

Scandinavian Business Seating AB  
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## Test of chairs regarding electrostatic protective properties

### 1 Client

Scandinavian Business Seating AB, Nässjö, Sweden.

### 2 Test objects

Three types of chairs manufactured by Scandinavian Business Seating AB with the following type designations:

#### ESD 7

Dressing of seat: Global 191 (black)  
Mechanism: 3H  
Gas spring: B  
Base: 5J (polished metal)  
Wheels: 7FM



#### ESD 7

Dressing of seat: Vinyl (black)  
Mechanism: 3H  
Gas spring: B  
Base: 5J (polished metal)  
Wheels: 7FM



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ESD 8

Dressing of seat: Gaja (black)  
Mechanism: 3H  
Gas spring: E  
Base: 5J (polished metal)  
Foot ring: 6F  
Wheels: 7F



ESD 8

Dressing of seat: Vinyl (black)  
Mechanism: 3H  
Gas spring: E  
Base: 5J (polished metal)  
Foot ring: 6F  
Wheels: 7F



ESD 9

Dressing of seat: Gaja (black)  
Mechanism: 3H  
Gas spring: A  
Base: 5J (polished metal)  
Wheels: 7FM



ESD 9

Dressing of seat: Vinyl (black)  
Mechanism: 3H  
Gas spring: D  
Base: 5J (polished metal)  
Wheels: 7FM



### 3 Commission

Tests according to IEC 61340.

### 4 Performance and result

The measurements were performed by Sven Byheden 2012-06-26 according to IEC 61340-5-1, edition 1.0, 2007 and IEC 61340-2-3, first edition (SP-method 2472, issue 6 with appendix 6, issue 5).

The test objects were conditioned during more than 48 h in  $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and  $12\text{ \% RH} \pm 3\text{ \% RH}$ . The measurements were performed in the same climate.

Instrument: SP inv. No. 501419; instrument uncertainty less than  $\pm 1\%$ .  
SP inv. No. 502920; instrument uncertainty less than  $\pm 3\text{ V}$ .

#### 4.1 Resistance to ground

Resistance values were measured at maximum 100 VDC from seats to a metal plate under each wheel.

##### Result

ESD7: All measured resistance values were in the range from  $0.26\text{ M}\Omega$  to  $0.86\text{ M}\Omega$ .

ESD8: Three out of five resistance values were in the range from  $0.04\text{ M}\Omega$  to  $0.27\text{ M}\Omega$ .

Two out of five resistance values were in the range from  $0.14\text{ T}\Omega$  to  $0.17\text{ T}\Omega$ .

ESD9: All measured resistance values were in the range from  $0.04\text{ M}\Omega$  to  $0.86\text{ M}\Omega$ .

Requirement of resistance to ground less than  $10\text{ G}\Omega$  was fulfilled via at least two wheels.

#### 4.2 Measurements according to SP-Method 2472, issue 6, section 7.3.

Resistance measurements, from all exposed parts of each test object, to a metal plate under the wheels were performed at maximum 100 VDC.

Electrostatic potentials were additionally measured in close vicinity of parts having a resistance to ground higher than  $1\text{ G}\Omega$ . The potentials were measured 2 s after a slight touch with the hand or cloth of the tested part. The measurements were performed at a distance of 20 mm with a metal plate ( $\text{Ø } 15\text{ mm}$ , 2 pF).

##### Result

Maximum measured electrostatic potential: 40 V.

The requirement that a product in an EPA must not accumulate and keep an electrostatic voltage higher than 100 V for longer than a maximum of 2 s was fulfilled.

### 4.3 Marking

The requirements were fulfilled. The chairs were marked with manufacturers name, type designation and ESD-symbol.

### 5 Summary

The test objects fulfilled the requirements for ESD-approval according to IEC 61340-5-1, edition 1.0, 2007.

The test result applies to the tested objects only.

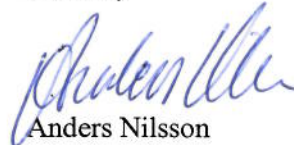
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