

Test manual vertical conveyor Prmk5

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This manual describes how to perform the mandatory overload tests for hoisting and lifting machines on a vertical conveyor Prmk5 from Qimarox.

This manual is a translation and was originally written in the Dutch language and published by:

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Overload Test

The Machinery Directive requires a static and dynamic overload test for hoisting and lifting machines in appendix I – 4.1.3 before the first commissioning.

This must be done on all ready-to-use hoisting and lifting machines, even after they are reassembled, for example.

The following Qimarox products are covered by this test manual: **Prmk5**.

The other vertical conveyors and the Pallet (de)stackers PDx have their own test manuals.

Safety

Think about your safety

- Follow the safety instructions in the vertical conveyor user manual.
- Only a qualified person should test the machine. A qualified tester has experience in operating machines and hoisting and lifting equipment and is familiar with the contents of this manual. The tester must be familiar with the contents of the user manual and the operating manual.
- If area shielding and other safety features are not in place, take adequate precautions against hazards from moving parts and potential energy from gravity.
- Never go under the carriers.
- Make sure that the test weight cannot move or fall, also due to possible failure of machine parts.
- Make sure that you and others cannot be hit by any falling test weight or falling machine parts.
- Ensure machine is anchored as prescribed in owner's manual. If not, ensure that the stability of the machine is not compromised by the tests.

Test data

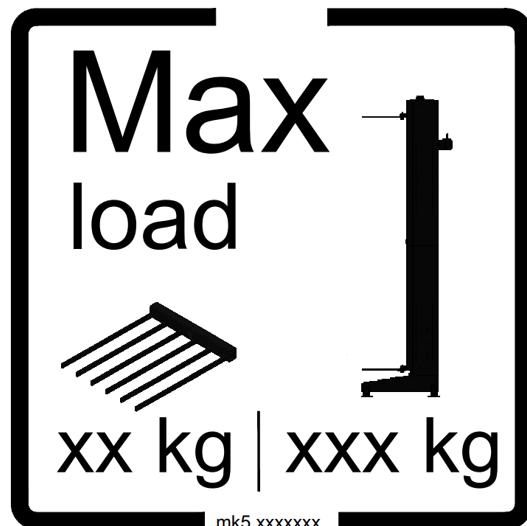
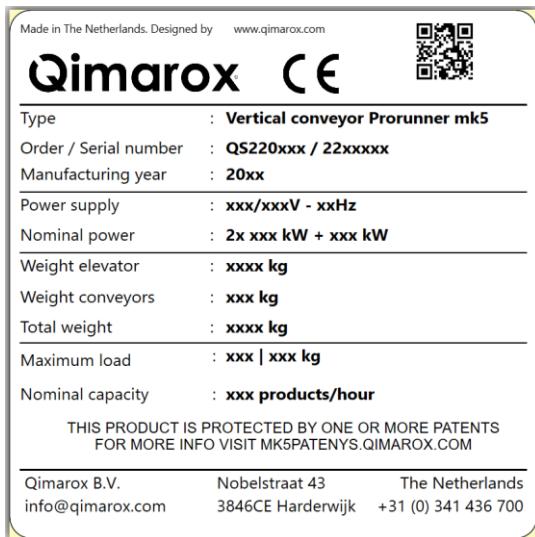
The test data can be found in the specification sheet of the vertical conveyor "Test to verify the integrity of vertical conveyor machinery".

- Check whether the data on type plate and "max. load" sticker match the test data.

Static overload test

The static test is performed first. The carriers of the machine are individually loaded in standstill with a total weight of 1.25x the maximum working load of the total elevator.

The maximum working load of the total elevator is the right hand number behind "Maximum load" and the right hand number on the type plate and on the "max load" sticker



The goal is to see if the mechanical strength of the elevator as a whole is great enough. The carriers and the machine must be able to pass the test without permanent deformations or apparent failure.

The test is performed by loading the carriers with this weight between input and output while the elevator is stationary.

The static test load can be found in the specification sheet of the vertical transporter under "Static overload test".

The position of the center of gravity of the test weights must correspond to the most unfavorable position of that of the load as it may occur.

The environment in which it is tested must correspond to the operating conditions stated in the machine's specification sheet.

The working order is:

1. Inspect the machine.
2. Place the carriers stationary in an easily accessible position and such that there is a maximum number of carriers between input and output. This number of carriers is the number of test weights required.
3. Switch off the machine, switch off the main power switch and lock it with a padlock.
4. Place the static test weight on the elevator, distributed on the carriers between input and output.
5. Remove the test weight from the carriers.
6. Inspect the elevator for permanent deformations or apparent defects.
7. If permanent deformations or apparent defects are found, please contact Qimarox.

Dynamic load test

The dynamic test is performed on a fully functional machine after a successful static test. This also means that input and output transport must function automatically. The active carriers of the machine are loaded with a weight of 1.1x the maximum working load of the entire vertical conveyor and moved. The aim is to see whether the machine can perform its function. The machine must be able to pass the test without failure.

The dynamic test weight (dynamic test load), number of required test weights and speed can be found in the specification sheet of the vertical conveyor under "Dynamic overload test".

The position of the center of gravity of the test weights must correspond to the most unfavorable position of that of the load as it may occur.

The environment in which it is tested must correspond to the operating conditions stated in the machine's specification sheet.

The test weights must be fed in and out using the appropriate conveyors. Make sure that the in- and out-feed conveyors can also handle the test weight. Conveyors supplied by Qimarox can handle the test weight.

The working order is:

1. Inspect the machine.
2. Switch on the machine.
3. Check that the speed is set correctly.
4. Move the vertical conveyor with empty carriers at the specified speed for approximately 2 revolutions of the carriers.
5. Enter all test weights directly one after the other via an input conveyor. There should be no empty carriers between the test weight carriers.
6. Switch off the machine, switch off the main power switch and lock it with a padlock.
7. Inspect the machine. If there are any defects or problems: **STOP** and go to 13.
8. Switch on the machine.
9. Enter all test weights directly one after the other via an input conveyor. There should be no empty carriers between the test weight carriers. Make an emergency stop while the maximum number of carriers is occupied.
10. Switch off the machine, switch off the main power switch and lock it with a padlock.
11. Inspect the machine.
12. The test was successful if:
 - no permanent deformations or apparent defects are found
 - and all functions could be performed properly.
13. Contact Qimarox if permanent deformations or apparent defects are found.
Check the steering and gears and speeds if not all functions could be performed correctly. If that doesn't solve the problem, please contact me Qimarox.

Documentation

If the test has been passed, the person who performed it must complete and sign the test statement. The test certificate can be found in the specification sheet of the vertical conveyor under "Static overload test".

The test statement must be sent to Qimarox and kept with the vertical conveyor's documentation.