improves its products and reserves the right to change specifications, design, prices and terms at any time without notification or obligation. These specifications do not extend any warranty, expressed or implied, nor do they or Schramm, Inc. make or imply any representation of the machine's merchantability or fitness for a particular purpose.

SKID MOUNTED HYDRAULIC PIPE RACKS

- Racks hydraulically raise and lower to roll pipe, collars and casing into feed or discharge position
- Rack loading area width 166 inches (4.22 m), with adjustable height from 47 inches (1.19 m) to 77 inches (1.96 m) to allow transfer of tooling from standard pipe hauling trailers
- Racks can be positioned between pipe transport trailers, flat bed trucks or staging racks

WEIGHT AND DIMENSIONS

- Transport length 40 ft (12.19 m)
- Transport width with hydraulic pipe racks stowed 10 ft 2 inches (3.1 m)
- Weight of trailer only 24,500 lbs (11,113 kg) approximate
- Weight of trailer and racks in stowed position 33,500 lbs (15,195 kg) approximate





ENERGY

EXPLORATION

MINE RESCUE

LARGE DIAMETER WATER WELL

DEEP HOLE GEOTHERMAL



BUILT TO HANDLE DRILL PIPE, COLLARS OR CASING SAFELY AND EFFICIENTLY

LoadSafe® is true to its name, offering safe, hands free cycling of drill pipe, collars and well casing for all Schramm Telemast® rigs designed with tilting top head drives.

This automated system is fully integrated into the TXD rig rated at 200,000 lb hoist, and is also offered as an option or retrofit for Schramm T200XD, T130XD and T90XD rigs used in energy, mineral exploration, mine rescue, large diameter municipal water well or deep hole geothermal drilling applications.

LoadSafe® is fed from hydraulically operated pipe racks set up in the horizontal position, eliminating "crow's nest" safety concerns found in traditional vertical pipe handling systems. Drill pipe or Range III casing is lifted from rack position into alignment with the tilting top head of the rig. A hydraulic roughneck on the rig eliminates manual tongs and the typical risks associated with their use while tripping drill pipe.

