Test report

REPORT NUMBER:
316021-4

DANISH
TECHNOLOGICAL
INSTITUTE

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Client: Novafix ApS
Tinvej 11
4100 Ringsted

Subject: Adjustable Multi-Brackets:
Right multi-bracket (RMB) with and without adapters (ABRL)

Sampling: Samples were brought by Novafix ApS on Wednsday 9th April 2025.

Test Period: The test was performed Wednesday 9th April 2025.

Test: Compressive test of Right multi-bracket (RMB) with and without adapters (ABRL) at 5 mm/min reporting compressive displacement after slack correction as described in ASTM D695-23 Standard Test Method for Compressive Properties of Rigid Plastics when the first sign of break appears.

Results: See page 2-3 and enclosure 1.

Remarks: Values for Right multi-bracket, without adapter taken from test report 281119-2 dated 19 March 2025.

Terms:

Test place: Danish Technological Institute, Plastics & Packaging

Signature: This document is only valid with a digital signature from Danish Technological Institute. The date of issue appears from the digital signature. Approved and signed by:

Anders Ask Carton
Business manager

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Test

Compressive test of Adjustable Multi-Brackets at 5 mm/min. Reported values represent the first point when observed failure/break was recorded and/or at 2 mm compressive displacement.

The bracket was mounted using two 8mm 8.8 steel bolts. For this test the "right" version of the bracket and adapter was used.

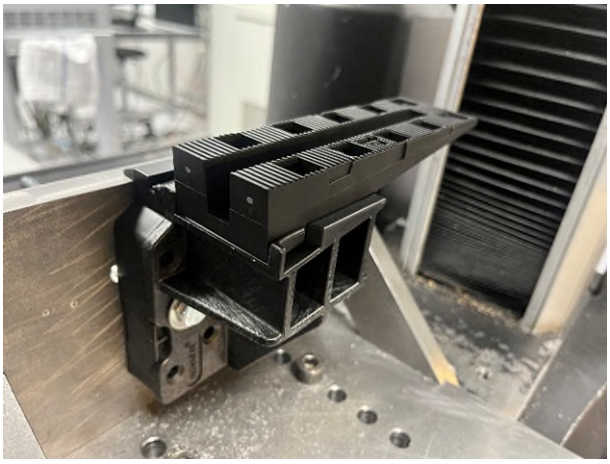
Equipment

Instron Universal Tensile Tester, 5569 H1500 (32T01.10.1) with 50kN load cell (32T01.11.1)

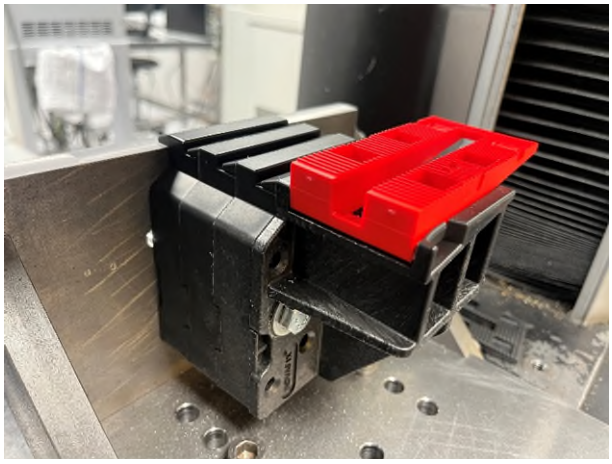
Samples

- Right multi-bracket (RMB)
- Adapter for left/right multi-bracket (ABRL)
- Red Wedge / Size 3
- Black Wedge / Size 4

Test Setup



Right Multi-Bracket (RMB) with Black Wedge / Size 4, with 1 adapter (ABRL)



Right Multi-Bracket (RMB) with Red Wedge / Size 3, with 3 adapters (ABRL)

Test Results

Test performed at 23±2ºC
Figures in brackets indicates the n-1 standard deviation.

