

Construction Equipment

Used Construction Equipment Sunnyvale - Construction equipment includes industrial machines designed to conduct certain building and demolition tasks. Heavy hydraulics, engineered vehicles and large trucks often accompany earthmoving operations. There are five equipment systems including traction, information and control, structure, implement and powertrain. 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. 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 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 A backhoe loader is similar to a tractor with a backhoe situated at one end and a front loader on the other. A swiveling seat design enables the operator to face either direction as needed, preventing operator fatigue. Backhoe loaders can be built by pairing a front-end loader with a rear backhoe or the machines can be purchased ready to go. 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. Obviously, switching seats repeatedly to reposition the machine for digging applications slows productivity down. Thanks to the invention of hydraulically powered attachments including an auger, tiltrotator, a grappler, breaker, etc., the backhoe can be outfitted to use in a variety of applications including construction, engineering and agricultural sectors. A popular attachment for transporting tools is the tiltrotator. Numerous backhoes offer quick coupler mounting systems. This mechanism enables better efficiency and drastically increases the abilities of the machine. Backhoes often work alongside bulldozers and loaders. Backhoe loaders are popular within the industrial equipment industry. Some types of specialized equipment such as front-end loaders and excavators are displacing backhoes. 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. 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 skidder is a kind of heavy equipment that is used in logging for hauling freshly cut trees from the forest in a forestry practice known 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 Dredging refers to a type of underwater excavation or partially underwater. 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. Bottom sediments can be sucked up and relocated elsewhere. 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. Dredging is considered to be a four-step process: loosening material, carrying material to the surface, transportation and disposal. 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. Swamp tracks, as the extra wide tracks are known, are useful in poor terrain. The transmission system delivers extensive tractive force and allows the machine to make the most 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 bulldozers have four wheels and are operated with a 4WD with an articulated, hydraulic system. The hydraulically actuated blade is mounted in front of the articulation joint. The two primary tools on a bulldozer are the blade and the ripper. Grader Graders are a kind of construction equipment that uses a long blade. Graders make surfaces flat during grading. 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. 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. Some grader models that can employ numerous attachments. 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. Rough grading processes are completed with bulldozers or scrapers. Dirt and gravel roads rely on graders to provide 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 giant machines create inclined surfaces to facilitates side slopes needed for drainage and road building beside highways. Grader steering can be completed via a joystick or steering wheel to control the angle of the front wheels. 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. Electro-hydraulic servo valves rely on electronic switches, joystick input or direct lever control to complete additional functions via hydraulics.