REPORT

Issued by an Accredited Testing Laboratory

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Date	Reference	Page
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SWEDEN

Testing of storage furniture according to EN 16121:2013

(3 appendices)

Customer:	Essem Design AB
Test object/ID:	Hat rack/Classic
Test methods:	EN 16121:2013 Non-domestic storage furniture – Requirements for safety, strength, durability and stability, test severity 1
Test environment:	23 ± 2ºC and 50 ± 5% relative humidity
Scope:	Complete test
Date of test:	2020-09-21 – 2020-10-16
Test result:	The tested object passed the test
Reservation:	The test results in this report apply solely to the specimen tested

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Performed by

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Appendices

1. Test result (4 pages)
2. Description of test object (1 page)
3. Pictures (1 page)

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Appendix 1

Test result

Abbreviations: N/A = Not applicable
N/T = Not tested

Table 1

1.	General requirements EN 16121 clause 5.2 – 5.5	Result
1.1	Accessible edges and corners shall be free from burrs and rounded or chamfered. There shall be no open ended tubes. All moveable parts accessible during normal use shall have safety distances in any position during movement of ≤ 8 mm or ≥ 25 mm. This applies to any two elements moving relatively to each other, with the exception of doors, flaps and extension elements. The safety distance also applies to the distance between handles and other parts. Adjustable parts shall be such as to prevent in advertent operation or release. Vertically sliding roll fronts shall not close by themselves from any position higher than 200 mm measured from the closed position. Extension elements shall have effective open stops. They shall resist being pulled out of the carcass once by a horizontal force of 200 N applied to the handle of the loaded extension element. Load bearing parts of the storage unit shall not come loose unintentionally. Safe height for vertically moving units shall be at least 100 mm from the floor. Horizontal lids that are 1 000 mm or less from the floor and weigh 0,25 kg or more, that are hinged, shall be provided with lid-support mechanisms. Any external, vertical glass component which is less than 900 mm above the floor , shall not break or become detached, when impacted once in accordance with EN 14072:2003, Clause 5, with a drop height of 70 mm	Pass

Appendix 1

Table 2

2.	Stability test	EN 16121	Loading	Result
2.1	Doors, extension elements and flaps closed, all storage units unloaded - Units that are, or can be, adjusted to a height of 1000 mm or less	5.6.1	Vertical 750 N	N/A
2.2	Doors, extension elements and flaps closed, all storage units unloaded - Units that are, or can be, adjusted to a height of more than 1 000 mm	5.6.2	Vertical 350 N Outward 50 N	N/A
2.3	All storage areas unloaded and all doors, extension elements and flaps open	5.6.3		N/A
2.4	All storage areas unloaded with overturning load	5.6.4	Vertical 100 N	N/A
2.5	All storage areas loaded with overturning load	5.6.5	Vertical Max. 300N	N/A
2.6	Doors, extension elements and flaps closed and locked	5.6.6	Outward 100N	N/A
2.7	Dynamic stability test for units with castors	5.6.7		N/A

Appendix 1

Table 3

3.	Structural safety tests	EN 16121	Cycles	Loading	Result
3.1	Static load test for tops and bottoms - Top - Bottom	5.7.1.1	10	750 N	 N/A N/A
3.2	Shelf retention test – horizontal outward	5.7.1.2	1	50 % of unloaded shelf weight	N/A
3.3	Shelf retention test – vertical downward	5.7.1.3	1	100 N	N/A
3.4	Strength of shelf supports	5.7.1.4	10	0.65kg/dm^2 Impact plate 2.5 Kg	N/A
3.5	Vertical load on pivoted doors Note. This test is only applicable to doors with a total mass > 10 kg or door with a potential energy > 65 Nm	5.7.1.5	10	30 kg	N/A
3.6	Horizontal load on pivoted doors Note. This test is only applicable to doors having a maximum opening angle of 135° or less	5.7.1.6	10	60 N	N/A
3.7	Strength of bottom-hinged flaps	5.7.1.7	10	200 N	N/A
3.8	Strength of extension elements	5.7.1.8	10	200 N	N/A
3.9	Slam shut and open of extension elements	5.7.1.9	1	Annex A EN 16122	N/A
3.10	Interlock test	5.7.1.10	10	200 N	N/A
3.11	Test for structure and underframes	5.7.1.11	10	350 N	N/A
3.12	Test for unit with castors or wheels	5.7.1.12	2 000	Table 1 EN 16121	N/A
3.13	Overload test Note. This test is only applicable for units not supported by the floor	5.7.1.13	1	2,5/dm^2	Pass 61.8 kg
3.14	Dislodgement test Note. This test is only applicable for units not supported by the floor	5.7.1.14	1	100 N	N/A
3.15	Horizontal outwards static load test Note. This test is only applicable for units mounted to the building or other structure and supported by the floor	5.7.1.15	1	200 N	N/A

Appendix 1

Table 4

	Strength & durability tests	**EN 16121**	**Cycles**	**Loading**	**Result**
4.1	Strength of clothes rail supports	6.1.1	1 h	4 kg/dm	Pass 36 kg
4.2	Strength of coat hooks	6.1.2	10	40 N / hook	Pass 32 kg
4.3	Durability of pivoted doors	6.1.3	40 000	2x1 kg	N/A
4.4	Slam shut test of pivoted doors	6.1.4	10	3 kg	N/A
4.5	Slam shut/open of sliding doors and horizontal roll fronts	6.1.5	10	4 kg	N/A
4.6	Durability of sliding doors horizontal roll fronts	6.1.6	20 000	-	N/A
4.7	Durability of horizontal roll fronts	6.1.6	10 000	-	N/A
4.8	Durability of flaps	6.1.7	10 000	-	N/A
4.9	Durability of vertical roll fronts	6.1.8	10 000	-	N/A
4.10	Durability of extension elements	6.1.9	40 000	0.2 kg/dm^3	N/A
4.11	Slam shut and open of extension elements	6.1.10	1	1.3 m/s	N/A
4.12	Displacement of extension element bottoms	6.1.11	10	60 N	N/A
4.13	Strength test for locking and latching mechanisms for extension elements	6.1.12	10	200 N	N/A
4.14	Strength test for locking and latching mechanisms for doors, flaps and roll fronts	6.1.13	10	200 N	N/A
4.15	Deflection of shelves Requirement max 0.5% of the items length	6.1.15	1 week	1.5 kg/dm^2	N/A
4.16	Deflection of shelves made of metal, glass and stone Requirement max 0.5% of the items length	6.1.15	1 h	1.5 kg/dm^2	N/A
4.17	Dislodgement of clothes rails	6.1.16	1 week	5 kg/dm	N/A
4.18	Dislodgement of clothes rails made of metal	6.1.16	1 h	5 kg/dm	N/A
4.19	Drop test for trays	6.1.17	10	350 mm	N/A
4.20	Sustained load test for trays	6.1.18	1 week	0.65 kg/dm^3	N/A

Appendix 2

Description of test object

Test object/ID:	Hat rack/Classic
Dimensions	
Width:	100 cm
Depth:	29.5 cm
Height:	29 cm
Components	
Frame:	Metal tube, Ø16 mm
Shelves:	Metal mesh
Hooks:	Plastic
Sampling:	The test object was selected by the customer
Date of arrival at RISE test laboratory:	2020-08-10
Observed defects before testing:	No defects

Appendix 3

Pictures

Figure 1

Figure 2