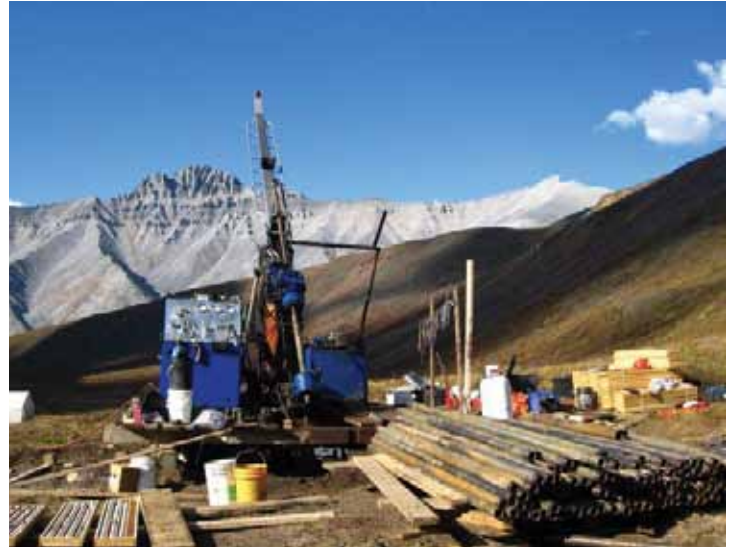


JKS BOYLES



A 5 HYDROSTATIC SURFACE DRILL

PERFORMANCE SPECIFICATIONS

The Innovators



A5 Hydrostatic Surface Drill

Maximum production with a minimum of effort – the **A5** from JKS Boyles meets all the requirements.

The A5 has field proven features which have been incorporated in the design to make this one of the best core drills in its class. The A5 is designed to be broken down quickly and easily for helicopter moves. The disassembled rig is light enough to be moved using a Hughes 500D helicopter.

Synchronised rod handling provides a quick and efficient method of adding and removing drill rods from the bore hole. The drill head has a “float” feature which avoids thread damage when rod joint making or breaking.

The bottom of the feed frame is fitted with a hydraulic ‘P’ size casing clamp which assures accurate alignment between drill rod and casing.

The operators console is equipped with easy to read gauges and finger tip controls to enable the highest possible production rates. Drill string weight is balanced with the hydraulic system to keep a constant preset weight on the drill bit at all times providing maximum bit life and core recovery.

- > Depth rated to 1,525 m (5,000 ft) N size 69.8mm
- > Rod handling feature (automatic chuck and clamp synchronisation)
- > Integral skid with hydraulic mast raise



One of the cost effective features of the A5 drill is the interchangeability and use of standard drill components which increases reliability and ease of servicing.



Depth capacity (altitude dependant) with 12.5° chuck

B	2-3/16" (55.5 mm)	6,000 ft (1,830 m)
N	2-3/4" (69.8 mm)	5,000 ft (1,525 m)
H	3-1/2" (88.9 mm)	3,200 ft (980 m)
P	4-5/8" (117.4 mm)	1,475 ft (450 m)

Recommended engine: 140 hp (104 Kw) or 170 hp (126 Kw) Isuzu diesel.

Weight

Feed frame:	1280 lbs (580 Kg)
Head:	1130 lbs (512 Kg)
Hydraulics (dry):	1375 lbs (623 Kg)
Engine (140 hp wet):	1200 lbs (544 Kg)
Engine (170 hp wet):	1550 lbs (703 Kg)

Drill Head

Standard: HQ drill head with hydraulic chuck
Option: PQ drill head with 35 hydraulic chuck
Gear ratio: Standards – 3:1 and 5:40 gear ratio

Chucks

Standard: Hydraulic Chuck available in both 12.5° and 7°
 35 Hydraulic Chuck 12.5° Hydraulic Jaws

Holding Capacity

26,000 lbs (11793 Kg) 12.5° Jaws
 36,000 lbs (16329 Kg) 7.5° Jaws

Speed and Torque

Parker V14 160 cc hydraulic motor at 4,500 psi (310 Bar)

	RPM	Torque (lbs/ft)
3:1 gear ratio	1600	507 (687 Nm)
5:4:1 gear ratio	300	1,707 (2314 Nm)

Foot Clamp

Standard: Hydraulic HQ Rod Holder
Option: Hydraulic PQ Rod Holder

Engines

Isuzu	4-cylinder	140 hp (104 Kw) (standard)
Isuzu	6-cylinder	170 hp (126 Kw) (optional)
Cat C6.6	6-cylinder	180 hp (134 Kw) at 2,200rpm (optional)

Hydraulics

General

- Fully synchronised clamp and chuck with operation controlled by fast feed lever
- Head floats up and down for making and breaking rods
- Three hydraulic pumps to maximise efficiency
- Water cooled shell/tube heat exchanger.

Main Pump (4,500 psi) (310 Bar)

Kawasaki variable displacement/load sensed pump. Controls rotation, fast feed and wireline.

Secondary Pump (3,500 psi) (241 Bar)

Eaton variable displacement/load sensed pump. Controls water.

Third Hydraulic Pump

Eaton variable displacement/pressure compensated pump. Controls the slow feed and mud mixer.

Filtration

- One Pall brand return filter
- Three Pall brand pressure filters
- Bypass alarm on all filters.

Oil Cooling

Oversized Thermal Transfer 1048 tube/shell heat exchanger.

Feed Frame

- No plastic components on the feed frame, so it is wear-free
- Drill head runs on 12 heavy duty cam-roller bearings, which are easily replaced
- 31.5" (9.6m) long including aluminium stinger
- Ladder along stinger frame to maintain shiv blocks at top
- Drilling angles from 22° to 90°
- Raises and lowers frame with dual hydraulic cylinders.

Feed Cylinders

Full 6' (152mm) stroke with 38,000lbs (17235Kg) pull back (standard cylinders).

Water Pump

Standard: Nickel coated water pump KL45. 145 Lt/min. 100 bar max pressure.

Option: FMC W1122 mudpump. 132 Lt/min. 69 bar max pressure.

Wireline Winch

Built to custom specs. As per customer needs for desired drilling depths with optional level wind.

A5 Hydrostatic Surface Drill

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Specification	A5
Engine HP	140-180
Number of hydraulic pumps	3
First hydraulic pump	160Lt/min 310 Bar
Second hydraulic pump	76Lt/min 200 Bar
Third pump	40Lt/min 200 Bar
Feed Stroke	1.83 m
Mast thrust force	6.80 ton
Mast pull back force	17235Kg
Rod pulls	3 m
Drilling angle	22-90 degrees
Hoist pull	N/A
Hoisting Speed	N/A
Max. drill head (r.p.m.)	1600
Max. drill head torque (Nm)	4267 Nm
Chuck	HQ/PQ
Chuck opens	Hydraulically
Chuck closes	Springs
Rod tripping speed	360 m/h
Rod tripping synchronised head clamp	Yes
Depth capacity NQ	1525 m
Drill weight (Dry)	4.5 ton
Fluid pump	132Lt/min 69 Bar
Weight: Mudpump W1122	259 Kg

The Innovators

In the interest of product improvement JKS Boyles reserves the right to change design, specifications and price without notice.

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