WILLIAMS

LDH Diggers

Tough By Reputation
Better By Design

Williams LDH Diggers: six depths to choose from, for all types of drilled shaft work.

Williams LDH Diggers are the most popular foundation drilling rigs in the industry-and for plenty of good reasons.

The LDH is designed for drilling holes to a maximum depth of 25, 40 or 50 feet (7.6, 12.2 or 15.2 meters) with a single kelly model, or 50, 80 or 100 feet (15.2, 24.4 or 30.5 meters) with a telescoping kelly. This makes it ideal for foundation drilling projects from freeways to farm-to-market roads, from bridge construction to skyscraper sites.

Hydraulically-operated, full-positioning turntable. Hydraulic stabilizing jacks. Two-speed service hoist. Tandem hydraulic pump system. These are some of the standard features that have helped make the LDH digger the standard of the industry. And though the LDH is heavy-duty and rugged enough for continuous operation on the big jobs, it's truck-mounted and highly mobile: you can easily move it from one job to the next.

Derrick Section

Square tubing legs in the derrick structure provide the required structural strength at all critical stress points. Nylon pads are utilized on the sliding guides, both on the middle guide and kelly head. Guide rails are rectangular for extra strength. On the DG rotary table, the lubricating pump drive has a broad gear face for longer wear. Large size oil lines and a high visibility oil indicator are among the other features which extend pump gear life and ensure proper lubrication throughout the rotary table under the roughest working conditions.

Drawworks Section

The standard "V" Belt drive, engine to power shaft, has been replaced by special sheaves and high capacity powerband belt drive. This improved system minimizes bearing loads and drive belt wear for longer life.

The hydraulic system has tandem 24 gpm pumps and a separate flow tandem valve bank. A constant turntable speed is obtainable at the same time other hydraulic functions are in operation. The hydraulic lines to the raising and slide cylinders were revised to eliminate the steel tubing; a single hose is used between the manifold and the cylinder port. The hose is located on the inboard side of the raising cylinders for added safety. The standard slide cylinder travel is a full four feet, and is located so that the cylinder is extended with the machine in the roading position for better load distribution.

We've summarized many of the features that make Williams LDH Diggers popular with men who know construction equipment. Check our LDH specifications for all the details. And remember-we keep making LDH diggers better.

Standard Specifications

POWER SUPPLY: G.M.C. Model 4-71N65 Diesel Engine; governed rating: 136 bhp @ 1800 RPM. Other engines optional.

POWER TRAIN: System provides high inertia characteristics to "smooth out" rough digging and provide "peak power" performance.

ROTARY TABLE: Williams Model DG-6000 double reduction rotary. All gear design with forced feed lubrication system.

ROTARY DRIVE: Chain driven through dual range friction clutches for instantaneous high and low speeds without shifting gears.

HOIST & CROWD: Chain driven cable drum through dual friction clutches for high speed kelly travel plus hydraulic crowd.

DERRICK: Tubular design with hydraulic cylinders for derrick raising and positive kelly crowd.

KELLY BAR: Single kelly system-6" square hollow. Telescoping kelly system-6" square hollow outer, 4¼" square hollow inner.

TRANSMISSION: Williams heavy-duty industrial type, three speeds forward, single speed reverse. By utilizing both rotary clutches six forward rotary speeds may be obtained.

HYDRAULIC SYSTEM: Tandem hydraulic pump permitting simultaneous operation of the turntable and all other positioning functions.

FRAME: Electrically welded structural members, trussed and cross braced for maximum strength.

TURNTABLE MOUNTING BASE: Heavy duty turntable base with 240° rotation and 4' slide stroke at any point in the arc. Includes hydraulic brake, controlled from operator's station.

HYDRAULIC STABILIZERS: Four 6" diameter sliding outrigger jacks.

SERVICE HOIST: Williams Model M-42 two-speed hoist equipped with ½" cable. Rated capacity: 18,000 pounds, single line, bare drum.

Application Specifications

KELLY SPEEDS (ROTARY): First gear: 23 & 40 rpm. Second gear: 38 & 65 rpm. Third gear: 63 & 110 rpm. The choice of rotary speeds within each gear is the result of Williams exclusive dual range clutches.

TORQUE AT KELLY: Available measured peak torque at kelly is in excess of 50,000 lb-ft.

HOIST FORCE: 16,000 pounds.

CROWD FORCE: 37,000 pounds positive crowd force.

KELLY TRAVEL SPEED: Maximum 180 fpm out of the hole (up). Free fall (down).

RECOMMENDED CARRIER: The model 600 8x4 or its equivalent is the minimum size carrier for LDH.

