

Construction Equipment

Used Construction Equipment Arizona - Industrial equipment including heavy-duty vehicles designed for specific construction tasks make up the majority of construction equipment. Earthmoving operations are often accompanied by heavy trucks, engineering machines, heavy hydraulics and more. Some of the popular kinds of the five equipment systems include implement, control and information, powertrain, traction and structure. There is a variety of industrial equipment that is classified under the heavy equipment umbrella.

Tractors Tractors are meticulously designed to provide high tractive responses at slow speeds to facilitate hauling equipment, trailers or items required for construction or agricultural applications. Tractors are commonly used to describe farm equipment that offers traction and power to mechanize farming tasks. Numerous agricultural additions can be mounted behind or onto the tractor to make certain jobs easier. The tractor is a useful farming machine used to mechanize loading, heavy lifting and digging among other things.

Excavators Heavy construction equipment such as excavators have a stick, a boom and a cab situated on a rotating platform. Depending on the particular model, the house is located on top of an undercarriage that has either tracks or wheels. The hydraulic excavators complete all functions and movement with the help of hydraulic fluid, hydraulic motors and hydraulic cylinders. The hydraulic cylinders provide linear actuation to provide a different operation mode in comparison to other excavator models that use winches, steel ropes and cables.

Backhoe Loaders Similar to a tractor, a backhoe loader is essentially a machine that has a front loader on one end and a backhoe on the other end. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. These machines are very durable and have been manufactured to be strong enough to complete farm work however, they are not suitable for heavy construction jobs. However, the farm unit requires the operator to change seats from sitting in front of the backhoe controls to then sitting in the tractor seat and vice versa. This constant movement to reposition the machine during digging often slows down the process. Common hydraulically powered attachments include the auger, a grapppler, breaker and a tiltrotator to complete a variety of jobs in the engineering, agricultural and construction industries. A great attachment for carrying tools is the tiltrotator. Many backhoes provide different quick coupler mounting systems. This enables easier attachment mounting and can dramatically increase the capabilities of the equipment on the machine. It is common to find backhoes working beside bulldozers and loaders. One of the most common types of industrial equipment is the backhoe loader.

Certain types of special equipment including excavators and front-end loaders are replacing backhoes. The advent of the mini-excavator has proven useful in a variety of industries. Previous job sites that would have employed a backhoe may now feature a mini excavator and skid steer used in conjunction. A power shovel can be created when the backhoe bucket is used in reverse. This can be useful for working around pipes and other obstacles, to increase overall reach capability, for loading from a stockpile or for filling material or picking up items next to buildings.

Skidder A type of forestry equipment for transporting freshly cut trees is the skidder. This hauling practice is referred to as skidding. Newly cut logs are dragged out of the forest and taken from the cutting area to a landing where they can be safely loaded and taken to the sawmill on logging trucks.

Dredging Dredging refers to a type of underwater excavation or partially underwater. Dredging can take place in the ocean or in shallow waters. This excavation method is used to keep waterways and ports navigable for ships and free of debris. Dredging is often done to improve the coastline, for coastal development purposes and land reclamation. Bottom sediments can be sucked up and relocated elsewhere. Sometimes, dredging is completed to recover materials. High-value sediments or minerals may be collected via dredging and utilized by the construction industry. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Dredging materials can be transported by barge, removed as a liquid suspension through

pipelines or locally disposed of. Bulldozers are powerful heavy equipment with great tracks to provide superior mobility on rough terrain. Excellent design features evenly distribute the weight over a wide area to prevent this heavy machine from sinking in sandy or muddy locations. Poor terrain can be easily navigated with extra-wide swamp tracks. 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. In front of the articulation joint, the hydraulically actuated blade is mounted. The ripper and the blade are the primary tools with this model. Grader A grader is a type of construction machine that features a long blade. A grading operation creates a flat surface. Many models have an engine and a cab situated at one end of the machine above the rear axles. There are three axles and the third one is found at the front end of the machine. The blade is 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. Extra attachments may be used on the rear of the machine such as a blade, ripper, compactor or scarifier. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. Some grader models that can employ numerous attachments. Some graders have been specifically designed for use in underground mining. Graders are used in the civil engineering industry to finish grade with precision with the proper height, pitch and blade angle. Scrapers and bulldozers complete rough grading processes. 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 essential for setting gravel or native soil foundation pads to make the grade before construction begins. 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 steering wheel or a joystick to control the front wheels' angle. Many models can conduct a tighter turning radius due to the way the frame is articulated between the rear and front axles. Materials can be moved more efficiently thanks to this design allowing operators to change the articulation angle. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.