

## Construction Equipment

Used Construction Equipment Tempe - Most heavy-duty construction equipment includes vehicles build to complete specific construction tasks. Heavy hydraulics, engineered vehicles and large trucks often accompany earthmoving operations. 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 often utilized as farm equipment to mechanize farming tasks that require power and traction. 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 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. 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 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 are for sale as is or they can be created by combining a rear backhoe loader with a front-end loader. The backhoe loaders that have been manufactured that way are extremely strong; models specified for farm variation are not as suited 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. Constantly changing positions to move the machine into place for digging slows everything down. Thanks to the invention of hydraulically powered attachments including an auger, tiltrotator, a grapppler, breaker, etc., the backhoe can be outfitted to use in a variety of applications including construction, engineering and agricultural sectors. The tiltrotator attachment works well for carrying tools. 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. Backhoes are commonly being replaced by different front-end loaders and excavators. The mini-excavator has become popular for many applications. Jobs that would have relied on a backhoe can now combine a skid steer and a mini-excavator. 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 Excavating partially or completely underwater is a process called dredging. Dredging can be completed in shallow or deep waters. This process is used to keep ports and waterways open and navigable. It is used for coastal redevelopment, land reclamation and assists in protecting the coastline. This process allows sediments to be suctioned up and relocated. On occasion, dredging can be done to recover things lost in the water. Minerals or high-value sediments can be collected from certain construction applications during 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 design features excellent ability to distribute the extensive weight over a large area to prevent the machine from sinking into muddy or sandy environments. Poor terrain can be easily navigated with extra-wide swamp tracks. Transmission systems within bulldozers are designed to offer excellent tractive force by taking advantage of the 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. 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 blade and the ripper are the main tools associated with this bulldozer. Grader Graders are a kind of construction equipment that uses a long blade. It creates a flat surface during the grading operation. 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. Optional rear attachments include the compactor, scarifier, ripper and blade. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. Certain grader models can use many attachments. The underground mining industry can use some specially engineered graders. Graders are employed by civil engineering to finish precision grades of a certain blade angle, pitch and height. Rough grading processes are completed with bulldozers or scrapers. Dirt and gravel roads rely on graders to provide accuracy. 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. A joystick or steering wheel is used to control the front wheel angle of the grader. Numerous models can complete a smaller turning radius thanks to frame articulation between the front and rear axles. This design allows operators to change the angle of articulation to move material more efficiently. Additional functions may be completed with hydraulics that are controlled directly by levers, joystick input or electronic switches that deliver power to electro-hydraulic servo valves.