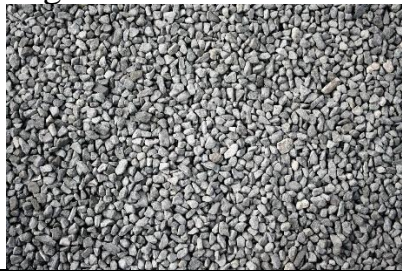


## TYPES OF HEAVY EQUIPMENT USED IN CONSTRUCTION

### 13.1. Vocabulary

*Ex. 1. Match the words to their Russian equivalents.*

1. demolition	a. копать траншею
2. trench	b. рыхлитель-кирковщик
3. front-mounted	c. кабина
4. gravel 	d. ковш (погрузчика)
5. engine	e. гравий
6. efficient	f. установленный с внешней стороны (панели)
7. ripper	g. разрушение, снос
8. bucket	h. молот
9. hammer	i. захват, крюк, грейфер
10. grapple	j. копать, рыть, откапывать
11. cab	k. двигатель, машина
12. excavate	l. эффективный, экономичный

*Ex. 2. Match the words to their definitions. Which words have a similar meaning?*

1. screed	a. the long arm of a crane used for lifting heavy objects
2. conveyor	b. the smaller arm attached to the end of a crane's boom, used for moving loads horizontally
3. bed	c. to make something even or flat
4. boom	d. a funnel-shaped container used for storing and pouring loose materials like grain or gravel
5. hopper	e. a machine that moves goods from one place to another, often used in factories or airports

6. lay asphalt	f. the foundation or base on which something is built or supported
7. jib	g. a multi-purpose instrument that can be used for many different tasks
8. versatile tool	h. a thin layer of concrete or other material poured over a surface to create a smooth, level floor
9. hydraulic arm	i. a mechanical device powered by fluid pressure that can move heavy objects with great force
10. level	j. to put down a layer of black, sticky material used for making roads and pavements

*Ex. 3. Complete the sentences with the following words.*

**hammer, level, excavate, front-mounted, efficient, arm, engine, versatile, lay, demolition, conveyor, screed**

1. The \_\_\_\_ (1) of the old building drew a crowd of onlookers.
2. They had to \_\_\_\_ (2) the ground before laying the foundation.
3. A dishwasher is an \_\_\_\_ (3) appliance for cleaning dishes quickly.
4. The \_\_\_\_ (4) of the car roared as it accelerated down the highway.
5. The \_\_\_\_ (5) camera allowed the driver to see ahead more clearly.
6. He used a \_\_\_\_ (6) to tack the picture frame onto the wall.
7. The \_\_\_\_ (7) belt carried the boxes to the next stage of production.
8. A Swiss army knife is a \_\_\_\_ (8) tool with many different functions.
9. The hydraulic \_\_\_\_ (9) lifted the heavy object with ease.
10. The construction workers needed to \_\_\_\_ (10) asphalt before finishing the road.
11. She used a ruler to \_\_\_\_ (11) the bookshelf so it wouldn't wobble.
12. The \_\_\_\_ (12) smoothed out the concrete surface.

### **13.2. Reading**

Ex. 1. Read the text.

## **17 Types of Heavy Equipment Used in Construction**

Construction is a complex and dynamic field that involves a wide range of processes and activities. One of the key components of any construction project is the heavy equipment that is used to move materials, dig, excavate, and build structures. These powerful machines play a critical role in the success of a construction project and are essential for efficient and effective work.

### **1. Excavators**

Excavators are large machines that are used to dig, move, and remove soil, rock, and other materials. They are equipped with a cab, boom, and shovel or bucket that can be used to dig or move materials. Excavators can be fitted with various attachments such as grapples, hammers, and rippers, which make them versatile tools for a wide range of construction tasks.

### **2. Backhoes**

Backhoes are smaller versions of excavators that are commonly used for digging and trenching. They are equipped with a front-mounted shovel or bucket and a rear-mounted digging arm. Backhoes are ideal for digging and excavating in tight spaces, as well as for loading and unloading materials.

### **3. Loaders**

Loaders are heavy equipment machines that are used to move and load materials such as soil, rock, gravel, and sand. They are equipped with a cab, engine, and a large, front-mounted bucket that can be used to pick up and move materials. Loaders are commonly used in excavation and grading work, as well as for loading and unloading materials from trucks and other vehicles.

### **4. Bulldozers**

Bulldozers are large and powerful machines that are used to push, move, and clear large quantities of soil, rock, and other materials. They are equipped with a large, front-mounted blade and a cab that provides the

operator with a clear view of the work area. Bulldozers are commonly used in excavation, grading, and demolition work.

## **5. Graders**

Graders are heavy equipment machines that are used to level and smooth surfaces such as roads, driveways, and parking lots. They are equipped with a blade that can be adjusted to different angles to create a flat and level surface. Graders are commonly used in road construction and maintenance, as well as for leveling and smoothing surfaces in preparation for paving or concrete work.

