

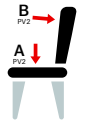
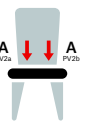

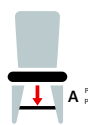
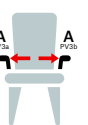
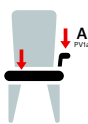
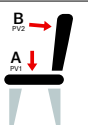
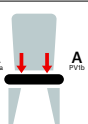
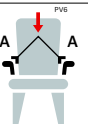
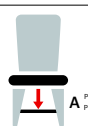
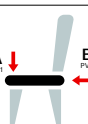


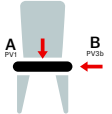
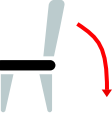

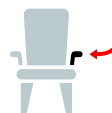
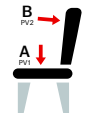




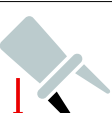
Albu

313 414 beech

Meets (level): II.
Created (by whom): Petra Říhová
Approved (date): 13.8.2018

TON products are tested carefully throughout the entire manufacturing process to ensure compliance with international standards for quality, safety and durability. The tests are carried out in TON's in-house laboratory, where chairs undergo repeated levels of prescribed stress on individual components.

| Standard | Test No. | Test Type | Load Level | | Result | Description | Image |
|-------------------|----------|--|--|--|------------|---|---|
| | | | I. | II. | | | |
| EN 1728, 6.4 | 1. | static load test of the seat and backrest | A load seat: 1 600 N B load backrest: 560 N cycles: 10× | A load seat: 2 000 N B load backrest: 700 N cycles: 10× | Level II | Static pressure is exerted on the seat and the backrest. |  |
| EN 1728, 6.5 | 2. | static load test of the front edge of the seat | A load: 1 300 N cycles: 10× | A load: 1 600 N cycles: 10× | Level II | Static loads are alternately exerted on two points on the front edge of the seat, as near as possible to the side edges. |  |
| EN 1728, 6.6 | 3. | vertical load test on the backrest | A load placed on seat: 1300 N B load: 600 N cycles: 10× | A load placed on seat: 1 800 N B load: 900 N cycles: 10× | Level II | Pressure is applied from the top to the centre of the upper edge of the backrest. |  |
| EN 1728, 6.8, 6.9 | 4. | static load test of the footrest | A load: 1 300 N cycles: 10× | A load: 1 600 N cycles: 10× | not tested | Static pressure is applied to the footrest to simulate a person rising from the chair with the help of the footrest. |  |
| EN 1728, 6.10 | 5. | lateral static load test of the armrests | A load: 400 N cycles: 10× | A load: 900 N cycles: 10× | not tested | Static pressure is applied laterally to the armrests in an outward direction. |  |
| EN 1728, 6.11 | 6. | vertical static load test of the armrests | A load: 750 N cycles: 5× | A load: 900 N cycles: 5× | not tested | Repeated static pressure is applied from the top to the front edge of the armrests, simulating the load exerted on the armrests when used as a support for getting up from the chair. |  |
| EN 1728, 6.17 | 7. | durability test of the seat and backrest | A load seat: 1 000 N B load backrest: 300 N cycles: 100 000× | A load seat: 1 000 N B load backrest: 300 N cycles: 200 000× | Level II | Repeated pressure is applied to the seat and the backrest over a large cycle period, simulating repetitive load during long-term use. |  |
| EN 1728, 6.18 | 8. | durability test of the front edge of the seat | A load seat: 800 N cycles: 50 000× | A load seat: 800 N cycles: 100 000× | Level II | Pressure is applied alternately on two points on the front edge of the seat, as near as possible to the side edges. |  |
| EN 1728, 6.20 | 9. | durability test of the armrests | A load: 400 N cycles: 30 000× | A load: 400 N cycles: 60 000× | not tested | Repeated pressure is applied to the armrests simultaneously at an angle of 10° to simulate long-term use. |  |
| EN 1728, 6.21 | 10. | durability test of the footrest | A load: 1 000 N cycles: 50 000× | A load: 1 000 N cycles: 100 000× | not tested | Repeated pressure is applied to the footrest over a large cycle period to simulate long-term use. |  |
| EN 1728, 6.15 | 11. | forward static load test of the legs | A load placed on seat: 1 000 N B load: 500 N cycles: 10× | A load placed on seat: 1 800 N B load: 620 N cycles: 10× | Level II | Static pressure is applied to the centre of the rear edge of the seat in a forward direction. The front legs must be secured to prevent forward movement. |  |

