

The Magnum pumping unit originated in the early 1980's at the request of a Dansco customer. The customer wanted to move more fluid on an existing well, so Danny began searching for new ways to make a pumping unit more efficient. Fiberglass rods were becoming more prevalent in the industry as their couplers were perfected, but the market didn't have a pumping unit that took full advantage of the elasticity of these new rods or the weight reduction they brought with them. Danny began working on a solution in conjunction with engineers from the C.A. Lawton Company, and in 1983 the first Dansco Magnum pumping unit began a test run on a well in the SACROC Field near Snyder, Texas. A 228 Magnum with a 100-inch stroke replaced a 320 unit with a 120-inch stroke that had been steadily pumping that specific well for nearly a decade. The test was successful, pumping the well off in only four days. Dansco produced four Magnum pumping units before the oil crash in 1986, which caused the Magnum – and its potential – to be shelved indefinitely.

The Magnum's design is centered on the idea of lifting more fluid than a conventional pumping unit while reducing the initial investment and ongoing utility expenses in the field. The Magnum can achieve these three primary objectives on several different types of wells including oil and water, as the design and execution remains constant regardless of the type of fluid being lifted.

The Magnum lifts more fluid thanks to a unique geometry change, where it actually accelerates on the down stroke. Fiberglass rods are more elastic than polished rods, and when combined with acceleration, create a "sling" effect on the rods as the unit begins the up stroke. This "sling" effect allows the rods to extend an average of 2-4 feet at the pump, so your actual stroke length increases without structural changes in the pumping unit. The increased pump stroke will also increase the amount of fluid lift, meaning the pump will actually produce at the same level as the next size up would produce on a conventional pumping unit.

The Magnum unit also reduces operating costs. It requires less horsepower than a conventional unit, balancing the lightweight fiberglass rods with lightweight cranks and structural components. It also features phased crank positions to assist in the counter balance process without adding more weight. This results in a 40-60% reduction in total weight, and when added to the even load distribution factors, requires less electricity than a conventional pumping unit.

The lightweight structure combines with the "sling" effect on the rods and the unique geometry of the counter balance effect to reduce gear box torque. Lower torque equates to a reduced gear box size in most cases, which in turn lowers the up-front capital needed to begin producing.

The Dansco Magnum pumping unit is once again a viable option for producers, as it does the work of larger API-sized units for a lower initial investment and reduced operational expenses throughout its life cycle. The Magnum comes with the same warranty, service standards and parts availability as the full line of conventional Dansco pumping units, and we invite you to contact us today for pricing and availability.

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