Right multi-bracket, without adapter		
Wedge type	Displacement @ Break [mm]	Load @ Break [kg]
Red Wedge / Size 3	1.5 (0.2)	297 (29)
Black Wedge / Size 4	1.3 (0.1)	321 (25)

Right multi-bracket, with 1 adapter	
Wedge type	Load @ 2 mm compressive displacement [kg]
Red Wedge / Size 3	220 (2)
Black Wedge / Size 4	204 (19)

Right multi-bracket, with 2 adapters	
Wedge type	Load @ 2 mm compressive displacement [kg]
Red Wedge / Size 3	182 (21)
Black Wedge / Size 4	153 (10)

Right multi-bracket, with 3 adapters	
Wedge type	Load @ 2 mm compressive displacement [kg]
Red Wedge / Size 3	113 (3)
Black Wedge / Size 4	112 (15)

Detailed results including graphs and peak values can be found in enclosure 1.

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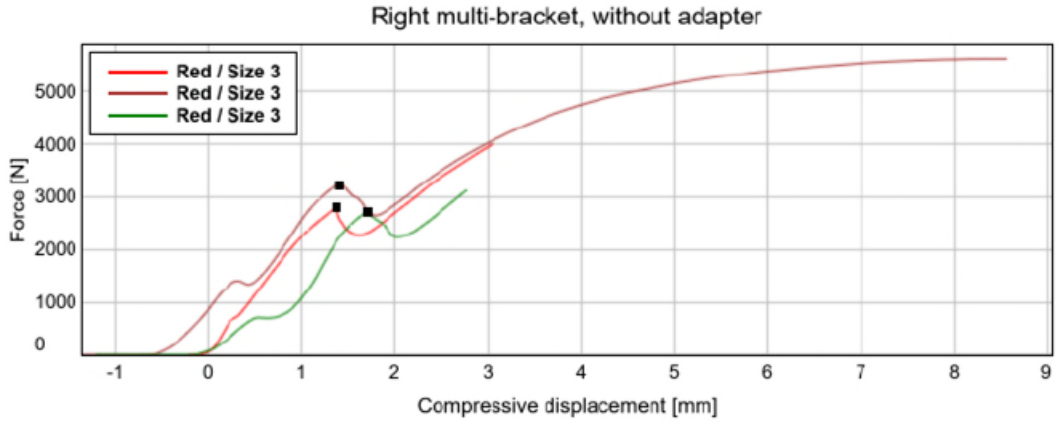
Last test date	12/03/2025
Rate 1	5.00 mm/min



	Produkt ID	Force @ Break [N]	Displacement @ Break [mm]	Load @ Break [kg]
1	Red / Size 3	2794	1.57	285
2	Red / Size 3	3232	2.77	329
3	Red / Size 3	2711	2.91	276
Mean		2913	2.42	297
Standard deviation		280.1	0.7	28.5

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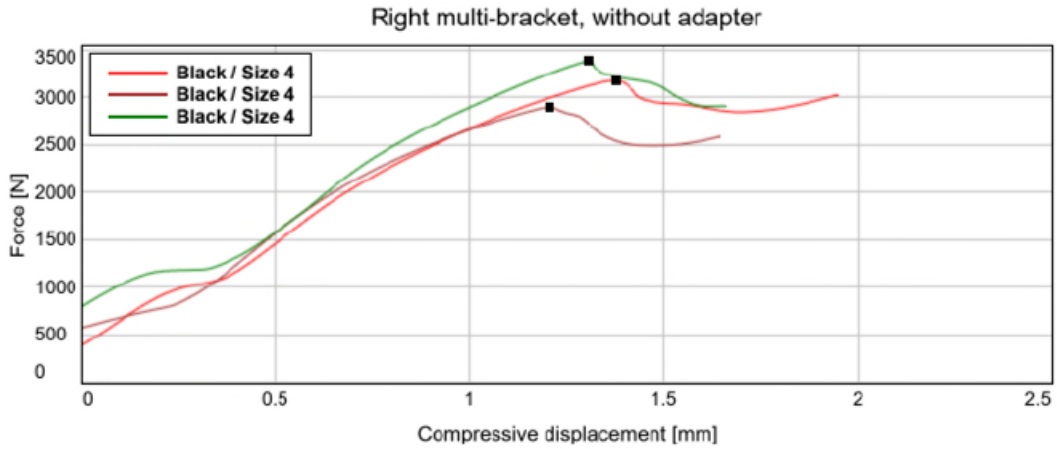

