

**LOAD TEST CERTIFICATE**

Report No.:	41193/4
Job No.:	PN41193
Client:	Cableduct Limited
Floor Box Model No.:	Minima RS+ stainless, recessed lid
Sample Reference:	4
Date Tested:	24/10/19
Test Technician:	DG

INTRODUCTION

James Fisher Testing Services were requested to carry out load tests on a sample of Cableduct Floor Box to test methods specified by the client.

TEST METHOD

For the first part of testing, the floor box was tested in accordance with specification BS EN 60670-23:2008, 15.101 (Compression test for all floor mounting boxes). The floor box was mounted within a horizontally placed sheet of plywood, simulating the floor. Loading was applied via a 1cm² loading indenter to the centre of the floor box with deflection of the box lid measured using a dial gauge positioned as close to the point of load as possible. The deflection of the plywood was also measured and subtracted from the lid deflection.

- A load of 0.5kN was applied and held for 1 minute, with deflection measured after 1 minute, and 1 hour after load removal.
- A load of 1kN was applied to the floor box via a sheet of 9mm plywood, and any damage to the supporting means of the box or lid were noted.

For the second part of the testing, the floor boxes were tested to PSA MOB PF2 and BS EN 12825:2001. Loading was applied via a 25mm x 25mm loading indenter to the centre of the floor box, with a dial gauge positioned as close to the point of load as possible to measure lid deflection.

- A load of 1.5kN was applied and held for 24 hours, with deflection measured after 23 hours, 24 hours and 1 minute after load removal.
- A Load of 1.5kN/3kN/4.5kN/6kN was applied and held for 5 minutes, with deflection measured after 5 minutes, and 1 minute after load removal.
- A Load of 7.5kN/9kN/10.5kN/12kN was applied and held for 5 minutes, with deflection measured after 5 minutes at each load.
- Loading was continued until failure, with deflection and maximum load measured at failure.

RESULTS

Table 1 – Results of load test according to BS EN 60670-23:2008.

Loading Conditions	Deflection (mm)
1 minute after load application (0.5kN)	1.72
1 hour after load removal (0.5kN)	0.14

After a load of 1kN was applied via a sheet of 9mm plywood, there was no damage to the means supporting the box nor to the lid.



Table 2 – Results of load test according to PSA MOB PF2 and BS EN 12825:2001.

Loading Conditions	Deflection (mm)
Immediately after load application (1.5kN)	0.89
23 hours after load application (1.5kN)	0.84
24 hours after load application (1.5kN)	0.84
1 minute after load removal (1.5kN)	0.10
5 minutes after load application (1.5kN)	1.37
1 minute after load removal (1.5kN)	0.06
5 minutes after load application (3kN)	2.37
1 minute after load removal (3kN)	0.32
5 minutes after load application (4.5kN)	3.86
1 minute after load removal (4.5kN)	1.24
5 minutes after load application (6kN)	5.55
1 minute after load removal (6kN)	1.97
5 minutes after load application (7.5kN)	7.09
5 minutes after load application (9kN)	8.93
5 minutes after load application (10.5kN)	10.30
5 minutes after load application (12kN)	11.37
Failure load = 12.01 kN	11.42

Photo 1 – View of testing arrangements



Photo 2 – Failure mode of sample



ASSESSMENT

The sample withstood loading to 0.5kN with a deflection of 1.72mm and a permanent deformation after 1 hour of unload of 0.14mm. The sample also withstood testing up to 1kN, applied via a sheet of plywood without any damage to the lid or the means supporting the box. The box passes the requirements for compression testing of floor boxes in accordance with the requirements stated in **BS EN 60670-23:2008, 15.101**. In the second test, the sample had a deflection of 2.37mm at 3kN and so also passes to **PSA Medium Grade** and **BS EN 12825:2001 – Classification 4/3/A/2**.


Approved Signature
James Fisher Testing Services
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