

Construction Equipment

Used Construction Equipment San Diego - Most heavy-duty construction equipment includes vehicles build to complete specific construction tasks. Earthmoving operations are often accompanied by heavy trucks, engineering machines, heavy hydraulics and more. Five main types of construction equipment systems include powertrain, implement, structure, control and information and traction. There is a variety of industrial equipment that is classified under the heavy equipment umbrella. Tractors Tractors are specially designed to deliver high tractive movements at slower speeds to accommodate hauling items such as trailers or construction equipment commonly for agricultural purposes. One of the most popular farming machines is tractors that mechanize heavy lifting and loading tasks that need traction and power. A variety of agricultural attachments may be mounted on or behind the tractor to make certain tasks more efficient. The tractor is a useful farming machine used to mechanize loading, heavy lifting and digging among other things. Excavators Heavy construction equipment includes excavators that feature a bucket, stick, boom and cab situated on a rotating platform. The house sits on top of an undercarriage outfitted with wheels or tracks depending on the model. Excavators rely on hydraulic motors, hydraulic fluid and hydraulic cylinders to facilitate all movements and functions. A different operation mode is achieved with excavators that rely on the linear actuation of the hydraulic cylinders as opposed to models that use cables, steel ropes and winches. Backhoe Loaders A backhoe loader is similar to a tractor with a backhoe situated at one end and a front loader on the other. To help prevent operator fatigue, there is a swiveling seat to allow the operator to face whichever direction is needed. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. Manufactured backhoe loaders are specific for farm applications and are not suitable for heavy work. The farm model requires the operator to change seats from sitting in the tractor seat to sitting in front of the backhoe controls. This constant movement to reposition the machine during digging often slows down the process. The hydraulically powered attachments include the grapppler, tiltrotator, auger, breaker and other items. The backhoe can be used in a variety of industries including agricultural, engineering and construction. The tiltrotator attachment works well for carrying tools. Many backhoes provide different quick coupler mounting systems. This mechanism enables better efficiency and drastically increases the abilities of the machine. It is common to find backhoes working beside bulldozers and loaders. Backhoe loaders are popular within the industrial equipment industry. Some types of specialized equipment such as front-end loaders and excavators are displacing backhoes. The advent of the mini-excavator has proven useful in a variety of industries. A mini-excavator and a skid steer can work together to complete work that was formally reserved for a backhoe. A power shovel can be created when the backhoe bucket is used in reverse. This design is helpful for extended-reach applications, working around pipes, loading and filling stockpiled materials, etc. Skidder A skidder is a kind of heavy equipment that is used in logging for hauling freshly cut trees from the forest in a forestry practice known as skidding. The logs are dragged out and transported from the cutting location to a landing where they can be loaded onto logging trucks and taken to the sawmill. Dredging Excavating partially or completely underwater is a process called dredging. Dredging can be completed in shallow or deep waters. Dredging helps to keep waterways and ports easy to navigate and open. Dredging is often done to improve the coastline, for coastal development purposes and land reclamation. Sediments can be sucked up and redistributed. Dredging can be utilized to recover items at times. The construction industry may collect high-value sediments and minerals via dredging. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Extracted items may be locally disposed of, removed in pipelines via a liquid suspension or moved by barge. Bulldozers A popular type of heavy equipment is the bulldozer. It relies on large tracks to manage mobility on rough surfaces and tricky terrain. Excellent design features evenly distribute the weight over a wide area to prevent

this heavy machine from sinking in sandy or muddy locations. Swamp tracks, as the extra wide tracks are known, are useful in poor terrain. The transmission system delivers extensive tractive force and allows the machine to make the most of the unique tracks. Bulldozers are often used in road building, infrastructure development, road building applications, mining, land clearing, construction and other projects that rely on earth-moving machinery. Wheeled bulldozer models with 4WD are available. They feature an articulated hydraulic system to complete difficult tasks. The hydraulically actuated blade is situated in front of the articulation joint. The ripper and the blade are the primary tools with this model. Grader Graders are a kind of construction equipment that uses a long blade. It creates a flat surface during the grading operation. Many models have an engine and cab located above the rear axles at one end of the machine, three axles with the third axle situated at the front end and the blade balanced in between. Most graders drive while their rear axles are in a tandem position. Some models feature front-wheel drive to provide better grading maneuverability. There are optional attachments for the rear including the scarifier, compactor, ripper or blade. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. A variety of attachments can be used on certain grader models. The underground mining industry can use some specially engineered graders. Graders are used in the civil engineering industry to finish grade with precision with the proper height, pitch and blade angle. Rough grading processes are completed with bulldozers or scrapers. Graders achieve accuracy while building gravel and dirt roads. They are also used to prepare the base for the construction of paved roads. Graders are employed to set gravel or native soil foundation pads to finish grade before large-scale building construction. These large machines can designate inclined surfaces to establish slopes for drainage ditches or roads beside the highways. Grader steering can be completed via a joystick or steering wheel to control the angle of the front wheels. A smaller turning radius is possible by many models due to the frame articulation design between the rear and front axles. This enables the operator to change the articulation angle to be more efficient moving material. Other functions are usually powered with hydraulics and can be directly controlled by joystick inputs, levers or electronic switches powering electro-hydraulic servo valves.