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**EQUIPMENT FOR TRANSPORTING, RECEIVING, CRUSHING AND  
PROCESSING GRAPES.**

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**Abstract:** Grapes are picked in special baskets on rusted rings and dried in special wooden cases, containers or specially equipped. Car bodies are collected in trailers and taken to processing plants will come. The processes of transporting, receiving, crushing, and processing grapes play a crucial role in the winemaking industry. The quality of the final product largely depends on the proper organization and use of appropriate equipment. This article examines the main types of equipment used for these purposes.

**Keywords:** Grape transportation, Receiving equipment, Crushing equipment, Wine processing, Fermentation tanks, Winemaking

The amount of grapes brought to processing is a special car measured in scales. Each transport when the grapes are measured 3 kg of wet flour is taken from the machine. Sample using special equipment is taken. Sampling equipment is installed on automatic scales. Suslo SPV-1M, grape sample SPV from the raw material imported obtained using branded equipment. Receiving grapes from the transport machine using an electric lift is discharged into the hopper (capacity). The receiving hopper is metal or made of reinforced concrete. Inside the screw conveyor is installed. Receiving hopper for harvesting and transfer of grapes to crushing intended for. Transporting Equipment. Transporting grapes from the vineyard to the processing facility must be done carefully to avoid damaging the grapes and ensuring they arrive in optimal condition. Key types of equipment include:

1. Harvest Bins: Used for collecting grapes during harvesting. Designed to minimize grape damage and allow for easy transport.
2. Conveyor Belts: Transport grapes from harvest bins to the receiving area. Ensure a steady and gentle movement of grapes to prevent bruising.
3. Grape Trailers: Specialized trailers for transporting large quantities of grapes. Often equipped with features to maintain grape quality during transport.

Receiving Equipment. Receiving equipment is used to handle grapes when they arrive at the processing facility. It ensures efficient unloading and preparation for further processing:

1. Receiving Hoppers: Large bins where grapes are unloaded from transport vehicles. Equipped with mechanisms to feed grapes into the processing line.



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2. De-stemmers: Machines that remove stems from grape clusters. Important for ensuring that only grape berries proceed to the next stage.

3. Conveyor Systems: Move grapes from receiving hoppers to the crushing equipment. Maintain a continuous flow of grapes through the processing line.

Crushing Equipment. Crushing equipment is essential for breaking the grape skins and releasing the juice necessary for fermentation. Main types of crushing equipment include:

1. Roller Crushers: Use rollers to gently crush grape berries. Ensure minimal damage to seeds and skins, preserving juice quality.

2. Pneumatic Presses: Use air pressure to crush grapes and extract juice. Provide precise control over the crushing process, resulting in high-quality juice extraction.

3. Bladder Presses: Use an inflatable bladder to press grapes against a perforated drum. Effective for extracting juice from whole clusters and crushed grapes.

Processing Equipment. Processing equipment involves various stages, including fermentation, aging, and bottling. Key equipment includes:

1. Fermentation Tanks: Stainless steel or oak tanks where grape juice ferments into wine. Equipped with temperature control systems to manage the fermentation process.

2. Pumps: Transfer wine between tanks during various stages of processing. Designed to handle wine gently to prevent oxidation and preserve quality.

3. Filters: Remove solids and impurities from wine before bottling. Ensure clarity and stability of the final product.

4. Bottling Lines: Automated systems for filling bottles with wine, corking, and labeling. Ensure consistency and efficiency in the bottling process.

Grapes are crushed during grape processing. The purpose of grinding is to facilitate the extraction of juice, increase its quantity and separate the pulp. After grinding, the permeability of its tissues increases and the diffusion process is accelerated. Crushing and separating grapes in special devices - is carried out in crushers and separators.

Conclusion: The proper use of equipment for transporting, receiving, crushing, and processing grapes is vital for producing high-quality wine. Each stage requires specific machinery designed to handle grapes and wine with care, preserving their quality and enhancing the final product. By investing in the right equipment and maintaining its proper function, winemakers can ensure the consistent production of excellent wines.



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**References:**

1. Bektemirov, O., & Yusupov, R. (2020). "Technologies of production of agricultural products". Tashkent: National Encyclopedia of Uzbekistan.
2. Karimov, D. (2018). "Innovative technologies in agriculture". Samarkand: Publishing House of Samarkand State University.
3. Khudaiberganov, A., & Mirzaev, I. (2019). "Storage and processing of agricultural products". Bukhara: Publishing House of Bukhara State University.
4. Jones, J. R. (2017). "Agricultural Product Processing and Packaging". New York: AgriTech Publications.

