

Construction Equipment

Used Construction Equipment Portland - Construction equipment includes industrial machines designed to conduct certain building and demolition 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. 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. One of the most popular farming machines is tractors that mechanize heavy lifting and loading tasks that need traction and power. A variety of agricultural attachments may be mounted on or behind the tractor to make certain tasks more efficient. Tractors can mechanize attachments to enable digging, heavy lifting and loading, etc. Excavators Heavy construction equipment includes excavators that feature a bucket, stick, boom and cab situated on a rotating platform. The house sits on top of an undercarriage outfitted with wheels or tracks depending on the model. The hydraulic excavators complete all functions and movement with the help of hydraulic fluid, hydraulic motors and hydraulic cylinders. 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. There is a swiveling seat option to position the operator facing whichever direction is required at the time. Backhoe loaders are for sale as is or they can be created by combining a rear backhoe loader with 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. Operators using the farm model will have to change seats from the tractor seat to the front of the backhoe controls. Constantly changing positions to move the machine into place for digging slows everything down. 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. The tiltrotator attachment works well for carrying tools. Quick coupler mounting systems are commonly found on numerous backhoes. This enables easier attachment mounting and can dramatically increase the capabilities of the equipment on the machine. Backhoes often work alongside bulldozers and loaders. One of the most common types of industrial equipment is the backhoe loader. Backhoes are commonly being replaced by different front-end loaders and excavators. 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. 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. Freshly cut logs are dragged out of the forest and transported from where they were cut to a landing where they are loaded onto logging trucks and transported to the sawmill. Dredging Excavating partially or completely underwater is a process called dredging. Dredging can occur in shallow lakes or the deep ocean. This process is used to keep ports and waterways open and navigable. It is commonly done for land reclamation, coastal development and coastline protection. Sediments can be sucked up and redistributed. 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. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Extracted items may be locally disposed of, removed in pipelines via a liquid suspension or moved by barge. Bulldozers Bulldozers are heavy equipment that uses large tracks to deliver excellent mobility on difficult 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. 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. There are 4WD models on the market of wheeled bulldozers that utilize a hydraulic, articulated system. The hydraulically actuated blade is situated in front of the articulation joint. The two primary tools on a bulldozer are the blade and the ripper. 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. Extra attachments may be used on the rear of the machine such as a blade, ripper, compactor or scarifier. Dirt grading and snowplowing jobs commonly use a mounted side blade. Some grader models that can employ numerous 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. 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. 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. Many models can conduct a tighter 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.