



TO: GOODMORNING.COM

FROM: BRAD SCHROEDER, P.ENG.
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DATE: February 21, 2025

RE: PHYSICAL MATTRESS TESTING

INTRODUCTION

GoodMorning.com has commissioned Techtree Engineering to provide independent 3rd party testing of multiple mattresses, based on an established testing schema prescribed by GoodMorning.com.

Techtree Engineering is an independent 3rd party engineering firm headquartered in Alberta, Canada, with a presence throughout the country.

The testing procedures are described briefly below, and in greater detail in document “TT-GM-01 – AppendixB”.

Sincerely,

Techtree Engineering Ltd.

Brad Schroeder, P.Eng.



TESTING METHODOLOGY

a. **Reference Loads** – The equipment used to perform the tests below is as follows:

1. 105 lb Rescue Randy mannequin
2. 65 lb weighted vest
3. Accelerometer
4. 10 lb medicine ball
5. Mattress testing base
6. Levels, tape measure – not shown



Rescue Randy, weighted vest, accelerometer, and mattress testing base (levels/tape measure not shown)

b. Test Conditions

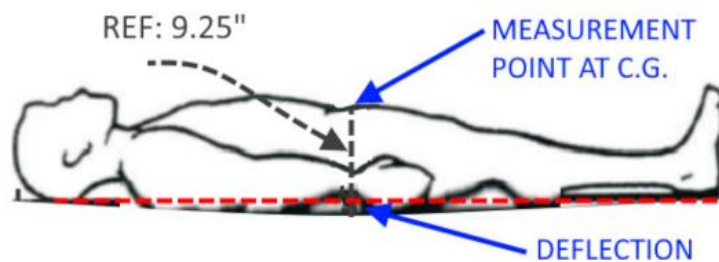
All tests were performed in offices equipped with thermostat-based temperature control, which maintains the environment within a specific range.



PART 1 - FIRMNESS TEST:

1. **Objective:** This test is conducted to assess the mattress's level of firmness, verifying that it adheres to the established criteria for comfort and support. This serves as a foundation for comparison, evaluation, and dialogue.
2. **Overview:** This test involves measuring the mattress's resistance to pressure by applying a human equivalent load and assessing its firmness level.
3. **Procedure:** A mannequin weighing 105 lb, outfitted with a weighted vest of 65 lb, was employed to assess the mattresses' deflection levels in comparison to a baseline measurement. These deflection readings help to ascertain the mattress's firmness, with greater deflection indicating a softer mattress.
4. **Formulas and calculations**

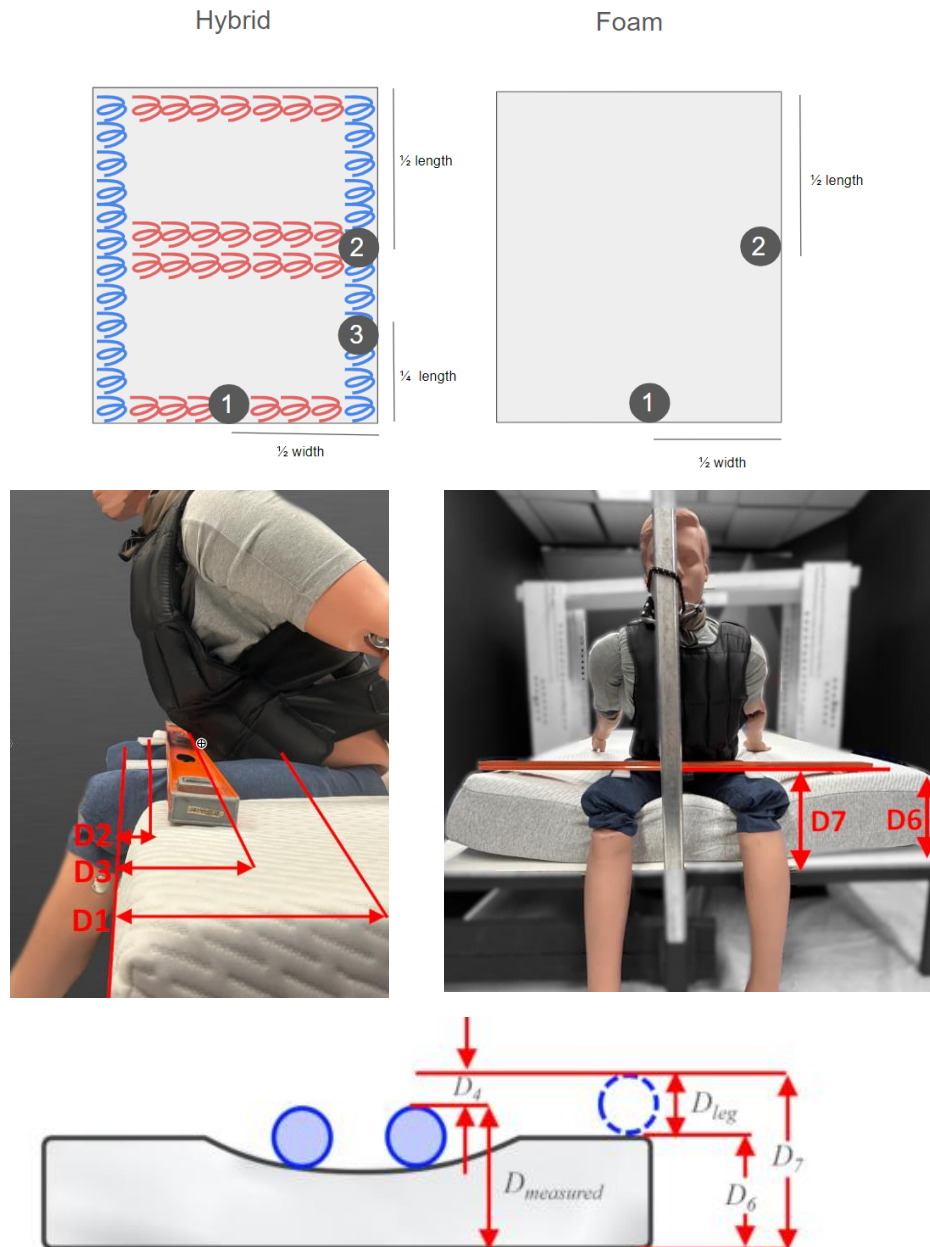
Deflection = Neutral measurement - (Deflected measurement + Mannequin thickness at the measurement point).