	Produkt ID	Force at Preset point (Cursor) [N]	Compressive displacement at break [mm]	Load at break [kg]
4	Black / Size 4	3172	1.38	323
5	Black / Size 4	2894	1.21	295
6	Black / Size 4	3380	1.31	344
Mean		3149	1.30	321
Standard deviation		244.2	0.1	24.9

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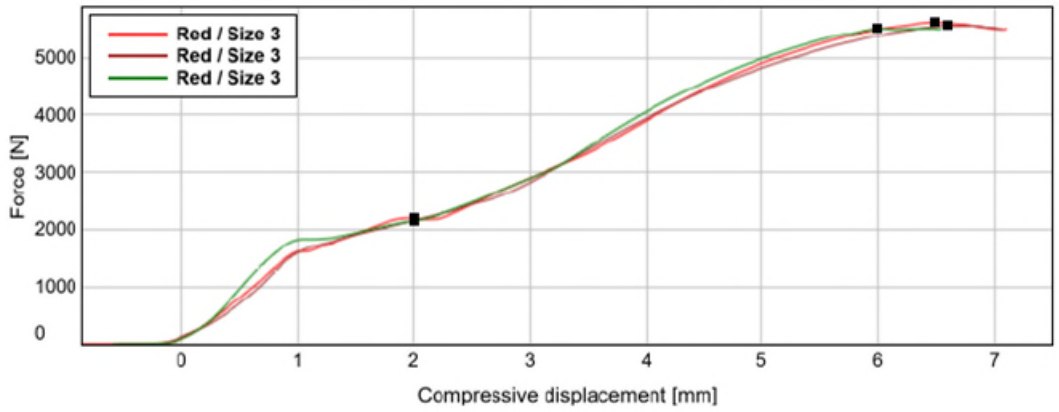
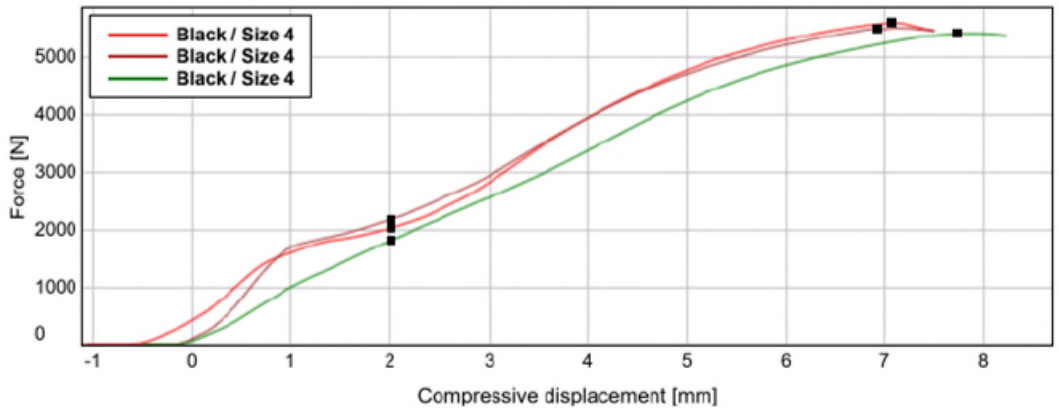
Last test date	09/04/2025
Rate 1	5.00 mm/min

