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## Test of chairs regarding electrostatic protective properties

### 1 Client

Scandinavian Business Seating AB, Nässjö, Sweden.

### 2 Test objects

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

RH Extend 200 ESD  
Fabric: Global 191 (black)  
Gas spring: 4F Logic  
Base: 5X (black)  
Wheels: 7FM  
Arm rests: 8E



RH Extend 200 ESD  
Fabric: Antistatisk vävplast  
Gas spring: 4F Logic  
Base: 5X (black)  
Wheels: 7HF



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RH Extend 200 ESD  
Fabric: Gaja Antistatic  
Gas spring: 4F Logic  
Base: 5X (polished metal)  
Wheels: 7HF



The chairs arrived at SP 2012-10-16

### **3 Commission**

Tests according to IEC 61340.

### **4 Performance and result**

The measurements were performed by Ingvar Karlson 2012-11-21 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 °C ±2 °C and 12 % RH ±3 % RH. The measurements were performed in the same climate.

Instrument: SP inv. No. 501419; instrument uncertainty less than ± 1%.  
SP inv. No. 502920; instrument uncertainty less than ± 3 V.

#### **4.1 Resistance to ground**

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

#### Result

All measured resistance values were in the range from 0.73 MΩ to 2.4 MΩ.

Requirement of resistance to ground less than 10 GΩ 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 GΩ. 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 (Ø 15 mm, 2 pF).

## Result

Maximum measured electrostatic potential: 30 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.

### SP Technical Research Institute of Sweden Electronics - Product Safety

Performed by



Ingvar Karlsson

Examined by



Anders Nilsson