PART 2 EDGE SUPPORT TEST:

- Objective:** This test aims to assess the edge of the mattress's capability to retain structural integrity and comfort when subjected to pressure. It serves as a foundation for comparison, evaluation, and discussion.
- Overview:** This test involves measuring edge deflection by applying a human-equivalent load at various points along the mattress's perimeter, tailored to the specific type of mattress (hybrid or foam). Results are categorized and scored according to mattress type.
- Procedure:** The edge support of mattresses is evaluated by situating a 105 lb mannequin at the mattress's edge, equipped with a 65 lb weighted vest, and conducting measurements from the thighs down to a predetermined reference point. Multiple measurements are systematically recorded for each mattress as outlined in the following illustrations:





4. Formulas and calculations – all measurements are in inches

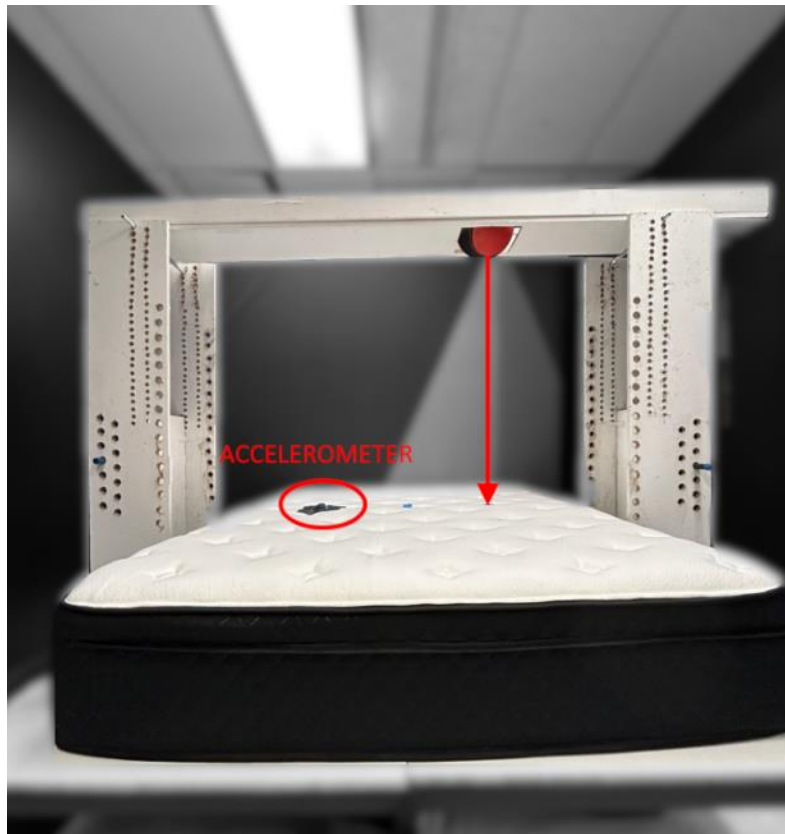
Constant values: $D1=17$; Leg thickness $D_{leg}=5.375$ at $D2$, $D_{leg}=6.375$ at $D3$

- Initial Setup and Measurements:
 - $D1$: Constant distance from the mattress edge to the center of mass of the mannequin.
 - $D2$: Horizontal reference point established by placing a level on the mannequin's knees.
 - $D3$: Alternate horizontal reference point, similar to $D2$.
 - $D6$: Mattress thickness.
 - $D7$: Distance from the top of the knees to the foundation base, indicating the height with no sinkage.
- Sinkage Measurement:
 - D measured: The distance from the top of the knees to the foundation base while the mannequin is seated, used to determine the sinkage.
- Deflection Calculations:
 - Deflection at the Knees $D4' = D7 - D$ measured.
 - Deflection at the Thigh $D4''$: Uses the same formula as $D4'$, calculated at a different point to capture the deflection at thigh level.
- Average Deflection:
 - $D4$: Average deflection value, obtained by averaging the two measurements ($D4'$ and $D4''$), provides a comprehensive assessment of the mattress edge support.
- Repeat Measurements and Final Calculations:
 - Measurements are repeated at various locations across the mattress according to the mattress type.
 - The average deflection value across all test points and for each mattress type: Hybrid and Foam, is determined, offering a metric for assessing overall edge support.



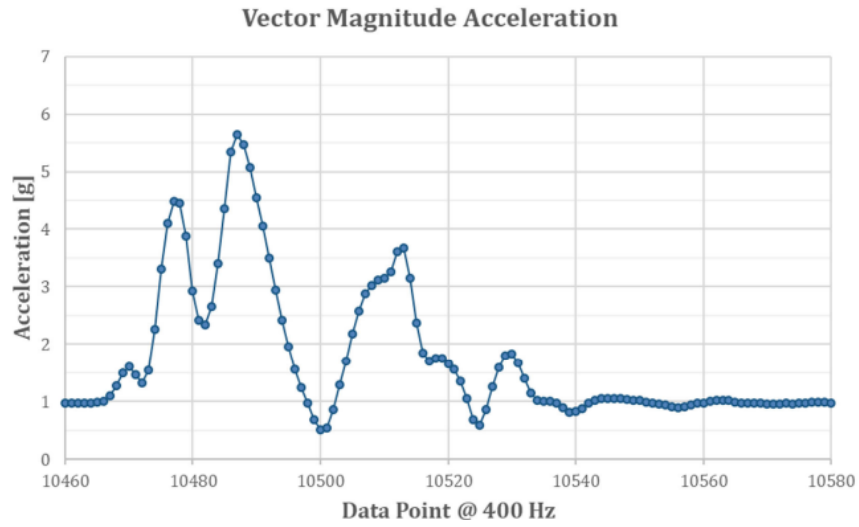
PART 3 – MOTION ISOLATION:

- 1. Objective:** This test aims to assess how much motion transfer is experienced on one side of the mattress from movement on the other.
- 2. Overview:** This test involves repeated drops of a medicine ball at a measured distance away from an accelerometer.
- 3. Procedure:** The motion isolation of mattresses is evaluated by dropping a medicine ball on a mattress 20 times, and recording the accelerations experienced by an accelerometer. The acceleration is three-dimensional: up-down, left-right, head-toe. These three values are combined into a magnitude acceleration and averaged across the 20 test drops.





4. Formulas and calculations



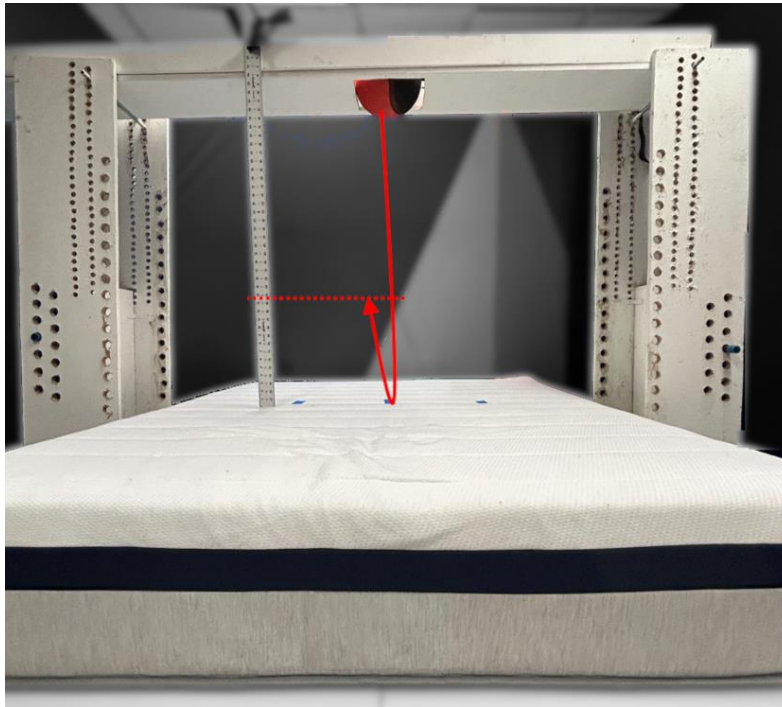
The vector magnitude of acceleration as shown above in is calculated using the expression shown below.