Right multi-bracket, with 1 adapter



Right multi-bracket, with 1 adapter



	Produkt ID	Force @ 2 mm [N]	Load @ 2 mm [kg]	Force @ Peak [N]	Compressive displacement @ Peak [mm]	Load @ Peak [kg]
1	Red / Size 3	2194	223	5619	6.5	572
2	Red / Size 3	2154	219	5568	6.6	567
3	Red / Size 3	2151	219	5512	6.0	561
4	Black / Size 4	2023	206	5595	7.1	570
5	Black / Size 4	2176	222	5497	6.9	560
6	Black / Size 4	1805	184	5411	7.7	551
Mean		2084	212	5534	6.8	564
Standard deviation		149.3	15.2	76.3	0.6	7.8

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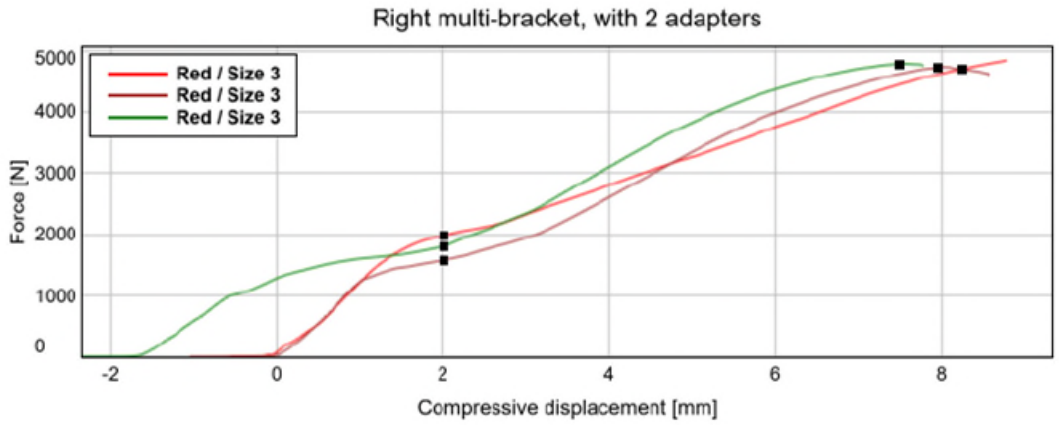
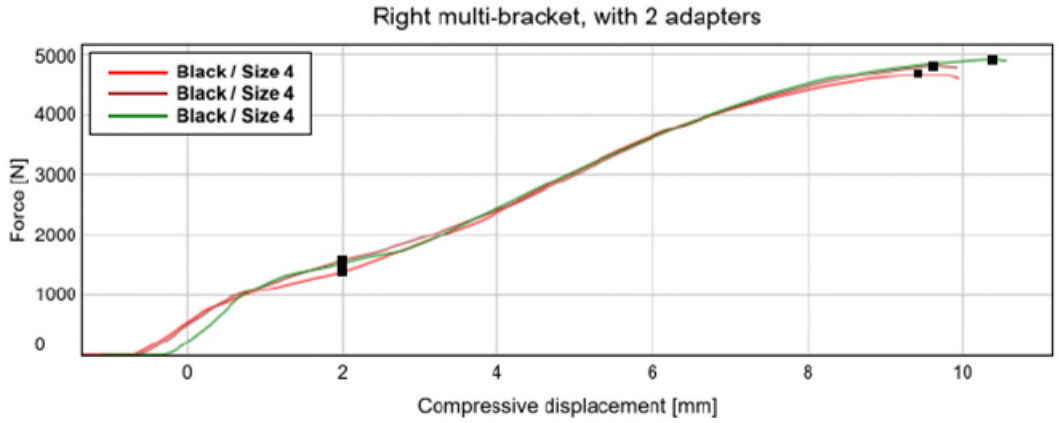
Rate 1	5.00 mm/min





