

## Construction Equipment

Used Construction Equipment Elk Grove - 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. There is a variety of industrial equipment that is classified under the heavy equipment umbrella. Tractors Specifically designed tractors offer extreme tractive capabilities at slower speeds to facilitate hauling equipment including construction items, trailers and items for agriculture. Tractors are often utilized as farm equipment to mechanize farming tasks that require power and traction. Many agricultural attachments can be added to the tractor to simplify tasks. The tractor can provide power to the mechanized attachment to facilitate heavy lifting or digging etc. Excavators Heavy construction equipment includes excavators that feature a bucket, stick, boom and cab situated on a rotating platform. Excavators may feature wheels or tracks depending on their application. The house is typically found on top of the undercarriage that houses the travel system. 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 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. 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. Manufactured backhoe loaders are specific for farm applications and are not suitable 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. 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. Quick coupler mounting systems are commonly found on numerous backhoes. 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. Some types of specialized equipment such as front-end loaders and excavators are displacing backhoes. The invention of the mini-excavator has drastically improved a variety of industrial jobs. 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 design is helpful for extended-reach applications, working around pipes, loading and filling stockpiled materials, etc. 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 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. Extracts may be disposed of in a liquid suspension in pipelines, transported by barge or locally disposed of. Bulldozers A popular type of heavy equipment is the bulldozer. It relies on large tracks to manage mobility on rough surfaces and tricky terrain. Their superior design prevents this heavy equipment

from sinking on soft terrain or muddy areas as their weight is evenly distributed. Swamp tracks, as the extra wide tracks are known, are useful in poor 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 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 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. 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. There are optional attachments for the rear including the scarifier, compactor, ripper or blade. Snowplowing maneuvers and dirt grading jobs rely on a mounted side blade. A variety of attachments can be used on certain grader models. The underground mining industry can use some specially engineered graders. Graders are used in the civil engineering industry to finish grade with precision with the proper height, pitch and blade angle. Rough grading processes are completed with bulldozers or scrapers. Maintaining and constructing dirt and gravel roads requires work by graders to ensure accuracy. These machines prepare the base for paved roads and construction. Graders are essential for setting gravel or native soil foundation pads to make the grade before construction begins. 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. 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. Other functions are usually powered with hydraulics and can be directly controlled by joystick inputs, levers or electronic switches powering electro-hydraulic servo valves.