$$a = \sqrt{x^2 + y^2 + z^2}$$



PART 4 – BOUNCINESS:

1. **Objective:** This test aims to assess how much rebound a mattress exhibits to quantify its bounciness.
2. **Overview:** This test involves repeated drops of a medicine ball and recording the rebound height from the mattress surface.
3. **Procedure:** Drop a 10 lb sphere (9" diameter) from a fixed distance on to the top side of each subject mattress and measure the resultant peak rebound height on its first bounce. A high resultant peak rebound height shall indicate more bounciness, while a low resultant peak height shall indicate less bounciness.





FIRMNESS TEST RESULTS

Mattress Firmness Measurements (in inches): Foam & Foam/Latex

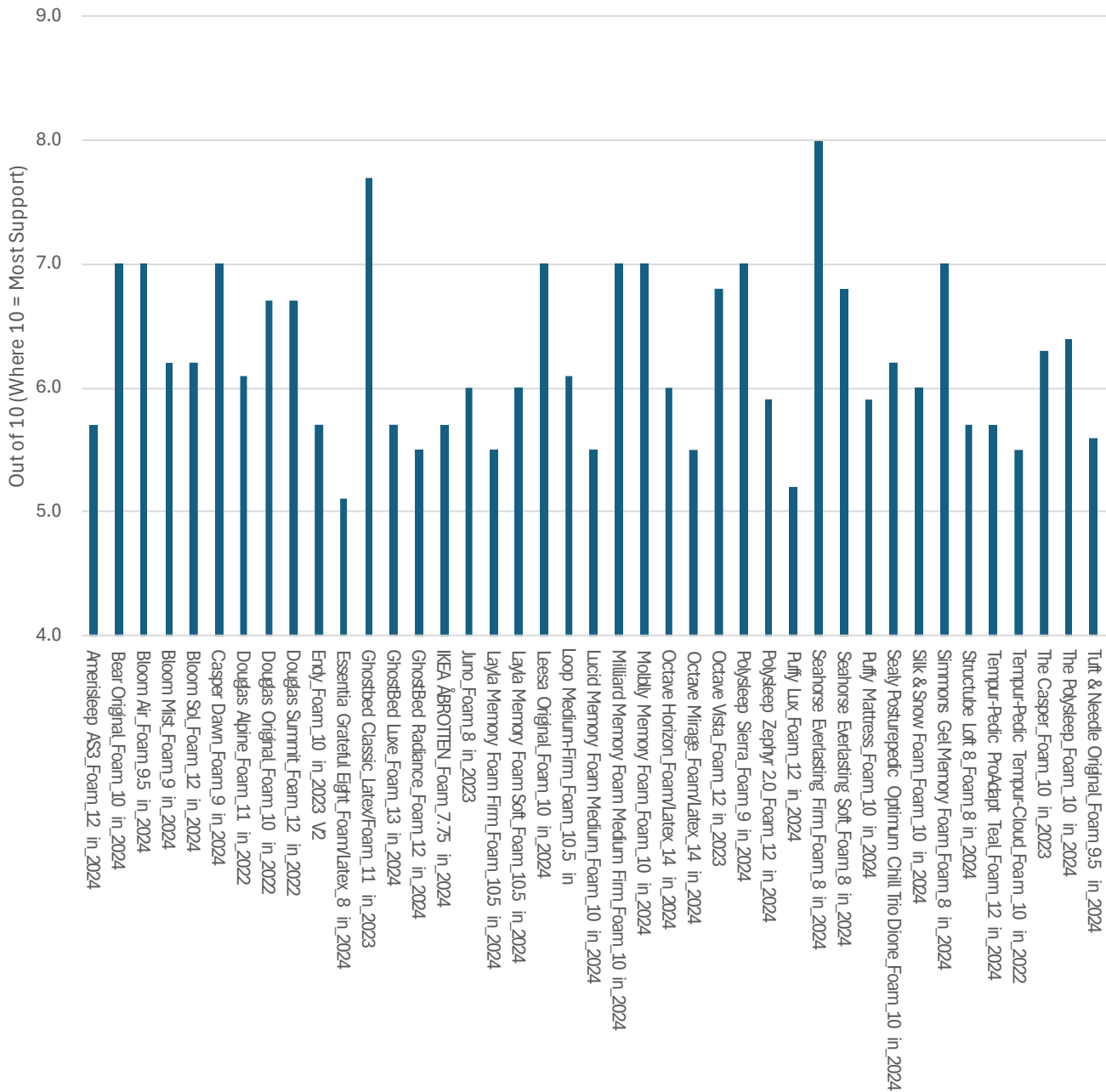
Mattress	Neutral Measurement (in)	Deflected Measurement (in)	Deflection (in)	Out of 10
Amerisleep AS3_Foam_12 in_2024	39.0	30.3	3.0	5.7
Bear Original_Foam_10 in_2024	41.5	31.5	1.8	7.0
Bloom Air_Foam_9.5 in_2024	41.0	31.0	1.8	7.0
Bloom Mist_Foam_9 in_2024	42.5	33.3	2.5	6.2
Bloom Sol_Foam_12 in_2024	38.0	28.8	2.5	6.2
Casper Dawn_Foam_9 in_2024	42.0	32.0	1.8	7.0
Douglas Alpine_Foam_11 in_2022	32.5	23.4	2.6	6.1
Douglas Original_Foam_10 in_2022	33.8	24.0	2.0	6.7
Douglas Summit_Foam_12 in_2022	31.8	22.0	2.0	6.7
Endy_Foam_10 in_2023 V2	33.5	24.8	3.0	5.7
Essentia Grateful Eight_Foam/Latex_8 in_2024	42.4	34.4	3.8	5.1
Ghostbed Classic_Latex/Foam_11 in_2023	33.5	22.8	1.0	7.7
GhostBed Luxe_Foam_13 in_2024	39.0	30.3	3.0	5.7
GhostBed Radiance_Foam_12 in_2024	37.8	29.3	3.3	5.5
IKEA ÅBROTTEF Foam_7.75 in_2024	45.8	37.0	3.0	5.7
Juno_Foam_8 in_2023	35.0	26.0	2.8	6.0
Layla Memory Foam Firm_Foam_10.5 in_2024	40.5	32.0	3.3	5.5
Layla Memory Foam Soft_Foam_10.5 in_2024	40.5	31.5	2.8	6.0
Leesa Original_Foam_10 in_2024	41.0	31.0	1.8	7.0
Loop Medium-Firm_Foam_10.5 in	39.8	30.6	2.6	6.1
Lucid Memory Foam Medium_Foam_10 in_2024	43.5	35.0	3.3	5.5
Milliard Memory Foam Medium Firm_Foam_10 in_2024	42.5	32.5	1.8	7.0
Molblly Memory Foam_Foam_10 in_2024	40.8	30.8	1.8	7.0
Octave Horizon_Foam/Latex_14 in_2024	30.8	21.8	2.8	6.0
Octave Mirage_Foam/Latex_14 in_2024	31.0	22.5	3.3	5.5
Octave Vista_Foam_12 in_2023	31.9	22.1	2.0	6.8
Polysleep Sierra_Foam_9 in_2024	43.8	33.8	1.8	7.0
Polysleep Zephyr 2.0_Foam_12 in_2024	41.3	32.4	2.9	5.9
Puffy Lux_Foam_12 in_2024	40.8	32.6	3.6	5.2
Seahorse Everlasting Firm_Foam_8 in_2024	41.0	30.0	0.8	8.0
Seahorse Everlasting Soft_Foam_8 in_2024	44.6	34.8	2.0	6.8
Puffy Mattress_Foam_10 in_2024	40.3	31.4	2.9	5.9
Sealy Posturepedic Optimum Chill Trio Dione_Foam_10 in_2024	40.3	31.0	2.5	6.2
Silk & Snow_Foam_Foam_10 in_2024	40.0	31.0	2.8	6.0
Simmons Gel Memory Foam_Foam_8 in_2024	44.5	34.5	1.8	7.0
Structube Loft 8_Foam_8 in_2024	44.3	35.5	3.0	5.7
Tempur-Pedic ProAdapt Teal_Foam_12 in_2024	40.8	32.0	3.0	5.7
Tempur-Pedic Tempur-Cloud_Foam_10 in_2022	33.7	25.3	3.3	5.5
The Casper_Foam_10 in_2023	33.3	23.9	2.4	6.3
The Polysleep_Foam_10 in_2024	40.5	31.0	2.3	6.4
Tuft & Needle Original_Foam_9.5 in_2024	40.5	31.9	3.1	5.6