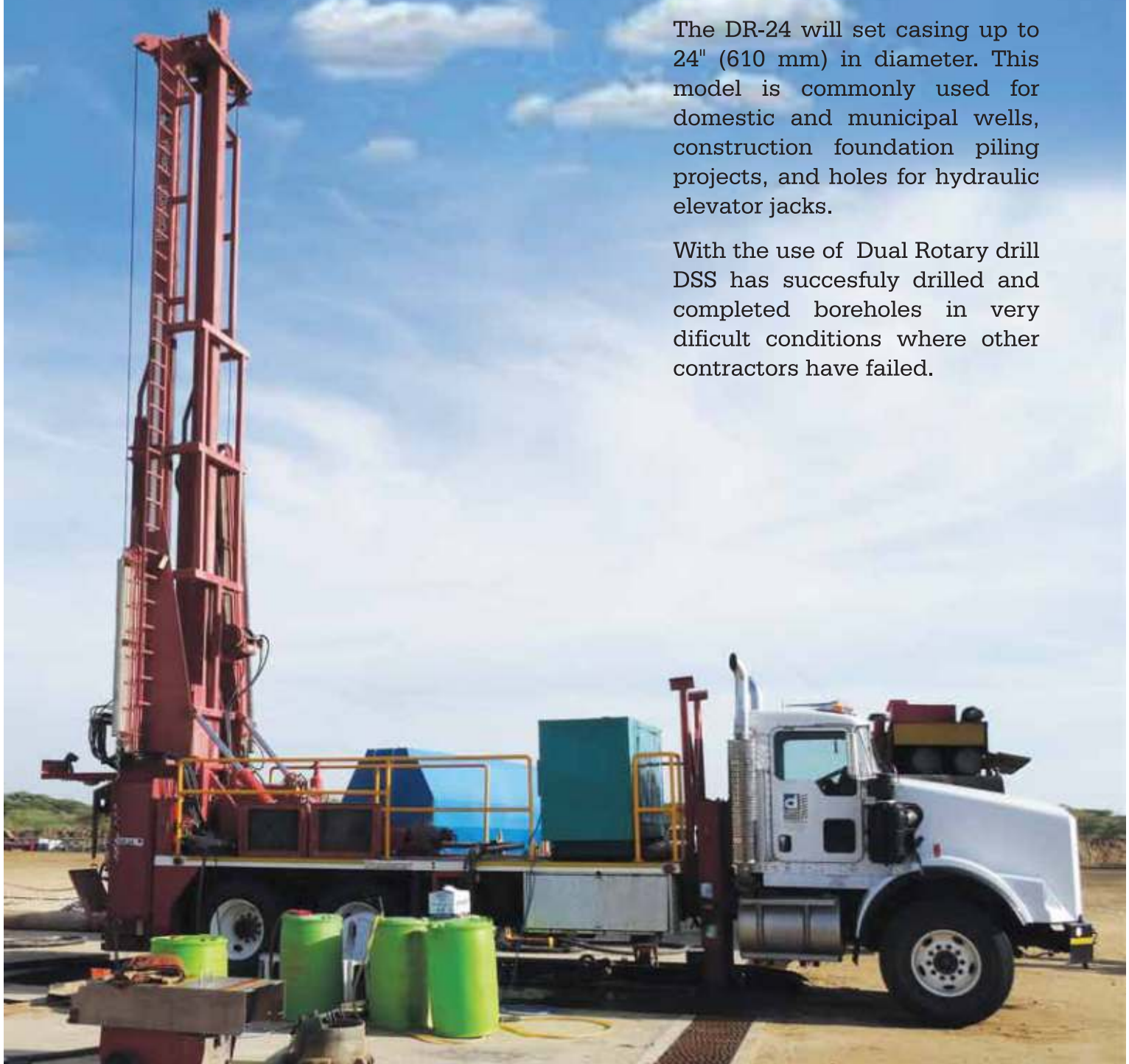
- Hands free operation
- Range III casing capability up to 47 ft (14.33 m) long
- Tubular range up to 30 inches (760 mm) diameter
- Lift capacity to 5,000 lbs (2,268 kg)
- Single or double sided pipe rack configurations available at additional cost



FOREMOST DUAL ROTARY DR-24

The DR-24 will set casing up to 24" (610 mm) in diameter. This model is commonly used for domestic and municipal wells, construction foundation piling projects, and holes for hydraulic elevator jacks.

With the use of Dual Rotary drill DSS has successfully drilled and completed boreholes in very difficult conditions where other contractors have failed.



