

Construction Equipment

Used Construction Equipment Berkeley - 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. Five main types of construction equipment systems include powertrain, implement, structure, control and information and traction. Many kinds of industrial machines are categorized under the heavy equipment category. 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. Many agricultural attachments can be added to the tractor to simplify tasks. The tractor can provide power to the mechanized attachment to facilitate heavy lifting or digging etc. 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. Excavators rely on hydraulic motors, hydraulic fluid and hydraulic cylinders to facilitate all movements and functions. 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. To help prevent operator fatigue, there is a swiveling seat to allow the operator to face whichever direction is needed. These machines can be purchased as is or may be constructed from a farm tractor pairing with a rear backhoe and a front-end loader. Manufactured backhoe loaders are specific for farm applications and are not suitable for heavy work. 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. 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. A popular attachment for transporting 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. Backhoes often work alongside bulldozers and loaders. In the industrial equipment industry, backhoe loaders are very popular. Certain types of special equipment including excavators and front-end loaders are replacing backhoes. The mini-excavator has become popular for many applications. 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 flexible design is excellent for completing tasks around obstacles such as pipes, for increasing reach potential and for filling items or loading stockpiled materials. Skidder A type of forestry equipment for transporting freshly cut trees is the skidder. This hauling practice is referred to 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 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. It is used for coastal redevelopment, land reclamation and assists in protecting the coastline. Bottom sediments can be sucked up and relocated elsewhere. Sometimes, dredging is completed to recover materials. The construction industry may collect high-value sediments and minerals via dredging. There are four parts to the dredging process including loosening items, bringing the material topside to the surface, transporting and disposing of the material. Extracts may be disposed of in a liquid suspension in pipelines, transported by barge or locally disposed of. Bulldozers 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. The extra-wide tracks are called swamp tracks and these work well in difficult terrain. The bulldozers' transmission system is built to deliver powerful tractive force by enabling the machine to take advantage of its' 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 mounted in front of the articulation joint. The ripper and the blade are the primary tools with this model. Grader A long bladed construction machine is the grader. It creates a flat surface during the grading operation. 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. The majority of graders drive with the rear axles in tandem; however, certain models add front wheel drive to offer better grading maneuverability. Optional rear attachments include the compactor, scarifier, ripper and blade. Dirt grading and snowplowing jobs commonly use a mounted side blade. Some grader models that can employ numerous attachments. Other graders have been designed for specific industries including underground mining. 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. Maintaining and constructing dirt and gravel roads requires work by graders to ensure accuracy. Graders are used to achieving the proper base for construction and road paving. Graders are employed to set gravel or native soil foundation pads to finish grade before large-scale building construction. These impressive machines can create inclined surfaces in order to generate side slopes for roads or drainage ditches along sides of the highways. Grader steering can be completed via a joystick or steering wheel to control the angle of the front wheels. Many models can conduct a tighter turning radius due to the way the frame is articulated between the rear and front axles. This enables the operator to change the articulation angle to be more efficient moving material. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.