**Mattress Firmness Measurements (in inches): Hybrid**

Mattress	Neutral Measurement (in)	Deflected Measurement (in)	Deflection (in)	Out of 10
Beautyrest Imperial Granite_Hybrid_12 in_2024	41.0	30.5	1.3	8.3
Bedstory Queen Mattress_Hybrid_12 in_2024	39.3	30.3	2.8	6.8
Casper Atlas_Hybrid_10 in_2024	41.8	33.0	3.0	6.5
Casper Nova_Hybrid_12 in_2023	31.8	23.8	3.7	5.9
Casper Snow_Hybrid_12 in_2024	38.5	30.5	3.8	5.9
Crystli Memory Foam Hybrid_Innerspring_10 in_2024	41.5	33.5	3.8	5.9
Dormeo One_Hybrid_11 in_2024	39.4	29.9	2.3	7.3
DreamCloud Premier_Hybrid_14 in_2024	40.0	30.3	2.0	7.5
Dreamstar Hilton_Hybrid_13 in_2024	37.3	28.5	3.0	6.5
Emma Hybrid Comfort_Hybrid_13 in_2024	38.4	28.4	1.8	7.8
Endy-Hybrid_Hybrid_13 in_2023	30.8	22.5	3.5	6.1
GhostBed Fusion_Hybrid_11 in_2024	40.3	31.5	3.0	6.5
Helix Midnight_Hybrid_11.5 in_2024	38.5	30.0	3.3	6.3
Hush Graph-Iced Hybrid_Hybrid_12 in_2024	41.0	32.8	3.5	6.1
IKEA Valevag_Hybrid_9.5 in_2024	40.5	31.6	2.9	6.7
Kingsdown Passions Beckingham_Hybrid_14.5 in_2024	39.5	30.0	2.3	7.3
Kingsdown Silent Partner Fairhaven_Hybrid_14 in_2022	29.4	20.8	3.1	6.4
Kingsdown Studio Acton_Hybrid_10 in_2024	40.4	31.5	2.9	6.7
Logan & Cove Choice_Hybrid_12 in_06/2024	37.0	27.9	2.6	6.9
Logan & Cove Frontier_Hybrid_13 in_2024	40.3	31.8	3.3	6.3
Logan & Cove Pinnacle_Hybrid_15 in_2024	34.6	26.5	3.6	6.0
Nolah Evolution Firm_Hybrid_15 in_2024	38.5	30.5	3.8	5.9
Purple Restore Hybrid Firm_Hybrid_11.5 in_2024	40.5	31.9	3.1	6.4
Original Hamuq Hybrid_Hybrid_13 in_2024	41.0	32.0	2.8	6.8
Saatva Classic Luxury Firm_Hybrid_11.5 in_2024	40.5	32.0	3.3	6.3
Sealy Posturepedic Hollycourt_Hybrid_14.25 in_2024	37.3	29.0	3.5	6.1
Serta iComfort Hybrid_Hybrid_14 in_2024	37.5	27.8	2.0	7.5
Serta Perfect Sleeper Elite Aero_Hybrid_10.5 in_2024	42.8	32.0	1.0	8.5
Serta Perfect Sleeper Elite Percevall_Hybrid_11.5 in_2024	40.0	30.2	2.0	7.6
Silk & Snow Hybrid_Hybrid_12 in_2024	40.0	31.0	2.8	6.8
Silk & Snow Organic Firm_Hybrid_10 in_2024	40.8	31.5	2.5	7.0
Silk & Snow Organic Medium_Hybrid_Firm_12 in_2024	40.5	31.6	2.9	6.7
Silk & Snow Organic Plush_Hybrid_14 in_2024	40.5	32.4	3.6	6.0
Simba 2500_Hybrid_12 in_2024	40.0	31.8	3.5	6.1
Spa Sensations_Innerspring_8 in_2024	42.8	33.5	2.5	7.0