Optional Equipment

CONVERSION KIT: All single kelly models of LDH utilize identical components as the telescoping kelly models and may be converted at a later date to telescoping diggers with twice their former depth capacities.

AIR CLUTCHES: Air actuated clutches available for the LDH on request.

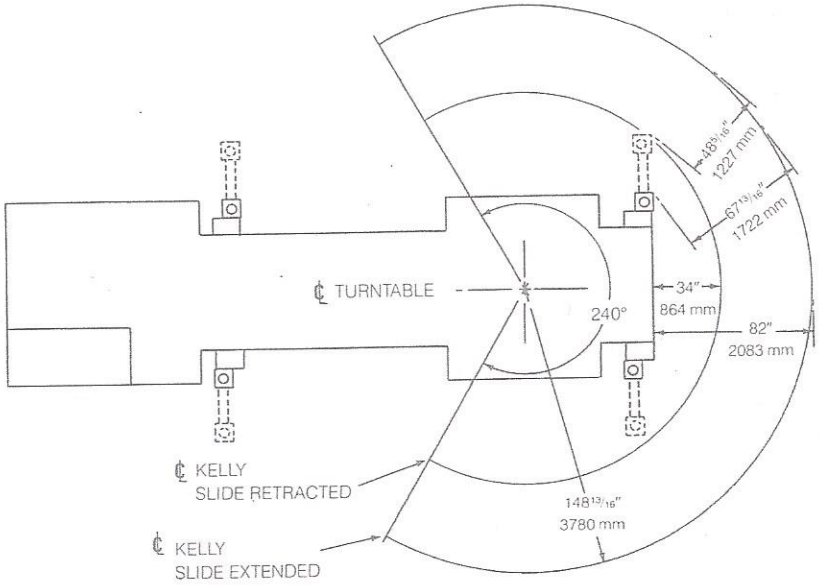
KELLY BAR: 4¼" square solid inner.

CUMMINS 6BTA 5.9 ENGINE: 171 bhp @ 2100 Powerful, fuel efficent & quiet.

LDH Digging Geometry

This drawing graphically illustrates the kelly positioning characteristics of the LDH digger. Fingertip touch by the operator of hydraulic controls will swing the entire digger section at a fast rate of speed in a 240° arc around the rear of the carrier vehicle. At any desired point in the arc, another touch by the operator of the hydraulic houselock brake control will hold the digger in a rigid drilling position.

Standard 4' horizontal slide provides $48^{5}/_{16}$" maximum extension beyond extended rear outrigger jacks. This allows the LDH to swing large augers up to 88" diameter around the fully-extended rear jacks without interference. The maximum extension from the rear of the carrier to the center line of the extended kelly is a generous 82".



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Weights and Dimensions

		SINGLE KELLY MODEL LDH			TELESCOPING KELLY MODEL LDH		
		25	40	50	50T	80T	100T
Gross Weight	lbs kg	62,100 28 168	63,400 28 758	64,200 29 121	64,700 29 348	66,400 30 119	67,500 30 618
Front Tandem	lbs kg	16,000 7 258	19,500 17 917	22,500 10 206	16,300 7 394	20,400 9 253	24,000 10 886
Rear Tandem	lbs kg	46,100 20 911	43,900 19 913	41,700 18 915	48,400 21 954	46,000 20 865	43,500 19 731
Derrick Assembly	lbs kg	11,400 5 171	12,700 5 761	13,500 6 124	13,700 5 761	14,400 6 532	15,500 7 031
Drawworks Assembly W/Turntable and Jacks	lbs kg	26,018 11 802	26,018 11 802	26,018 11 802	27,328 12 396	27,328 12 396	27,328 12 396
Carrier	lbs kg	20,400 9 253	20,400 9 253	20,400 9 253	20,400 9 253	20,400 9 253	20,400 9 253
Dimensions—A	mm in.	11 508 453 1/16	16 080 633 1/16	19 128 753 1/16	11 851 466 9/16	16 423 646 9/16	19 471 766 9/16
B	mm in.	2 240 88 3/16	6 812 268 3/16	9 860 388 3/16	2 240 88 3/16	6 812 268 3/16	9 860 388 3/16
C	mm in.	13 386 527	17 958 707	21 006 827	13 729 540½	18 301 720½	21 349 840½
D	mm in.	700 27 9/16	700 27 9/16	700 27 9/16	1 043 41 1/16	1 043 41 1/16	1 043 41 1/16
E	mm in.	1 219 48	1 219 48	1 219 48	1 219 48	1 524 60	1 524 60

NOTE: Above weights may vary ±5% due to the various accessories which are available for each unit.