

# CERTIFICATE

for burglar resistance of **Turva-Max bicycle rack**

Manufactured by **Martek-Tekniikka Oy Ltd**, Finland

VTT Building technology in Finland has conducted burglar resistance tests for a bicycle rack manufactured by the company mentioned above. The rack consists of a steel frame with two guide rails. One of the rails is fixed and the other is rotating. The rotating guide rail can be locked with a transversely twisting locking mechanism. A bike can be locked on the rack by its own locking device that prevents wheel rotation and/or with an additional padlock. The tests were done according to the Finnish national code "VAATIMUS- JA TESTAUSNORMI POLKUPYÖRÄNLUKOILLE SUOMESSA (Finnish performance and test requirements for bicycle locks), 15.03.1993" developed by insurance companies. Test results and the construction of the rack are presented in test report NR. RTE30282/97 (6.6.1997, Finnish).

Both manual burglar tests and a torque resistance test were carried out. The total requested operating time in manual burglar test was 3 minutes. The rack failed to fulfil the test requirements if the bike in the rack could be detached undamaged within 3 minutes. The tool set requested in the national code was used. Typical tools were hammer 320 g, hacksaw, multigrip and cutting pliers 280-300mm and screwdriver 270 mm. Besides this, a crowbar with length of 400 mm was used. This tool was not requested by the code.


## 1. Manual burglar tests.

The rack was placed on the floor without any fixing. A bike was placed and locked on the rack both with its own locking device and an additional padlock (approved Abloy type). The operator attacked several points of the closing mechanism. The tests showed that the "Turva-Max" bicycle rack meets the requirements of the Finnish national code provided that it is used together with a padlock.

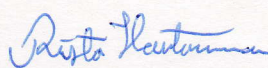
## 2. Torque resistance test.

In the torque resistance test no bike was placed on the rack. It was in locked position with a padlock. A torque moment of 200 Nm was applied on the closing mechanism by using a steel bar. The applied moment causes an opening force to the transversal locking mechanism which met the requirements of the Finnish national code.

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