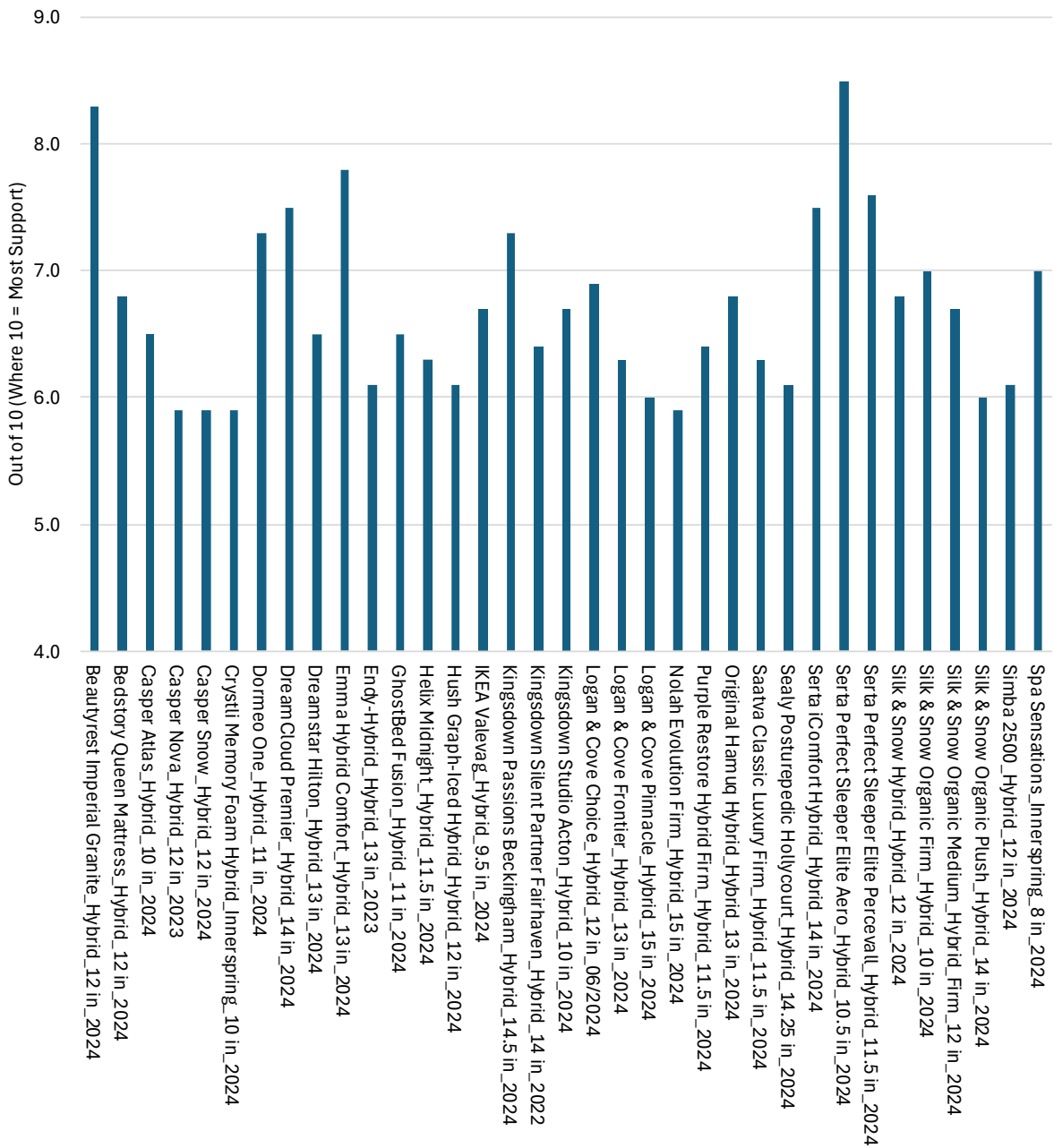


Firmness Out of 10: Foam & Foam/Latex





Firmness Out of 10: Hybrid





EDGE SUPPORT TEST RESULTS

Edge Support - Deflection Measurements (in inches): Foam & Foam/Latex

Mattress Name	D4 - Sinkage	D4 - Sinkage	D4 - Sinkage	D4 - Sinkage	Average Deflection	Out of 10
	Front [Location 1] @ D2	Front [Location 1] @ D3	Side [Location 2] @D2	Side [Location 2] @D3		
Amerisleep AS3_Foam_12 in_2024	4.6	5.3	5.6	6.3	5.5	6.8
Bear Original_Foam_10 in_2024	2.6	3.3	3.1	3.7	3.2	9.0
Bloom Air_Foam_9.5 in_2024	3.5	4.2	3.9	4.6	4.1	8.0
Bloom Cloud_Foam_10.5 in_2017*	-	-	-	-	-	5.7
Bloom Earth_Foam_8 in_2023*	-	-	-	-	-	8.2
Bloom Mist_Foam_9 in_2024	2.2	2.9	2.9	3.4	2.9	9.3
Bloom River_Foam_7 in_2023*	-	-	-	-	-	7.2
Bloom Sol_Foam_12 in_2024	4.8	5.6	5.0	5.7	5.3	6.8
Casper Dawn_Foam_9 in_2024	2.4	3.2	2.9	3.4	3.0	9.3
Douglas Alpine_Foam_11 in_2022	4.0	4.8	6.2	6.3	5.3	6.8
Douglas Original_Foam_10 in_2022	4.4	4.6	4.1	4.1	4.3	7.8
Douglas Summit_Foam_12 in_2022	3.4	4.3	5.3	5.9	4.7	7.5
Endy_Foam_10 in_2023 V2	4.7	5.5	4.3	5.0	4.9	7.3
Essentia Grateful Eight_Foam/Latex_8 in_2024	3.8	4.6	4.1	4.8	4.4	7.8
Ghostbed Classic_Latex/Foam_11 in_2023	2.8	3.4	3.4	2.5	3.0	9.0
GhostBed Luxe_Foam_13 in_2024	4.6	5.4	5.1	5.7	5.2	7.0
GhostBed Radiance_Foam_12 in_2024	5.9	6.5	5.3	6.1	5.9	6.3
IKEA ÅBROTTEIN_Foam_7.75 in_2024	2.4	3.1	2.8	3.4	2.9	9.3
Juno_Foam_8 in_2023	3.4	4.1	4.4	4.9	4.2	8.0
Layla Memory Foam Firm_Foam_10.5 in_2024	4.9	5.8	5.4	6.3	5.6	6.5
Layla Memory Foam Soft_Foam_10.5 in_2024	5.1	5.6	5.9	6.4	5.7	6.5
Leesa Original_Foam_10 in_2024	4.5	5.0	5.1	5.8	5.1	7.0
Loop Medium-Firm_Foam_10.5 in	4.4	5.1	5.8	6.5	5.4	6.8
Lucid Memory Foam Medium_Foam_10 in_2024	4.4	4.9	5.8	6.1	5.3	6.8
Milliard Memory Foam Medium Firm_Foam_10 in_2024	2.7	3.5	2.9	3.5	3.1	9.0
Molbilly Memory Foam_Foam_10 in_2024	2.5	3.4	2.9	3.6	3.1	9.0
Octave Horizon_Foam/Latex_14 in_2024	5.0	5.8	5.1	5.7	5.4	6.8
Octave Mirage_Foam/Latex_14 in_2024	5.2	6.1	5.1	5.6	5.5	6.8
Octave Vista_Foam_12 in_2023	3.5	4.2	5.5	5.5	4.7	7.5
Polysleep Sierra_Foam_9 in_2024	4.2	5.0	4.4	5.2	4.7	7.5
Polysleep Zephyr 2.0_Foam_12 in_2024	3.7	4.5	3.9	4.6	4.2	8.0
Puffy Lux_Foam_12 in_2024	3.7	4.5	4.3	5.1	4.4	7.8
Puffy Mattress_Foam_10 in_2024	4.5	4.8	5.1	5.9	5.1	7.0
Seahorse Everlasting Firm_Foam_8 in_2024	0.1	0.9	0.6	1.4	0.8	9.5
Seahorse Everlasting Soft_Foam_8 in_2024	0.7	1.5	1.1	1.8	1.3	9.5
Sealy Cocoon_Foam_8 in_2022*	-	-	-	-	-	8.9
Sealy Posturepedic Optimum Chill Trio Dione_Foam_10 in_2024	3.6	4.3	3.0	3.8	3.7	8.5
Serta iComfort TempActiv II_Foam_11 in_2023*	-	-	-	-	-	4.8
Silk & Snow Foam_Foam_10 in_2024	4.1	4.9	4.6	5.3	4.7	7.5
Simmons Gel Memory Foam_Foam_8 in_2024	3.3	4.1	3.9	4.6	4.0	8.3
Structube Loft 8_Foam_8 in_2024	3.5	4.2	3.4	4.0	3.8	8.3
Tempur-Pedic ProAdapt Teal_Foam_12 in_2024	4.1	4.9	4.1	4.9	4.5	7.5
Tempur-Pedic Tempur-Cloud_Foam_10 in_2022	2.5	3.1	4.2	4.9	3.7	8.5
The Casper_Foam_10 in_2023	4.5	4.8	4.2	4.6	4.6	7.5
The Polysleep_Foam_10 in_2024	2.6	3.2	3.1	3.6	3.2	9.0
Tuft & Needle Original_Foam_9.5 in_2024	4.7	5.5	4.6	5.3	5.0	7.3