## **6. Cranes**

Cranes are large, mobile machines that are used to lift and move heavy objects such as steel beams, concrete blocks, and large machinery. They are equipped with a cab, engine, and a boom or jib that can be used to lift and move materials. Cranes can be mounted on a truck or trailer for mobility, or they can be stationary, mounted on a foundation or tower.

## **7. Concrete Mixers**

Concrete mixers are heavy equipment machines that are used to mix concrete, sand, gravel, and water to create concrete mixture. They are equipped with a drum that rotates to mix the ingredients, and they can be either stationary or mounted on a truck for mobility. Concrete mixers are commonly used in concrete construction and pouring work.

## **8. Pavers**

Pavers are heavy equipment machines that are used to lay asphalt or concrete on roads, driveways, and other surfaces. They are equipped with a hopper, conveyor, and screed that can be used to lay and finish the surface. Pavers are commonly used in road construction and maintenance, as well as for laying concrete or asphalt surfaces for sidewalks, patios, and other structures.

## **9. Rollers**

Rollers are heavy equipment machines that are used to compact soil, gravel, and asphalt. They are equipped with a cylindrical drum that rotates to apply pressure and compact the surface. Rollers can be either

smooth or vibratory, and they come in various sizes and weights to suit different types of construction projects.

## **10. Dump Trucks**

Dump trucks are large vehicles that are used to transport and dump materials such as soil, rock, gravel, and sand. They are equipped with a bed that can be raised and tilted to dump the material. Dump trucks come in various sizes, ranging from small pickups to large tractor-trailer combinations.

## **11. Concrete Pumps**

Concrete pumps are heavy equipment machines that are used to pump concrete from a truck or mixer to the work site. They are equipped with a hopper, pump, and a series of pipes and hoses that can be used to reach the desired location. Concrete pumps are commonly used in concrete construction and pouring work, especially for high-rise buildings and structures.

## **12. Skid Steers**

Skid steers are small and versatile heavy equipment machines that are used for digging, grading, and material handling. They are equipped with a cab, engine, and a hydraulic arm that can be fitted with various attachments such as buckets, forks, and rippers. Skid steers are commonly used in landscaping, excavation, and material handling work.

## **13. Telehandlers**

Telehandlers are heavy equipment machines that are used for lifting and moving heavy materials such as steel beams, concrete blocks, and large machinery. They are equipped with a telescopic boom and a cab that provides the operator with a clear view of the work area. Telehandlers can be fitted with various attachments such as buckets, forks, and jibs, making them versatile tools for a wide range of construction tasks.

## **14. Compactors**

Compactors are heavy equipment machines that are used to compact soil, gravel, and asphalt. They are equipped with a flat plate or roller that is used to apply pressure and compact the surface. Compactors come in

various sizes and weights, and they are commonly used in road construction and maintenance, as well as for compacting the base for foundations and retaining walls.

## **15. Trenchers**

Trenchers are heavy equipment machines that are used for digging trenches for pipelines, utilities, and other underground services. They are equipped with a chain or blade that rotates to dig the trench, and they come in various sizes to suit different types of projects. Trenchers are commonly used in excavation work for pipelines, utilities, and other underground services.

## **16. Scrapers**

Scrapers are heavy equipment machines that are used to move and remove large quantities of soil, rock, and other materials. They are equipped with a blade or bucket that can be used to scoop and move materials, and they come in various sizes to suit different types of projects. Scrapers are commonly used in excavation and grading work.

## **17. Pile Drivers**

Pile drivers are heavy equipment machines that are used to drive piles into the ground for foundation support. They are equipped with a hydraulic hammer or vibratory driver that is used to drive the piles into the ground, and they come in various sizes to suit different types of projects. Pile drivers are commonly used in foundation work for buildings, bridges, and other structures.

**Ex. 2.** Say if the following statements are *TRUE (T)* or *FALSE (F)*.

1. Heavy equipment is not important for construction projects.
2. Excavators are used to move materials.
3. Backhoes are larger versions of excavators.
4. Loaders are used to move and load materials such as soil, rock, and gravel.
5. Bulldozers are used to level and smooth surfaces.

6. Graders are used to push and clear large quantities of soil, rock, and other materials.
7. Cranes are used to mix concrete, sand, gravel, and water to create concrete mixture.
8. Concrete mixers are used to lift and move heavy objects such as steel beams, concrete blocks, and large machinery.
9. Pavers are used to lay asphalt or concrete on roads, driveways, and other surfaces.
10. Pavers are commonly used in road construction and maintenance only.

**Ex. 3.** *Answer the questions.*

1. What are rollers used for in construction projects?
2. How do dump trucks transport and dump materials?
3. What is the purpose of concrete pumps in construction work?
4. What tasks can skid steers be used for?
5. What types of heavy materials can telehandlers lift and move?
6. What is the difference between smooth and vibratory rollers?
7. In what type of construction work are trenchers commonly used?
8. What is the function of scrapers in excavation and grading work?
9. What is the main use of pile drivers in construction projects?