

# BenchPro (Chair Test Report)

**BIFMA INTERNATIONAL**  
*General-Purpose Office Chairs – Test*  
*American National Standard for Office Furniture*

**CHAIR TEST NAME:** 12. STABILITY TEST

LARGE NYLON -BASE CHAIR: HTF-320, CASTERS : 60mm std.

WNT3-F,V, WNT2-DF,DV

START DATE: AGO-19-2013

START HOUR:

END DATE: AGO-22-2013

END HOUR:

## Chair tests:

Backrest Strength Test – Static  
(Type I)

Backrest Durability Test – Cyclic  
(Type I)

Backrest Strength Test – Static  
(Type II, III)

Backrest Durability Test – Cyclic  
(Type II, III)

Base Test – Static

Caster/Chair Base Durability  
Test - Cyclic

Drop Test – Dynamic

Leg Straight Test – Front and  
Side Application

Swivel Test – Cyclic

Footrest Durability Test –  
Vertical - Cyclic

Tilt Mechanism Test – Cyclic

Arm Durability Test - Cyclic

Seating Durability Test – Cyclic

Out Stop Test for chairs with  
Manually Adjustable Seat Depth

Stability tests

Tablet Arm Static Load Test

Arm Strength Test – Vertical – Static

Tablet Arm Load Ease Test  
Cyclic

Arm Strength Test – Horizontal – Static

**Type chair:**

Type I - Tilting Chair

Type II – Fixed seat angle, tilting backrest

Type III – Fixed seat angle, fixed backrest

**Applicability:** The stability tests shall be performed on all types of chairs.

**Purpose of the test:** The purpose of these test is to evaluate the rear and front stability of chairs.

**Test Setup:** The chair shall be placed on a test platform.

On chairs with adjustable features, all adjustments shall be set at the apparent least stable condition for rearward stability, such as:

- a). Maximum height of seat or backrest, or both.
- b). Minimum tension of tilt mechanism.
- c). Rearmost seat or backrest position, or both,
- d).The least stable condition of casters or glides.

Note: On chairs with tilt locks, locking the mechanism in the near upright position changes the chair type, and the chair shall be tested in the locked (near upright) and unlocked ( reclined ) conditions.

- A 79 kg. (173 lb) weight shall be placed on the seat at the center of the unit or on the seating position nearest to the center of the chair.
- A Block, obstruction or other restraining device 13 mm (0.5 in.) in height shall be affixed to the test platform. The device shall prevent sliding but not restrict the unit from tipping. On chair that rotate, the base and casters shall be positioned to offer the least resistance to rearward tipping of the chair.

**Test Procedures:**

- a). A rearward force, either push or pull, shall be applied to the backrest of the chair, in the plane of the top or the top of the backrest, whichever is lower.
- b). A force shall be applied until the total unit weight is transferred to the rear support members (This typically occurs when the front support members lift off the test platform).
- c) Determine that the force required to achieve the condition described up. Exceeds the acceptance levels below.

**Acceptance Level .**

The force determined shall not be less that shown for each type of chair:

Type I        89 Newtons (20 lbf.)

Type II        89 Newtons (20 lbf)

Type III       156 Newtons (35 lbf)

**Conclusion:** The chair never lost stability or serviceability , during and after the stability test.

**Test :** PASS

**Video:** DONE

**Photo:** DONE