*Disclaimer : Legacy data employed an older methodology than our current one. All data remains valid and is available upon request.

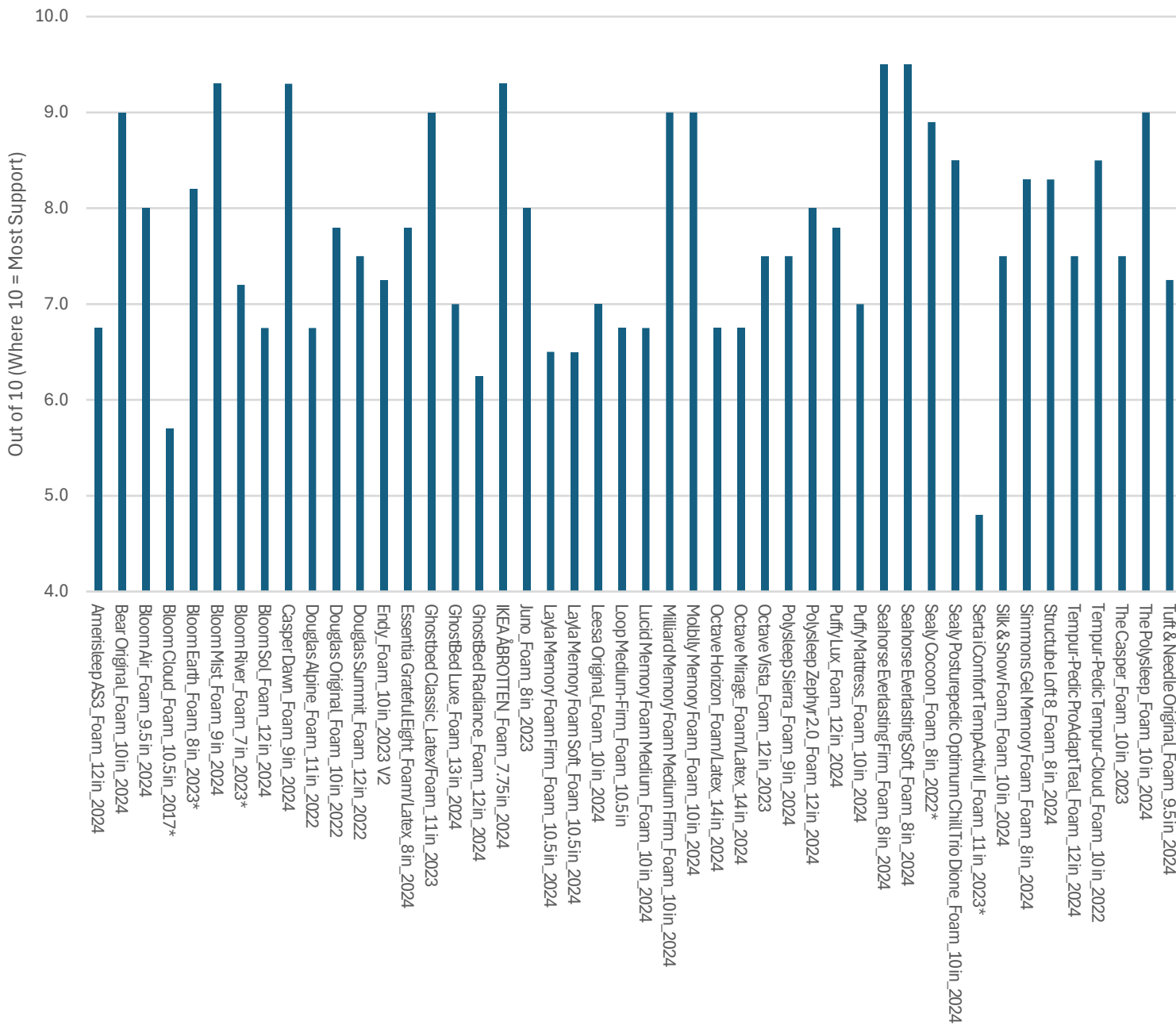
**Edge Support - Deflection Measurements (in inches): Hybrid**