	Produkt ID	Force @ 2 mm [N]	Load @ 2 mm [kg]	Force @ Peak [N]	Compressive displacement @ Peak [mm]	Load @ Peak [kg]
1	Red / Size 3	1980	202	4699	8.2	479
2	Red / Size 3	1580	161	4723	8.0	481
3	Red / Size 3	1804	184	4783	7.5	487
4	Black / Size 4	1386	141	4667	9.4	475
5	Black / Size 4	1579	161	4812	9.6	490
6	Black / Size 4	1528	156	4919	10.4	501
Mean		1643	167	4767	8.9	485
Standard deviation		212.9	21.7	91.7	1.1	9.3

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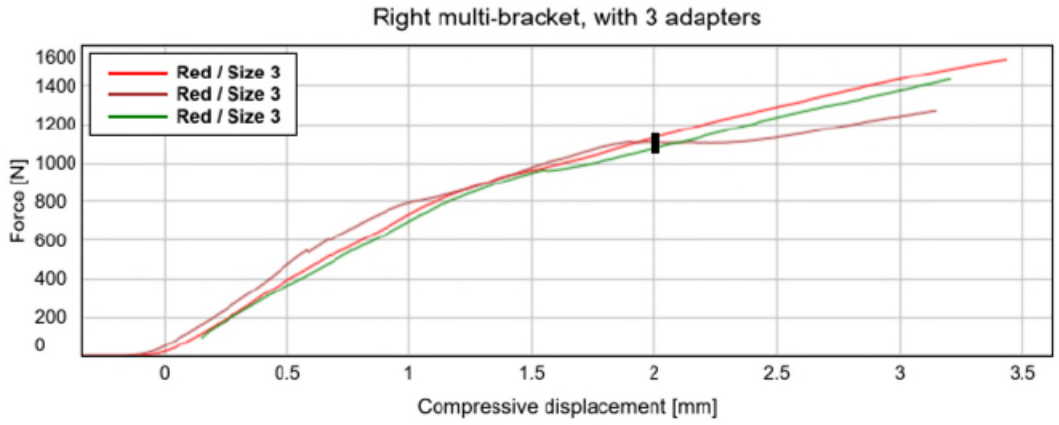

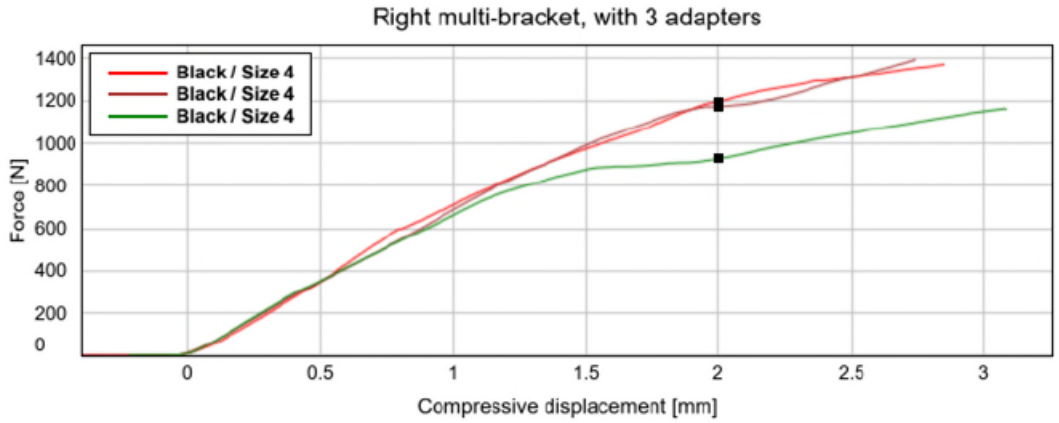

	Produkt ID	Force @ 2 mm [N]	Load @ 2 mm [kg]
1	Red / Size 3	1132	115
2	Red / Size 3	1109	113
3	Red / Size 3	1076	110
4	Black / Size 4	1196	122
5	Black / Size 4	1172	119
6	Black / Size 4	927	94
Mean		1102	112
Standard deviation		95.9	9.8