

HXY-9 Core Drilling Rig



I . General

HXY-9 is an improved product based on HXY-8. It is mainly used in core drill with diamond bit or hard tungsten-carbide tipped bit in the field of geology, metallurgy, coal mine, hydrological and engineering drilling. It can also be used in the fields of superficial-zone petroleum and natural gas mining, mine's gallery ventilation and water discharge tunnel drilling as well as foundation pile construction in large diameter. It is compact in construction, rational in overall arrangement, moderate in weight, convenient in assembling and suitable in the range of rotation speed.

Equipped with water brake, the rig is in normal-open clutch mechanism. The hoist is in low-position operation for its lifting and stopping and other advantages.

II. Main Specifications (with 160KW/1480rpm electric motor)

Drilling depth: 2000~4000m (6560~13120feet)

Spindle dia: 118mm (4.65inch)

Spindle speed (rpm):

Positive: 73, 94,132,207, 333,209,267,376, 589, 948

Negative: 69,198

Spindle torque: Positive: 18088, 14150, 10044, 6417, 3986N·m (13330, 10429, 7402, 4729, 2938 lbf·ft) 6364, 4978, 3534, 2258, 1402 N·m (4690, 3669, 2605, 1664, 1033 lbf·ft)

Negative: 19109, 6723 N·m (14083, 4955 lbf·ft)

Hexagonal Kelly: $\Phi 114 \times 102$ mm ($\Phi 4.49 \times 4.02$ inch), $\Phi 89 \times 79$ mm ($\Phi 3.5 \times 3.11$ inch)

Dia of drill rod: $\Phi 102$ $\Phi 89$ $\Phi 71$ mm ($\Phi 4.02$ $\Phi 3.5$ $\Phi 2.8$ inch)

Spindle stroke: 1200mm (47.2inch)

Sliding stroke of drill rig: 800mm (31.5inch)

Max. Lifting force: 643KN (144546 lbf)

Max. Pressurizing force: 339KN (76207 inch)

Winding Drum capacity: 350m (1148 feet)

Steel wire dia.: 26mm (1.02 inch)

Max. Single-wire hoisting force (the third layer): 150KN (33720 lbf)

Single-wire lifting speeds of hoist: 0.75, 0.96, 1.35, 2.12, 3.4 m/s (2.46, 3.15, 4.43,

6.95, 11.15feet/m)

Drilling angle (without vertical arm): 78°-90°

Dimensions (with electric motor): 5730x2040x3396mm (225.6x80.3x133.7inch)

Weight (with electric motor): 10.2T (22491 lb)

Dimensions (with diesel engine): 6088x2040x3396mm (239.7x80.3x133.7inch)

Weight (with diesel engine): 10.8T (23814 lb)

III. Power unit

Electric motor model: Y315L1-4

Power: 160KW (215HP)

Rotating speed of electric motor: 1480rpm

Diesel engine model: Cummins 6CTA

Power: 178KW (240HP)

Rotating speed of diesel engine: 2200rpm