Mattress Name	D4 - Sinkage Front [Location 1] @ D2	D4 - Sinkage Front [Location 1] @ D3	D4 - Sinkage Side [Location 2] @D2	D4 - Sinkage Side [Location 2] @D3	D4 - Sinkage Side [Location 3] @D2	D4 - Sinkage Side [Location 3] @D3	Average Deflection	Out of 10
Beautyrest Imperial Granite_Hybrid_12 in_2024	2.3	2.9	2.8	3.6	2.4	3.1	2.9	9.3
Bedstory Queen Mattress_Hybrid_12 in_2024	3.9	4.8	4.6	5.3	4.2	5.0	4.6	7.5
Casper Atlas_Hybrid_10 in_2024	3.9	4.7	4.4	5.1	4.0	4.8	4.5	7.8
Casper Nova_Hybrid_12 in_2023	5.1	5.4	5.6	6.1	5.3	6.1	5.6	6.5
Casper Snow_Hybrid_12 in_2024	5.4	6.3	5.3	6.0	4.8	5.6	5.5	6.5
Crystli Memory Foam Hybrid_Innerspring_10 in_2024	5.1	5.9	5.5	6.2	5.1	5.9	5.6	6.5
Dormeo One_Hybrid_11 in_2024	2.3	3.1	2.9	3.5	2.1	2.9	2.8	9.3
DreamCloud Premier_Hybrid_14 in_2024	4.3	5.2	4.9	5.7	4.5	5.4	5.0	7.3
Dreamstar Hilton_Hybrid_13 in_2024	4.5	5.3	5.1	6.0	4.4	5.2	5.1	7.0
Emma Hybrid Comfort_Hybrid_13 in_2024	4.5	5.3	4.5	5.3	4.1	4.9	4.8	7.3
Endy-Hybrid_Hybrid_13 in_2023	5.4	5.8	6.0	6.6	6.3	6.3	6.1	6.0
GhostBed Fusion_Hybrid_11 in_2024	3.4	4.2	4.1	4.9	3.8	4.6	4.2	8.0
Helix Midnight_Hybrid_11.5 in_2024	3.8	4.5	3.1	3.8	3.1	3.8	3.7	8.5
Hush Graph-Iced Hybrid_Hybrid_12 in_2024	5.7	6.0	5.2	6.0	5.7	6.4	5.8	6.3
IKEA Valevag_Hybrid_9.5 in_2024	3.4	4.2	3.6	4.4	0.0	0.0	3.9	8.3
Kingsdown Passions Beckingham_Hybrid_14.5 in_2024	3.6	4.5	4.1	4.9	3.6	4.5	4.2	8.0
Kingsdown Studio Acton_Hybrid_10 in_2024	1.9	2.6	2.4	3.1	2.1	2.9	2.5	9.7
Kingsdown Silent Partner Fairhaven_Hybrid_14 in_2022	4.4	4.8	5.1	5.3	4.8	6.0	5.1	7.0
Logan & Cove Choice_Hybrid_12 in_06/2024	4.0	4.7	4.4	5.1	4.1	4.9	4.5	7.5
Logan & Cove Frontier_Hybrid_13 in_2024	4.0	4.8	4.9	5.5	4.4	5.2	4.8	7.3
Logan & Cove Pinnacle_Hybrid_15 in_2024	5.4	6.1	6.1	6.7	5.8	6.5	6.1	6.0
Nolah Evolution Firm_Hybrid_15 in_2024	3.4	4.2	3.9	4.6	3.4	4.3	3.9	8.3
Purple Restore Hybrid Firm_Hybrid_11.5 in_2024	2.1	3.0	1.9	2.7	2.9	3.3	2.6	9.5
Original Hamuq Hybrid_Hybrid_13 in_2024	4.3	5.0	4.5	5.1	4.8	6.0	4.9	7.3
Saatva Classic Luxury Firm_Hybrid_11.5 in_2024	2.6	3.5	3.6	4.1	2.8	3.6	3.4	8.8
Sealy Posturepedic Hollycourt_Hybrid_14.25 in_2024	4.1	4.9	4.6	5.4	4.3	5.1	4.8	7.3
Serta iComfort Hybrid_Hybrid_14 in_2024	4.4	5.2	5.1	5.9	5.1	5.7	5.2	7.0
Serta Perfect Sleeper Elite Aero_Hybrid_10.5 in_2024	2.6	3.4	2.9	3.6	2.7	3.5	3.1	9.0
Serta Perfect Sleeper Elite Percevall_Hybrid_11.5 in_2024	1.7	2.6	2.8	3.5	2.4	3.2	2.7	9.5
Silk & Snow Hybrid_Hybrid_12 in_2024	4.6	5.4	5.1	5.9	4.9	5.6	5.3	6.8
Silk & Snow Organic Firm_Hybrid_10 in_2024	1.9	2.6	2.4	3.0	2.2	2.8	2.5	9.7
Silk & Snow Organic Medium_Hybrid_Firm_12 in_2024	3.6	4.4	4.0	4.6	3.8	4.3	4.1	8.0
Silk & Snow Organic Plush_Hybrid_14 in_2024	4.2	5.0	5.0	5.8	4.6	5.3	5.0	7.3
Simba 1500_Hybrid_10 in_2023*	-	-	-	-	-	-	-	8.1
Simba 2500_Hybrid_12 in_2024*	5.6	6.2	6.1	6.6	5.6	6.4	6.1	6.0
Simba 5000_Hybrid_14 in_2023	-	-	-	-	-	-	-	3.5
Spa Sensations_Innerspring_8 in_2024	3.4	4.0	3.9	4.4	4.1	4.7	4.1	8.0

*Disclaimer : Legacy data employed an older methodology than our current one. All data remains valid and is available upon request.

