

Test report 24-TA40884
Article: Mento D-1034-DRLF 24/7H
Test requested by: Kinnarps AB



Requirements for this report are related to standard: BS 5459-2:2000 Specification for performance requirements and tests for office furniture – Part 2: Office pedestal seating for use by persons weighing up to 150 kg and for use up to 24 hours a day, including type-approval tests for individual components.

Tests are carried out according to standards: BS 5459-2:2000 annex A5, A6 and A7.
(in the scope of the accreditation except for annex A7)

Discrepancies:

Result and observations: The sample submitted for test
 fulfils the requirements in above mentioned standards.
 does not fulfil the requirements in above mentioned standards.

Used equipment: ID: 1, 5, 65, 66, 117, 156, 167, 39, 50, 21

Measurement: Detailed information on measurement uncertainty can be obtained from Kinnarps Test and Verification Center on request.

Decision rule: The measured result is directly compared to the requirement level. When reporting results, no account is taken to the measurement uncertainty

Report: This report relates to sample submitted for test and no other. The report may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Kinnarp 2024-08-20



Approved by Jörgen Nilsson
Manager Kinnarps Test- & Verification Center



Tested by Jacob Roguski
Test technician

Item description			
General information			
Date of manufacture:	2024-03-12		
Date of arrival:	2024-03-13		
Date of test:	2024-04-05 to 2024-08-20		
Overall dimensions (mm):	Width: 671	Depth: 635	Height: 1024
Weight (kg):	16,6		
Materials/construction			
Seat:	Upholstered		
Back:	Upholstered		
Armrests:	2D with metal brackets and handwheel		
Under frame:	Aluminium 5 arm starbase with castors for hard floors		
Test conditions			
Laboratory atmosphere:	20°C ± 5°C, within limits during test		



Strength and durability - Test and method BS 5459-2:2000 A5 Durability and safety tests		Test parameters BS 5459-2 Requirements 4.6.1 Criteria of failure		Test results	Pass/Fail or N/A
A.5.1	Fore-and-aft safety	1	V ₁ = 1 400 N V ₂ = 1 400 N H ₁ = 400 N Cycles = 120 000	No remarks	Pass
A.5.2	Seat impact	2	Drop height = 350 mm Cycles = 5	No remarks	Pass
A.5.3	Back impact	3	Drop height = 330 mm or Angle = 48° Cycles = 10	No remarks	Pass
A.5.4	Drop	4	<200 mm Drop height = 250 mm ≥200 mm Drop height = 450 mm	-	N/A

4.1 Durability

After completing 120 000 cycles of the fore-and-aft safety test specified in A.5.1, followed by the tests specified in A.5.2, A.5.3 and A.5.4, the chair shall not fail as specified in 4.6.1.

Strength and durability - Test and method BS 5459-2:2000 A5 Durability and safety tests Can be done on separate chair for A.5.5.		Test parameters BS 5459-2 Requirements 4.6.1 Criteria for failure or 4.6.2 Criteria for safe failure		Test results	Pass/Fail or N/A
A.5.1	Fore-and-aft safety	5	V ₁ = 1400 N V ₂ = 1400 N H ₁ = 400 N Cycles = 380 000	No remarks	Pass
A.5.5	Side-to-side safety	6	Downward vertical force = 1 200 N Cycles = 250 000	No remarks	Pass

4.4 Safety

When tested for the remaining 380 000 cycles of the fore-and-aft safety test in A.5.1, and when tested in accordance with A.5.5, the chair shall not fail as specified in 4.6.1. or shall fail safely as specified in 4.6.2.

Stability - Test and method BS 5459-2:2000 A6 Stability tests		Stability - Test parameters Requirements 4.3 Stability		Test results	Pass/Fail or N/A
A.6.2.1.1	Forward overturning (all chairs)	7	Downward vertical force = 600 N Horizontal force = 20 N	74 N	Pass
A.6.2.1.2	Sideways overturning (without arms)	8	Downward vertical force = 600 N Horizontal force = 20 N	-	N/A
A.6.2.2	Sideways overturning for armchairs	8	Downward vertical force (seat) = 250 N Downward vertical force (arm) = 350 N Horizontal force = 20 N	37 N	Pass
A.6.3.1	Rearward overturning (all chairs)	9	Downward vertical force = 600 N F = 80 N, (h ≥ 720 mm) F = 285,7 x (1-h/1000) N, (h < 720 mm)	223 N	Pass
A.6.3.2	Accidental rearward overturning	10	Horizontal distance 100 mm, fall freely	No remarks	Pass
A.6.4	Rearward overturning of tilting and reclining chairs	11	13 discs	No remarks	Pass

4.3 Stability

When tested according to A.6, the chair shall not overturn.

Strength and durability - Test and method BS 5459-2:2000 Parts of A7 Durability of components (outside the accreditation) Can be done on separate chair for A.7		Test parameters Requirements 4.6.1 Criteria for failure		Test results	Pass/Fail or N/A
A.7.2	Arm sideways static load ID167,39,50	1	Force = 600 N Cycles = 10	No remarks	Pass
A.7.3	Arm downward static load ID21,39,50	2	Force = 1 200 N Cycle = 10	No remarks	Pass
A.7.4	Arm impact	3	Angle 48° Cycle = 10	No remarks	Pass
A.7.5	Chair swivelling	4	Downward vertical force = 1 200 N Cycles = 100 000	No remarks	Pass
A.7.9	Locking device fatigue	5	H ₁ = 400 N Cycles = 500 000	No remarks	Pass

4.2 Component durability

When tested in accordance with A.7, the components shall not fail as specified in 4.6.1.

4.6 Criteria for failure and safe failure

4.6.1 Criteria for failure

The chair is considered to have failed if any of the following occurs:

- a) fracture of any member, joint or component (including back support, column, base, seat suspension and castors);
- b) loosening of joints or components intended to be rigid, which is shown to be permanent by applying hand pressure;
- c) deformation affecting the appearance or functions;
- d) impairment of the operation of any mechanical part.

4.6.2 Criteria for safe failure

The chair is considered to have failed safely if any damage to the chair is such that the sitter would immediately be aware that the chair was impaired but would not be at risk of injury at that time. Permanent tilting of the chair or structural insecurity are acceptable provided that:

- a) the chair and its occupant would not overturn at the moment of failure (see note 1); and
- b) expulsion of internal parts of the chair under pressure is not possible; and
- c) the seat cannot be detached except by deliberately lifting it.

Note 1 Safe failures in accordance to 4.6.2a can be assessed by loading the chair with 13 discs.

If failure is caused by a specific weakness in the test sample, such as a weld fault or casting porosity, repeat the tests on a new sample.

Note 2 The following are examples of safe failure: bending of an arm or the chair; fracture of part of an arm (though not the sudden loss of an arm); damage to the tilt mechanism or seat structure (provided that the seat is not suddenly detached from the pedestal), including bending of the base or pedestal and loss of or damage to castors.

Remarks, comments

End of report