

# testing tables (for strength, durability and safety)



## Hexagon

421 638 beech, oak

Complies with (level): EN 12521 (domestic tables) ✓ EN 15372 (non-domestic tables) ✓

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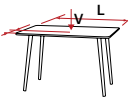
Approved on (date): 20.5.2022

TON brand products undergo rigorous checks throughout the entire manufacturing process to ensure that they comply with international quality, safety and resistance standards. The tests are conducted in an external laboratory, where the table is repeatedly subjected to pressure on individual components.

✓ complies with the standard  
 ✗ does not comply with the standard  
 - not applicable



| Test no. | Standard                 | Test  | Load level   |   |  | EN 12521 domestic tables | EN 15372 non-domestic tables | Description  | Illustration |
|----------|--------------------------|---|--|---|--|--------------------------|------------------------------|--|--------------|
|          |                          |   | Domestic tables  |   | Non-domestic tables  |                          |                              |  |              |
|          |                          |   | Other domestic tables  | Tables $\leq 600$ mm in height or with a table top area of $\leq 0.25$ m <sup>2</sup> type of use: general* | type of use: general*  |                          |                              |  |              |
| 1.       | EN 1730, 6.2             | horizontal static load test   | A table top load: 50 kg<br>B force: 400 N<br>min. specified force: 200 N<br>repeated 10x | A table top load: 50 kg<br>B force: 200 N<br>min. specified force: 100 N<br>repeated 10x                    | A table top load: 50 kg<br>B force: 400 N<br>min. specified force: 100 N<br>repeated 10x | ✓                        | ✓                            | The load is approximately in the centre of the table top. The legs are secured with braces. The force acts perpendicular to the leg joint and halfway between them. The structure is loaded in all four directions. Where there is a single central pedestal, the force acts at points on the table top axes.                          |              |
| 2.       | EN 1730, 6.3.1           | vertical static load test on the main surface                               | A force: 1000 N<br>repeated 10x  | A force: 1000 N<br>repeated 10x   | A force: 1250 N<br>repeated 10x  | ✓                        | ✓                            | Any table extension in the centre is considered the main surface. The legs are secured with braces. Vertical force acts on any place on the table top where failure is probable, but no closer to the edge than 100 mm.  |              |
|          |                          |   | When buckling is measured, the last load is left in place for a period of 30 min.        |   |  |                          |                              |  |              |
| 3.       | EN 1730, 6.3.2           | additional vertical static load test for a main surface longer than 1600 mm |  |   | A force: 1000 N<br>repeated 10x  | —                        | —                            | Any table extension in the centre is considered the main surface. The legs are secured with braces. Two vertical forces act on the longitudinal axis of the table top, 400 mm from the transverse axis on each side.   |              |
| 4.       | EN 1730, 6.3.3           | additional surface test with a vertical static load                         | A force: 200 N<br>repeated 10x   |   | A force: 300 N<br>repeated 10x   | —                        | —                            | Any table extension in the centre is considered the main surface. The legs are secured with braces. Part of the main surface in the non-extended version may become the additional surface when extended. Vertical force acts on the place on the table top where failure is probable, but no closer than 100 mm from the edge.        |              |
|          |                          |   | When buckling is measured, the last load is retained for a period of 30 min.             |   |  |                          |                              |  |              |
| 5.       | EN 1730, 6.4.1, a 6.4.2. | horizontal durability test  | A static surface load: 50 kg<br>B force: 300 N<br>repeated 10 000x                       | A static surface load: 50 kg<br>B force: 150 N<br>repeated 5 000x   | A static surface load: 50 kg<br>B force: 300 N<br>repeated 15 000x                       | ✓                        | ✓                            | Fatigue test. The legs are secured with braces. Two vertical forces alternate against each other on the level of the main surface, 50 mm from the edge. This procedure is repeated in the remaining corner positions. For round or oval surfaces, it is conducted on the longitudinal and perpendicular axes.                          |              |
| 6.       | EN 1730, 6.5.            | vertical durability test for tables with a base or pedestal                 | A table top load: as required<br>B force: 300 N<br>repeated 10 000x                      | A table top load: as required<br>B force: 150 N<br>repeated 5 000x  | A table top load: as required<br>B force: 300 N<br>repeated 15 000x                      | ✓                        | ✓                            | Fatigue test. The legs are secured with braces. Tables with a central extension are tested when extended; other tables are tested without additional surfaces. The vertical force acts on the table top at the least favourable point, 100 mm from the edge. If the table rises, the surface is loaded.                                |              |
| 7.       | EN 1730, 6.6.1, a 6.6.3. | vertical impact test  | a 25 kg impact body dropped from a height of 180 mm, repeated 10x                        | a 25 kg impact body dropped from a height of 140 mm, repeated 10x   | a 25 kg impact body dropped from a height of 180 mm, repeated 10x                        | ✓                        | ✓                            | There is foam between the impact body and the table surface. The impact device is freely dropped onto the surface of the foam at these points: - the closest point to the table top support, but no less than 100 mm from the edge, - 100 mm from the edge, as far as possible from the support, - 100 mm from the edge in one corner. |              |
| 8.       | EN 1730, 6.7.            | table top buckling  |  |   | Surface load: 1.5 kg/dm <sup>2</sup> , evenly distributed<br>load period: 1 week         | —                        | —                            | Tables with a central extension are tested when extended; other tables are tested without additional surfaces. The table surface is loaded with a uniform load. Buckling is the difference in height between the initial unloaded state and the final loaded state.  |              |
| 9.       | EN 1730, 6.9.            | drop test   |  |   | drop height: 100 m<br>repeated 6x  | —                        | ✓                            | The table is lifted to the specified height at the point used to establish vertical force, and allowed to drop freely back onto the floor.   |              |

