

## Construction Equipment

Used Construction Equipment Kent - Construction equipment includes industrial machines designed to conduct certain building and demolition tasks. Common earthmoving operations rely on engineering equipment, oversized trucks and heavy hydraulics among other things. 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. Numerous agricultural additions can be mounted behind or onto the tractor to make certain jobs easier. The tractor can provide power to the mechanized attachment to facilitate heavy lifting or digging etc. 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. The linear actuation of the hydraulic cylinders offers a different operation mode compared to excavators operated with cables, steel ropes and winches to accomplish tasks. 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. 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. 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. Obviously, switching seats repeatedly to reposition the machine for digging applications slows productivity down. Common hydraulically powered attachments include the auger, a grappler, 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 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. 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. Jobs that would have relied on a backhoe can now combine a skid steer and a mini-excavator. 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 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 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. Bottom sediments can be sucked up and relocated elsewhere. Dredging can be utilized to recover items at times. High-value sediments or minerals may be collected via dredging and utilized by the construction industry. There are four parts to the dredging process including loosening items, bringing the material topside to the surface, transporting and disposing of the material. Extracted items may be locally disposed of, removed in pipelines via a liquid suspension or moved by barge. 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.

Transmission systems within bulldozers are designed to offer excellent tractive force by taking advantage 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 A long bladed construction machine is the grader. 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. 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 and dirt grading operations often use a side blade that can be mounted. 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. Bulldozers and scrapers are used to accommodate difficult grading procedures. Maintaining and constructing dirt and gravel roads requires work by graders to ensure accuracy. These machines prepare the base for paved roads and construction. These machines are used to set native soil foundation pads or gravel to complete the grade prior to large-scale construction commences. 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. 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.