

Construction Equipment

Used Construction Equipment Fairfield - Industrial equipment including heavy-duty vehicles designed for specific construction tasks make up the majority of construction equipment. Heavy hydraulics, engineered vehicles and large trucks often accompany earthmoving operations. Some of the popular kinds of the five equipment systems include implement, control and information, powertrain, traction and structure. Numerous types of industrial machines fall under the classification of heavy equipment. 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. 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 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 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 A backhoe loader is similar to a tractor with a backhoe situated at one end and a front loader on the other. There is a swiveling seat option to position the operator facing whichever direction is required at the time. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. The backhoe loaders that have been manufactured that way are extremely strong; models specified for farm variation are not as suited for heavy work. 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. 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 great attachment for carrying tools is the tiltrotator. Numerous backhoes offer 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. 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. A mini-excavator and a skid steer can work together to complete work that was formally reserved for a backhoe. A backhoe bucket can be reversed and utilized in a power shovel application. 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. 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. Dredging can be utilized to recover items at times. Minerals or high-value sediments can be collected from certain construction applications during dredging. Four specific components comprise the dredging process including loosening items, transporting the materials to the surface, transporting materials and disposing of them. Extracts may be disposed of in a liquid suspension in pipelines, transported by barge or locally disposed of. Bulldozers Bulldozers are heavy equipment that uses large tracks to deliver excellent mobility on difficult 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. 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 bulldozers have four wheels and are operated with a 4WD with an articulated, hydraulic system. In front of the articulation joint, the hydraulically actuated blade is mounted. The ripper and the blade are the primary tools with this model. Grader A grader is a type of construction machine that features a long blade. 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. 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. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. A variety of attachments can be used on certain grader models. Some graders have been specifically designed for use in underground mining. 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. 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 large machines can designate inclined surfaces to establish slopes for drainage ditches or roads beside the highways. A joystick or steering wheel is used to control the front wheel angle of the grader. A smaller turning radius is possible by many models due to the frame articulation design between the rear and front axles. Materials can be moved more efficiently thanks to this design allowing operators to change the articulation angle. 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.