Seating *sit-test* and comfort sign-off

A small panel of different sizes sits in a full-size prototype for a set time; the same points are measured and scored on one sheet; the designer signs. A working protocol, not a standard: it does not certify ergonomics.

AT A GLANCE

Stage	What is built	What you check	Sit time per tester (starting value)	Who signs
1. Dimension mock-up	Foam blocks or timber at full size, no final cover	Heights, depths, angles, fit at the table	[5] min	Designer
2. Full-spec prototype	Production frame, filling, plain or final cover	Every line on the sheet, measured and felt	[10] dining; [20] banquette, bar; [30] lounge	Designer, client's representative
3. Pre-production approval	First item with the real cover, trim and finish	Cover fit, seams, finish, changes since stage 2	As stage 2, or shorter if the shape is unchanged	Designer and client
4. Post-delivery check	Delivered item in its room, beside the benchmark	Fit in the room; match to the benchmark	[10] min	Designer, on site

Numbers in [square brackets] are starting values to agree, not figures from a standard. The partner workshop confirms which stages are practical and what can change after each.

RECORD SHEET (PRINT ONE PER TESTER)

Project _____ Item _____ Stage _____ Date _____ Tester (height band) _____ Sit time ____ min Table height ____ mm

A. Measured	Target	Measured	OK
Seat height, as sat on			
Seat depth			
Back and arm height above seat			
Seat top to table top, space under apron			
Seat slope and back rake			

B. Felt, score 1 (poor) to 5 (good)	Score	Note
Thigh at the front edge	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Lower back	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Arms and shoulders	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Rise and sit	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Lean and stability	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Fit at the table	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Cover feel and slip	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Noise or smell	○ 1 ○ 2 ○ 3 ○ 4 ○ 5	
Still comfortable at the end? (yes / no)	☐ Yes ☐ No	

C. Decision: ☐ Approved ☐ Approved with changes ☐ Not approved. Changes required _____ Signed _____ Date _____

SPECIFICATION WORDING

PROTOTYPE FOR SIGN-OFF

Contractor to provide one full-size prototype of [item ref] for sign-off before production, built to the approved drawing [ref, revision] with the production frame, filling and suspension and [a plain / the final] cover. The approved prototype, tagged and photographed, is retained as the benchmark until practical completion. Production is not to start until the designer has signed the prototype 'Approved' or 'Approved with changes'.

SIT-TEST PROCEDURE

The prototype is to be sit-tested by a panel of at least [4] people, including at least one small and one large adult within the intended users, each sitting for not less than [20] minutes at a table of finished height [ ] mm, and recorded on the sit-test record sheet [ref]. The designer records the results. No line is to be scored 1 by any tester. Any line scored [2] or lower by [two] or more testers is to be resolved in writing before approval.

CHANGES, FIRST-OFF AND DELIVERY

Changes to the approved prototype's geometry, filling, suspension, cover or finish after sign-off are to be made only by written variation approved by the designer, and the benchmark is updated to match and retained for inspection until practical completion. The first production item is to be checked by the designer against the benchmark before the remainder is made [and again on delivery]; differences beyond [the agreed tolerance] are recorded on the snagging list.

TERMS USED

Finished seat height

The height of the top of the upholstered seat above the finished floor. It is different unloaded and when sat on, because foam and feather compress, so drawings should state which one they mean.

Seat rake

How much the seat surface tilts back from horizontal. A small backward tilt helps people stay seated and feel supported; too much makes standing up difficult.

Benchmark sample

The approved prototype or sample kept, tagged and photographed, as the reference that production and delivered items are compared with.

Rise and sit

Standing up from a seat and sitting down again, usually three times in a sit test, to see how much effort the seat, the arms and the depth ask of the sitter.

STANDARDS AND SOURCES

- BS EN 16139:2025: Furniture. Safety, strength and durability. Requirements and test methods for non-domestic seating. BSI listing: published 31 August 2025, current; adults up to 110 kg. A safety, strength and durability standard: it does not assess comfort.
- BS EN 1728:2012: Furniture. Seating. Test methods for the determination of strength and durability. BSI listing: current; test methods only, no requirements.
- FIRA: Pressure Mapping, Review of Validity to Assess Comfort of Mattresses, Guidelines for Best Practice: information page of 14 July 2020; the guidance PDF is restricted and was not read.
- Make Bespoke Studio: Sampling: approved samples retained as the benchmark.

Full guide: https://makebespoke.com/trade/technical/seating-sit-test-protocol. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.