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| Product | Kolmio pupil's desk |
| Task | Determination of the stability and the mechanical strength of pupil's desk. |
| Materials | Materials as presented in Martela Oyj product program 2018. |
| Test method | Standard EN 1729-2:2012 Chairs and tables for educational Institutions. Part 2: Safety requirements and test methods was applied. |



The test specimen was selected by Martela and arrived at test laboratory 12.2.2018

Test were carried out 18-28.2.2018 in temperature 15-25°C

Performance Tests were carried out according to the standard above. Detailed test program is presented in the table 1.

Results Kolmio table passed the stability, strength and durability tests without any defects.

Assessment of the results

Kolmio meets the safety; strength, durability and stability requirements presented in the standard EN 1729-2:2006 Chairs and tables for educational Institutions. Part 2: Safety requirements and test methods

Nummela, February 28, 2018

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Ref. Test report No.1631/18

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Table 1. Tests applied.

| EN1729-2:2012 Safety requirements for educational tables | | | |
|--|--|--------|---------|
| Reference to standard | Requirements | Record | Results |
| a) | Edges of the seat, back rest and arm rests, which are in contact with the user when sitting in the chair shall be rounded with a minimum 2 mm radius or chamfer | | OK |
| b) | Edges of the handles shall be rounded with a minimum 2 mm radius in the direction of the force applied | | OK |
| c) | All other edges and corners with which the user may come into contact with during normal use shall be smooth, rounded or chamfered and shall have no burrs | | OK |
| d) | Distance between accessible moving parts operated by powered mechanisms, e.g. gas lifts, shall always be either < 8 mm or ≥ 25 mm | | OK |
| e) | With the exception of setting up or folding tables and chairs, there shall be no accessible gaps > 8 mm and < 25 mm created during normal movements and actions | | OK |
| f) | Adjustment controls shall not operate inadvertently or accidentally | | OK |
| g) | Open ends and feet of tubular components shall be capped or otherwise closed | | OK |
| h) | Parts shall not be detachable without the use of an appropriate tool | | OK |
| i) | Parts which are lubricated shall be covered in order to avoid staining | | NA |
| k) | Chairs shall not overturn when tested as specified in 5.2; | | OK |
| l) | Chairs shall show no structural failure which can affect safety when tested for strength and durability as specified in 5.3 and they shall still fulfil their function. For overload tests there shall be no visible fracture or breakage; | | NA |
| m) | Tables shall not overturn when tested in accordance with EN 1730:2000, 6.7; | | OK |
| n) | Tables shall show no structural failure which can affect safety when tested for strength and durability as specified in 6.2 and they shall still fulfil its function. | | OK |

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Table 2. Tests applied.

| Chairs and tables for educational institutions EN 1729-2:2012 | Cycles | Load, N, direction (enquiry) | Application point | RESULTS |
|--|--------|--|--|---|
| 6.1.2 Stability of tables, vertical load (EN 1730:2000 6.7) | 1 | Vertical force: 600 N | Apply vertical load with a distance of 50 mm from the edge | OK |
| 6.2.2 Horizontal static load (EN 1730:2000 6.2) | 10 | Horizontal load: sizes 0-3 300N sizes 4-7 400N | Apply the force for the number of cycles specified in the requirement document by means of the horizontal force application device (5.2) alternately at the centre of each short side (figure 2a). If the table tends to overturn, incline the test force downwards gradually until the table is just prevented from overturning (see 6.2.1). | Used angle: 20° Used force: 400N |
| 6.2.3 Horizontal durability (EN 1730:2000 6.4) | 10 000 | Vertical load in the middle 50 kg Horizontal load sizes 0-3 200N sizes 4-7 300N | Apply horizontal force alternately 50 mm from the corners at opposite sides of table. | OK |
| 6.2.4 Vertical static load (EN 1730:2000 6.3) | 10 | Vertical load: 1000N | <u>Length <1m:</u> Apply vertical load 100mm from edge at the middle <u>Length >1m:</u> Apply vertical load at 2 points each 100 mm from edge 300mm each side of the middle If article tends to overturn, load the main table top sufficiently. | OK |
| 6.2.5 Vertical durability (EN 1730:2000 6.5) | 10 000 | Vertical load: Sizes: 0-3: 400N Sizes: 4-7: 600N | Apply vertical load 50 mm from the working edge. If article tends to overturn, load the main table top sufficiently to prevent overturn. | OK |

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