

## Construction Equipment

Used Construction Equipment Missouri - Most heavy-duty construction equipment includes vehicles built 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. 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 is a useful farming machine used to mechanize loading, heavy lifting and digging among other things. Excavators Excavators are one of the most popular types of heavy construction equipment. They often feature a cab located on a rotating platform, a boom and a stick. Excavators may feature wheels or tracks depending on their application. The house is typically found on top of the undercarriage that houses the travel system. The hydraulic excavators complete all functions and movement with the help of hydraulic fluid, hydraulic motors and hydraulic cylinders. 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 Backhoe loaders resemble a tractor and these machines feature a backhoe found at one end of the equipment and a front loader found at the opposite end. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. 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. 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. The farm model requires the operator to change seats from sitting in the tractor seat to sitting in front of the backhoe controls. Constantly changing positions to move the machine into place for digging slows everything down. 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. Quick coupler mounting systems are commonly found on numerous backhoes. This mechanism enables better efficiency and drastically increases the abilities of the machine. It is common to find backhoes working beside 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 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. It is possible to reverse a backhoe bucket and use it as a power shovel. 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 The skidder is a type of heavy equipment utilized in the forestry industry and logging for taking freshly cut trees out of the forest. 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 occur in shallow lakes or the deep ocean. 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. This process allows sediments to be suctioned up and relocated. On occasion, dredging can be done to recover things lost in the water. 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. Dredging materials can be transported by barge, removed as a

liquid suspension through pipelines or locally disposed of. Bulldozers Bulldozers are powerful heavy equipment with great tracks to provide superior mobility on rough terrain. Their superior design prevents this heavy equipment from sinking on soft terrain or muddy areas as their weight is evenly distributed. 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. Mobile and powerful, bulldozers are commonly used in developing infrastructure, road building, construction, mining, land clearing and other projects that require earth-moving equipment. There are 4WD models on the market of wheeled bulldozers that utilize a hydraulic, articulated system. The hydraulically actuated blade is mounted in front of the articulation joint. The blade and the ripper are the main tools associated with this bulldozer. Grader A long bladed construction machine is the grader. A grading operation creates a flat surface. Numerous models feature a cab and engine found above the rear axles located at one end of the equipment with three axles. The third axle is found at the front portion of the machine and the blade balances nicely in between. Many graders ride with their rear axles in tandem. Some models offer front-wheel drive to provide more maneuverability for grading purposes. 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. A variety of attachments can be used on certain grader models. The underground mining industry can use some specially engineered graders. Civil engineering relies on graders to complete a precise grade that is a specific pitch, height and blade angle. Bulldozers and scrapers are used to accommodate difficult grading procedures. Graders achieve accuracy while building gravel and dirt roads. Graders are used to achieving the proper base for construction and road paving. These machines are used to set native soil foundation pads or gravel to complete the grade prior to large-scale construction commences. 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 steering wheel or a joystick to control the front wheels' angle. Many models can conduct a tinier turning radius due to the way the frame is articulated between the rear and front axles. This design allows operators to change the angle of articulation to move material more efficiently. Other functions are usually powered with hydraulics and can be directly controlled by joystick inputs, levers or electronic switches powering electro-hydraulic servo valves.