DR-24 SPECIFICATION

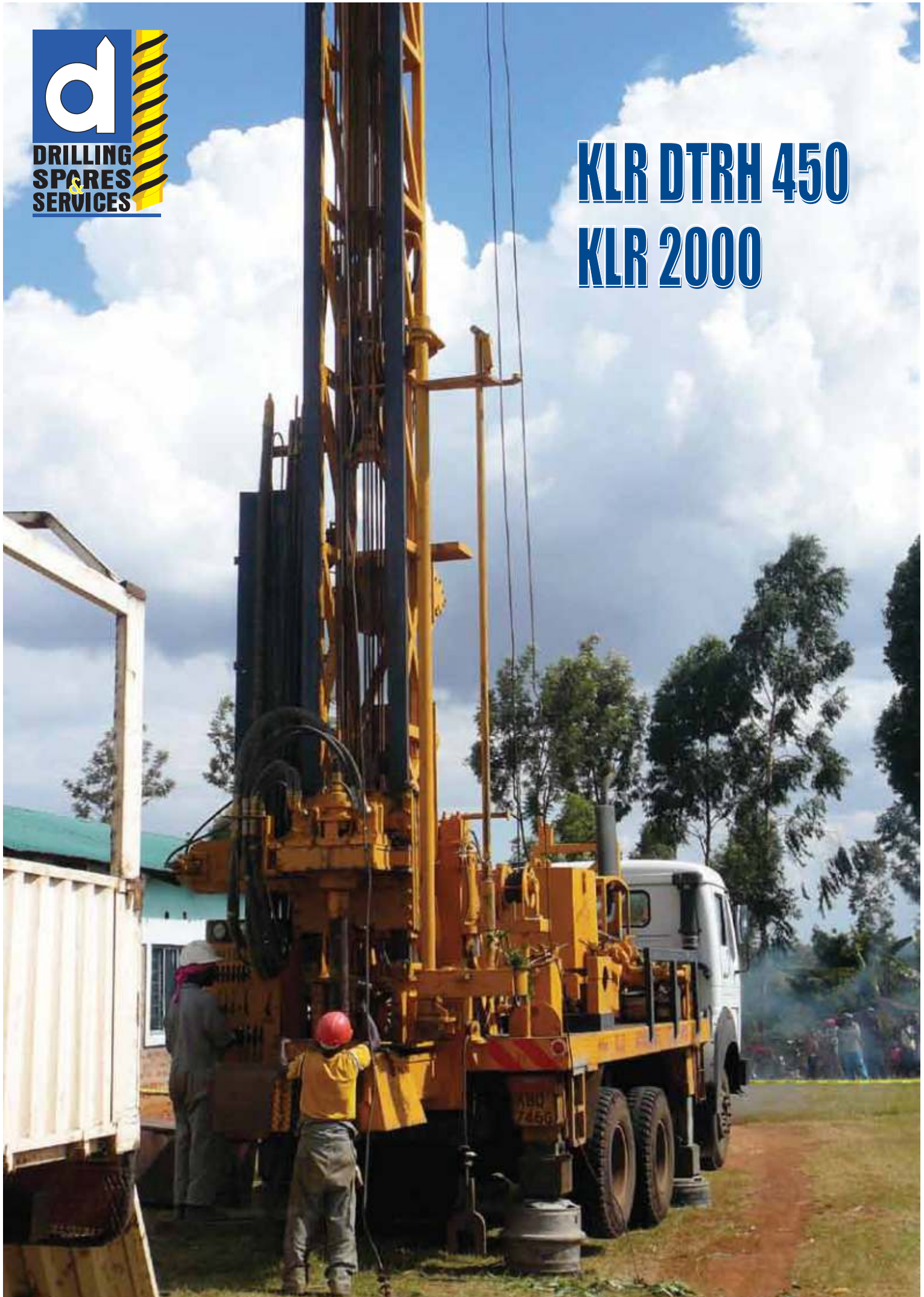
		DR-24
Top Drive		Standard
Stroke		26 ft (7.92 m)
Hoist Speed	Up	77 ft/min (23.47 m/min)
Hoist Capacity	Pullback	58,000 lbs (26300 kg)
	Pulldown	20,000 lbs (9000 kg)
Torque (stall)		116,000 in-lbs (13100 Nm)
Rotation Speed		0 - 116 rpm
Lower Drive		
Stroke		12 ft (3.66 m)
Hoist Capacity	Pullback	72,000 lbs (33000 kg)
	Pulldown	33,000 lbs (15000 kg)
Torque		1,000,000 in-lbs (112000 Nm)
Rotation Speed		0 - 6 rpm
Maximum Casing Diameter		24" (609.6 mm)
Compressor		
Air Flow		900 - 1150 cfm (25.5 - 32.6 m ³ /min)
Pressure		350 psi (24.1 bar)
Engine Power		475 - 600 hp (354 - 447 kw)
Dimensions		
Length		38 ft 9 in (11.81 m)
Height		13 ft 6 in (4.11 m)
Width		8 ft (2.44 m)
Weight		56,000 - 72,000 lbs (25400 - 32650 kg)
Jib Boom Winch		
Wire Rope Length		140 ft (42.67 m)
Wire Rope Diameter		1/2" (12.70 mm)
Line Pull on Bare Drum		6,000 lbs (2720 kg)
Line Speed on Full Drum		100 ft/min (30 m/min)
Water & Foam Injection		
Capacity		12 - 20 gpm (45 - 75 l/min) 20 gpm (75 l/min)
Pressure		600 psi (41.4 bar)





