

ТЕМА 2.3.9 СТРОИТЕЛЬНАЯ ТЕХНИКА CONSTRUCTION EQUIPMENT

1. Read the text Construction Equipment and complete the statements.

1. The text tells us about...
2. It specifies...
3. The text also mentions...

Construction equipment is machinery used to build and demolish bridges, buildings, and other structures. These machines usually save labour, money, and time. One of them can do more work in an hour than a hundred workers using hand tools could do in a day.

An excavator is important heavy equipment widely used in the construction industry. The main purpose of this equipment is excavation, but it can also be used for heavy lifting, demolition, river dredging, cutting of trees, etc. Excavators are driven by tracks or wheels, but tracks are more common because excavators tend to work mostly on uneven surfaces where tracks outperform wheels.

An excavator consists of a boom, dipper arm (or stick), bucket and cab on a rotating platform known as the "house". The cab can rotate a full 360 degrees. The operator sits in the cab and from there he can have visibility of the site. The boom can move only up and down, or in addition also shift towards the left and right of the machine. A dipper arm is attached to the boom end and it provides the digging force needed to pull the bucket through the ground. A bucket is fixed at the dipper arm end for carrying the soil. Buckets have numerous shapes and sizes for various applications. In addition, there are numerous other categories of attachments with the excavator that are used for boring, crushing, lifting, and ripping. Excavators come in numerous sizes depending on bucket size, length of boom, length of arm, and operation speed.

A concrete mixer (also commonly called a cement mixer) is a device that homogeneously combines cement, aggregate such as sand or gravel, and water to form concrete. A typical concrete mixer uses a revolving drum to mix the components. For smaller volume works portable concrete mixers are often used so that the concrete can be made at the construction site, giving the workers ample time to use the concrete before it hardens. An alternative to a machine is mixing concrete or cement by hand. This is usually done in a wheelbarrow.

Special concrete transport trucks are made to mix concrete and transport it to the construction site. They can be loaded with dry materials and water, as a result mixing is achieved during transport. They can also be loaded from a plant; in this case, the material has already been mixed before loading. The interior of the drum on a concrete mixing truck is equipped with a spiral blade. When the drum rotates in one direction, the concrete is pushed deeper into the drum. This is the direction while the concrete is being transported to the building site. When the drum rotates in the other direction, the concrete is forced out of the drum.

2. Use the QR-code and choose the correct variant of construction equipment.



3. Match the words to their definitions.

- | | |
|-----------|--|
| 1. boom | a) an attachment for a materials-handling or excavating machine that digs or carries loose materials such as earth, gravel, stone, or concrete |
| 2. bucket | b) to raise or pull something up to a higher position, often using ropes or special equipment |
| 3. hook | c) to move or turn around a central fixed point |
| 4. lumber | d) a long fixed or hydraulic arm that is used to move large objects in construction |
| 5. pipe | e) timber sawn or split in the form of beams, boards, joists, planks, etc. |

6. wheelbarrow

f) a tube inside which liquid or gas flows from one place to another

7. to rotate

g) used for transporting materials over short distances

8. to hoist

h) a curved or bent metal device used for attachment

4. Explain the word combinations in your own words.

Construction equipment; track excavator; rotating platform; concrete mixer; revolving drum.

5. Work in pairs. Discuss the questions.

1. What is the main purpose of construction equipment?
2. What is an excavator used for?
3. What parts does an excavator consist of?
4. What is a concrete mixer?
5. What concrete mixers are used for smaller volume works?
6. What does a concrete mixer use to mix the components?

6. A. Find and underline key words and word combinations in the text Construction Equipment.

B. Make up a short summary of the text Construction Equipment. Retell it using your notes.

7. A. Discuss modern companies producing construction equipment with your groupmates.

B. Choose one of the companies and create a new commercial for it.