| Standard | Test No. | Test Type | Load Level | | Result | Description | Image |
|-----------------------|-----------|--|--|--|------------|---|---|
| | | | I. | II. | | | |
| EN 1728, 6.16 | 12. | lateral static load test of the legs | A load placed on seat: 1 000 N B load: 400 N cycles: 10× | A load placed on seat: 1 800 N B load: 760 N cycles: 10× | Level II | Static pressure is applied to the centre of the side edge of the seat in a lateral direction to the chair. The legs must be secured from the sides to prevent movement. |  |
| EN 1728, 6.27.1, 6.28 | 13. | fall test | not used | cycles: 50× | Level II | The chair is tipped backwards to its balance point and then released in free fall without any additional force applied. The test is repeated by tipping the chair sideways. |  |
| EN 1728, 6.25 | 14. | impact test from a hammer on the backrest (6.4 kg) | swing of hammer: 210 mm angle of impact: 38° cycles: 10× | swing of hammer: 330 mm angle of impact: 48° cycles: 10× | Level II | Force of a hammer is repeatedly applied to the rear of the backrest to test its resistance to impact. |  |
| EN 1728, 6.26 | 15. | impact test from a hammer on the armrests (6.4 kg) | swing of hammer: 210 mm angle of impact: 38° cycles: 10× | swing of hammer: 330 mm angle of impact: 48° cycles: 10× | not tested | Force of a hammer is repeatedly applied to the outer edges of the armrests to test their resistance to impact. |  |
| BIFMA | 6. | static strength test of the backrest | B load backrest: 667 N cycles: 10× | B load backrest: 1 112 N cycles: 10× | Level II | The seat is weighed down and static pressure is exerted on the backrest. |  |
| BIFMA | 18. | lateral static strength test of the front leg | B load front leg: 334 N cycles: 10× | B load front leg: 503 N cycles: 10× | Level II | Static pressure is exerted laterally on the front leg. The chair must be weighed down to prevent movement. |  |
| BIFMA | 18. | frontal static strength test of the front leg | B load front leg: 334 N cycles: 10× | B load front leg: 503 N cycles: 10× | Level II | Static pressure is applied to the front leg from the front. The chair must be weighed down to prevent movement. |  |
| BIFMA | 11. 3. 1. | impact resistance test | | test weight: 57 kg drop height: 30 mm cycles: 100 000× | Level II | Weight is dropped repeatedly from specified height on to the centre of the seat to test its resistance to repeated impact. |  |
| BIFMA | 8. | single impact test | test weight: 102 kg drop height: 152 mm cycles: 1× | test weight: 136 kg drop height: 152 mm cycles: 1× | Level I | Weight is dropped from specified height on to the centre of the seat to test its resistance to a single large impact. |  |
| JIS S 7.13 | | free fall leg test - front and back legs | | fall height: 100 mm cycles: 10× | Level II | The chair is dropped from specified height onto one leg to test its strength and durability. The test is done on both the front and back legs. |  |

Our products are shipped to more than 60 countries and are regularly tested against European standards (EN 16139) as well as the American BIFMA and the Japanese JIS S 1203 standards.

EN 16139 Standard

This European standard provides guidelines for the strength, durability and safety of all types of non-residential furniture for adults weighing up to 110 kg. The standard is tested through methods outlined in specific parts of the standard EN 1728.

Japanese Standard JIS S 1203

This Japanese standard sets the parameters for the strength and service life of seating furniture.

American Standard ANSI/BIFMA X5.1

The American standard developed by the Business and Institutional Furniture Manufacturers Association (BIFMA) provides guidelines for the safety and durability of seating furniture.

Testing Methods

A sample of every seating furniture produced by TON undergoes strength, durability and safety testing according to the parameters outlined in this document:

| Level | Type of Use | Extent of Use |
|-------|-------------|--|
| I. | general use | Places where seating furniture is usually intended for short-term use and where the load placed on the furniture is light to heavy. Examples include: public buildings, cafes, restaurants, canteens, banks and bars. |
| II. | extreme use | Places where seating furniture is sometimes or repeatedly exposed to extremely high loads due to specific types of use or incorrect use. Examples include: nightclubs, police stations, public transport stations, changing rooms, prisons and barracks. |

We test TON products at both levels of use and always endeavour to attain Level II.