KLR DTRH 450

KLR 2000



BRIEF TECHNICAL SPECIFICATIONS OF KLR DTH DRILL RIG MODELS

DESCRIPTION	DTH 2000	DTHR 450
DRILLING CAPACITY: Drill hole size	6 - 14"	6 - 16"
MAST: Construction Centraliser opening Rod / Casing Handling	Study channel 400 mm 6.0 mtrs	Box Frame 400 mm 6.0 mtrs
ROTARY HEAD: Max. Speed Max. Tarque	0 to 100 8,700 Nm	0 to 100 8,700 Nm
FEED SYSTEM: Pull up Force Pull up Speed	17,500kg 30m/min	22,000kg 20m/min
CARRIER:	TATA 2516 6 X 4 160 HP	TATA 2516 6 X 4 160 HP





COMPRESSORS

ATLAS COPCO 1200CFM/330 PSI

Use of a six cylinder, turbo-charged drive engine allows for increased flows and pressures for greater borehole drilling. Like all our boosters, this unit provides you with a better penetration rate, cooler bit temperatures, and longer bit life.

Special attention has been given to the overall product quality, user friendliness, ease of serviceability and economical operation.

DSS operates two units of this type. The machines are fully compliant with oil/gas and mining safety standards.



DZ 23044-1100CFM/350 PSI



Elgi has a legacy of providing reliable compressed air solution for the construction, mining and oil & gas industries for over four decades. Drilling is both technically demanding and commercially challenging in these industries. For drilling small to large blast holes, the compressors should meet the critical requirements of high-speed, reliable performance and economy in drilling operations. Elgi compressor has proved a good choice to meet these demands. With faster drilling, it ensures higher productivity at lower drilling cost -per-foot.

The compressors are available in diesel/electric powered versions. They have broad usage in diverse applications that include DTH drilling, oil & gas exploration, tunneling, piggging, sand blasting, piling, laying of fibre cables, road and bridge construction.

DSS operates seven units of this type mounted on both trucks and sleds for different environment. The units are fully compliant with oil/gas and mining safety standards.

TECHNICAL SPECIFICATIONS

	ATLAS COPCO XRV 1200 Excel	ELGI D223044
Flow (1/S)	568	519
CFM	1200	1100
Operating Pressure (psig)	330	350
Length (mm)	3580	4800
Width (mm)	1600	2100
Height (mm)	1865	2690
Dry Weight (Kg)	4100	6500
Engine Make / Model	Cummins / NTA 855 BC	Cummins / KTA 1150C
No. of Cylinders	6	6
Engine Full Load Speed (rpm)	1900	2200





MUD SOLID CONTROL



Mud Reservoir	Deutz Diesel 74 HP BF4L2011
1000 Gallons	Air-Cooled
3/16" HR Steel	4 cylinder in-line engine
2 - 4" Suction Outlet	Fulfills Tier III EPA emissions regulations
Sloped walls & Sand traps	Electronic Engine Monitor System
Shaker	(Safety shutdown) Gauge Panel
4' x 5' Double Screen - Bottom 10 &	Alternator 12 Volt
100 Top Mesh	Mud Mix Hopper
Hydraulic driven w/constant speed control	Vacuum Jet ventury
Screens mesh should be adjusted as needed	Total Weight
Rotary Motion 1/4" HR Steel wall	7,000 Pounds
construction	Foot Print 6'6" Wide x 14' Long x 7'6" Tall



Drilling and spares services Limited Operates 5 MUD PUMP UNITS giving a capacity from 195 gpm to 750 gpm at pressure from 180PSI to 750PSI

MODEL	OUT PUT (GPM)	PRESSURE (PSI)	LINER (INCHES)	STROKE (INCHES)
EMSCO D-375	723	744	7.5"	14"
GARDNER DENVER FY-FXX	420	182	7.5"	8"
CBG 250H	427	256	7"	10"
CBG 150	181	256	5"	6"
NATIONAL D-50	195	450	5"	10"



P. O. Box 40859-00100 (G.P.O.) Nairobi, Kenya.
Tel: (02) 3540208, Mobile: 0722 20 47 61,
Email :dss@iconnect.co.ke,
info@drillingspareskenya.com
Website: www.drillingspareskenya.com