

D-50 DRILL SPECIFICATIONS

Performance ratings are based on engineering specifications, calculations and accepted industry standards. Capacities may vary according to drilling conditions. Diedrich Drill reserves the right to amend these specifications at any time, without notice.

GENERAL	<p>All purpose drill rig for soil and rock explorations using augers, rotary tools, or core drilling tools.</p> <p>Rated from 125 ft.(38m) to 250 ft.(76m) depth with hollow stem or continuous flight augers up to 14"(356mm) hole size.</p> <p>Rated to 1000 linear feet(305m) of core drilling using N series tools.</p>
FRAME AND BASE	The drill frame is a weldment, constructed of heavy wall rectangular steel tubing, with sufficient strength and rigidity for heavy duty use.
POWER UNIT	The basic D-50 Magnum unit is powered by a 4-cylinder diesel or a 4 cylinder turbo charged diesel engine.* Electric starting and engine instruments are standard. *Other engine options are available
CLUTCH AND TRANSMISSION	<p>Clutch - 13 inch(330mm) automotive type. (60HP gas engine uses 11 inch(279mm) clutch)</p> <p>Transmission - Heavy duty helical gear transmission with 4-forward and 1-reverse gears.</p> <p>Optional cathead is driven by a power-take-off providing 1 speed forward and 1 reverse.</p>
RIGHT ANGLE DRIVE	The right angle drive is a heavy-duty gearbox, totally enclosed, and running in oil
ROTARY BOX	The rotary box consists of a 80# triple-stranded roller chain drive, totally enclosed, and running in oil. The quill and spindle are supported on tapered roller bearings. The lower bearings run submerged in oil. The upper bearings are externally greased.
SPECIFICATIONS	<p>Spindle Bore.....3-1/2"(89mm)</p> <p>Spindle Travel.....70"(1778mm)</p> <p>Thrust.....up 22,581 lbs (100kN) @2300psi</p> <p style="padding-left: 100px;">down 14,453 lbs (64kN) @2300psi</p> <p>Max Feed Rate.....up FPM 49 (15m/min)</p> <p style="padding-left: 100px;">up Rapid Retract option FPM 70 (21m/min)</p> <p style="padding-left: 100px;">down FPM 76 (23m/min)</p> <p>Max gross spindle torque*...1st gear</p> <p style="padding-left: 100px;">up to 9,012ft.lbs (12,218Nm)</p> <p>Max spindle speed*.....1st gear, 95 RPM</p> <p style="padding-left: 100px;">4th gear, 597 RPM</p> <p>* varies with engine</p>
HYDRAULIC SYSTEM	<p>On the D-50 unit, oil is supplied by a heavy-duty gear type two-section pump rated at 19 GPM(72 l/min) and 24 GPM(91 l/min) at 2400 RPM. Maximum operating pressure is 2300 PSI(15,513 k Pa). The pump is gear driven from the engine accessory drive or from the front crank shaft.</p> <p>The hydraulic valves are stock sectional body directional control valves with an integral non-adjustable relief valve. All controls are conveniently located on a single console for ease of operation.An optional regenerative spool can be provided for the main feed valve providing a high speed spindle lift as well as normal operation.</p>
AUGER ADAPTER	A heavy duty universal joint which mounts to the spindle with a single nut is provided for ease in hook-up and adjusting for misalignment. All components are sized to withstand torque and axial loads encountered under most drilling conditions. 1-5/8"(41.3 mm) female hex is standard, other sizes available.