|   |   | Load level                      |   |   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
|---|---|---------------------------------|---|---|---|--------------------------|------------------------------|--|---|---|-------------------|-----------------|---------------------|-------------------|---|-----------|---------------------|--|--|
|   |   | Domestic tables                 |   | Non-domestic tables   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
| Test no.  | Standard  | Test                            | Other domestic tables   | Tables $\leq 600$ mm in height or with a table top area of $\leq 0.25$ m <sup>2</sup>                     | type of use: general*   | EN 12521 domestic tables | EN 15372 non-domestic tables | Description  | Illustration  |   |                   |                 |                     |                   |   |           |                     |  |  |
|   |   |                                 | Force V depends on the longest side of the table top and the table height. It is determined by a formula. | Force V depends on the longest side of the table top and the table height. It is determined by a formula. | Force V depends on the longest side of the table top and the table height. It is determined by a formula. |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
| 10.   | EN 1730, 7.2.                                     | stability under a vertical load | Force V depends on the longest side of the table top and the table height. It is determined by a formula. | Force V depends on the longest side of the table top and the table height. It is determined by a formula. | Force V depends on the longest side of the table top and the table height. It is determined by a formula. | ✓                        | ✓                            | The vertical load is applied 50 mm from the edge, as far as possible from the pedestal, at the point with the greatest risk of overturning.  |  |   |                   |                 |                     |                   |   |           |                     |  |  |
| 7.23  |   |                                 | For tables higher than 950 mm, 50 % of the stated vertical load (V) is used.                              |   |   |                          |                              | <table border="1"> <thead> <tr> <th>The longest side of the table top in the direction of overturning (L)</th> <th>Vertical load (V)</th> </tr> </thead> <tbody> <tr> <td>0 mm - &lt; 800 mm</td> <td><math>V_1 = 200\text{N}</math></td> </tr> <tr> <td>800 mm - 1 600 mm</td> <td><math>V_2 - (V_2 - V_1) \times \frac{(1600 - L)}{800}</math></td> </tr> <tr> <td>&gt; 1600 mm</td> <td><math>V_2 = 400\text{N}</math></td> </tr> </tbody> </table> |   | The longest side of the table top in the direction of overturning (L) | Vertical load (V) | 0 mm - < 800 mm | $V_1 = 200\text{N}$ | 800 mm - 1 600 mm | $V_2 - (V_2 - V_1) \times \frac{(1600 - L)}{800}$ | > 1600 mm | $V_2 = 400\text{N}$ |  |  |
| The longest side of the table top in the direction of overturning (L) | Vertical load (V)                                 |                                 |   |   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
| 0 mm - < 800 mm   | $V_1 = 200\text{N}$                               |                                 |   |   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
| 800 mm - 1 600 mm   | $V_2 - (V_2 - V_1) \times \frac{(1600 - L)}{800}$ |                                 |   |   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |
| > 1600 mm   | $V_2 = 400\text{N}$                               |                                 |   |   |   |                          |                              |  |   |   |                   |                 |                     |                   |   |           |                     |  |  |

Technical specifications:

**ČSN EN 12521 Furniture - Strength, durability and safety - requirements for domestic tables**

**ČSN EN 15372 Furniture - Strength, durability and safety - requirements for non-domestic tables**

\*hotels, cafés, restaurants, banks, bars, public spaces such as halls, conference rooms

Testing procedures comply with:

**ČSN EN 1730 Furniture-Tables -Testing methods to establish stability, strength and durability**