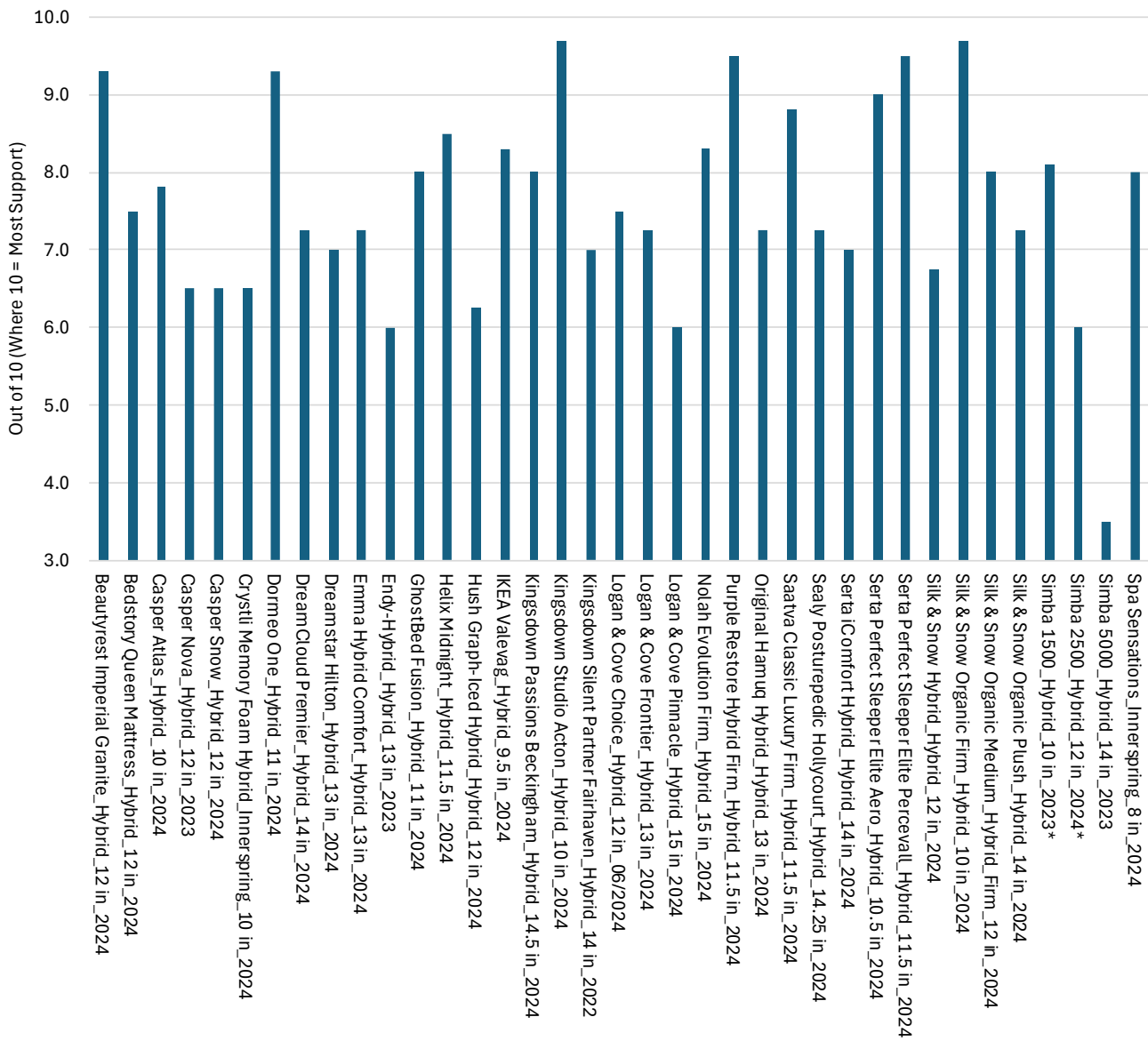


Edge Support Out of 10: Foam & Foam/Latex





Edge Support Out of 10: Hybrid





MOTION ISOLATION TEST RESULTS

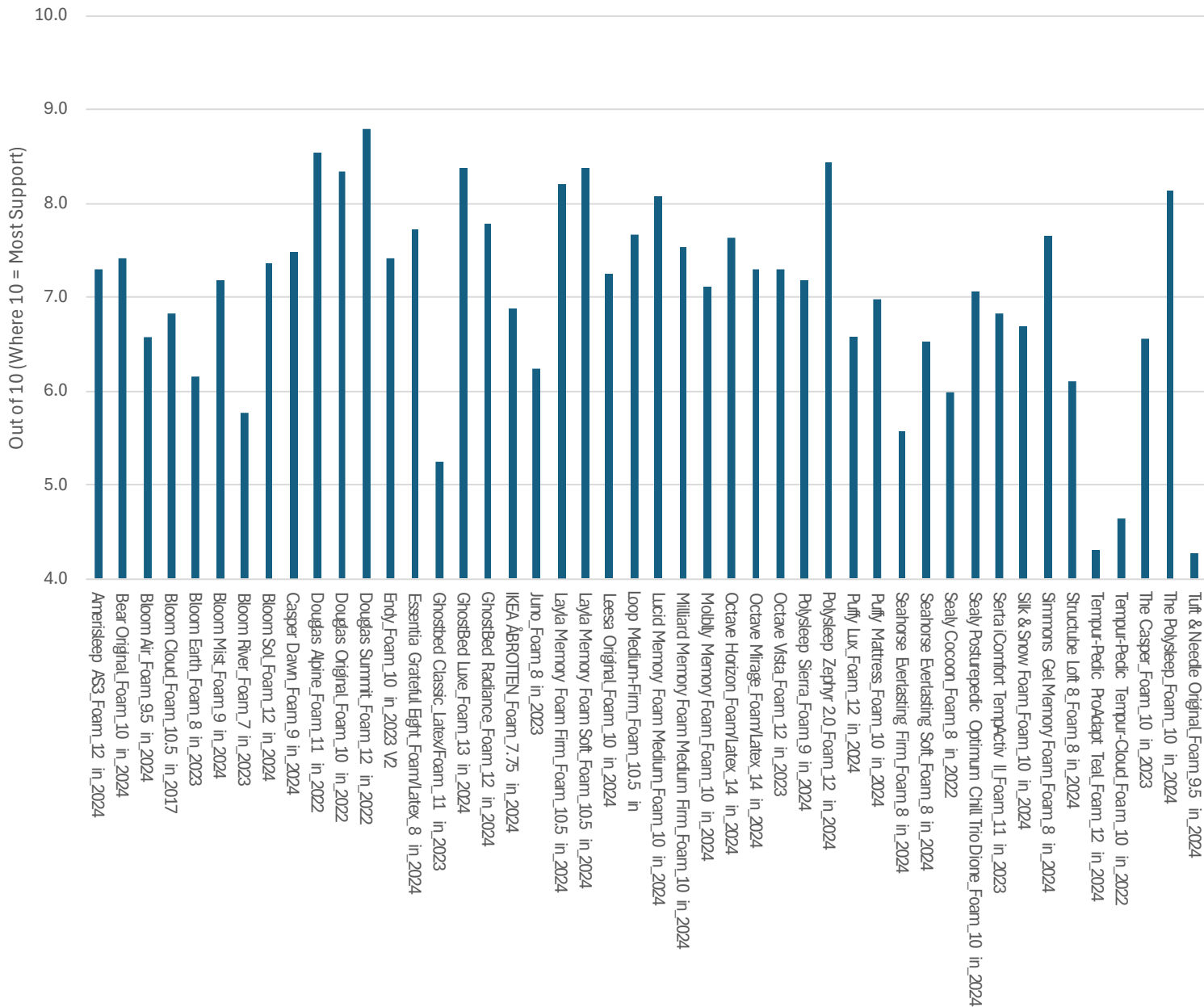
Motion Isolation: Foam & Foam/Latex		
Mattress	Average Peak Acceleration [g]	Out of 10
Amerisleep AS3_Foam_12 in_2024	4.5	7.3
Bear Original_Foam_10 in_2024	4.3	7.4
Bloom Air_Foam_9.5 in_2024	5.7	6.6
Bloom Cloud_Foam_10.5 in_2017	5.3	6.8
Bloom Earth_Foam_8 in_2023	6.4	6.2
Bloom Mist_Foam_9 in_2024	4.7	7.2
Bloom River_Foam_7 in_2023	7.1	5.8
Bloom Sol_Foam_12 in_2024	4.4	7.4
Casper Dawn_Foam_9 in_2024	4.2	7.5
Douglas Alpine_Foam_11 in_2022	2.4	8.5
Douglas Original_Foam_10 in_2022	2.8	8.3
Douglas Summit_Foam_12 in_2022	2.0	8.8
Endy_Foam_10 in_2023 V2	4.3	7.4
Essentia Grateful Eight_Foam/Latex_8 in_2024	3.8	7.7
Ghostbed Classic_Latex/Foam_11 in_2023	7.9	5.2
GhostBed Luxe_Foam_13 in_2024	2.7	8.4
GhostBed Radiance_Foam_12 in_2024	3.7	7.8
IKEA ÅBROTTEEN_Foam_7.75 in_2024	5.2	6.9
Juno_Foam_8 in_2023	6.3	6.2
Layla Memory Foam Firm_Foam_10.5 in_2024	3.0	8.2
Layla Memory Foam Soft_Foam_10.5 in_2024	2.7	8.4
Leesa Original_Foam_10 in_2024	4.6	7.2
Loop Medium-Firm_Foam_10.5 in	3.9	7.7
Lucid Memory Foam Medium_Foam_10 in_2024	3.2	8.1
Milliard Memory Foam Medium Firm_Foam_10 in_2024	4.1	7.5
Molbilly Memory Foam_Foam_10 in_2024	4.8	7.1
Octave Horizon_Foam/Latex_14 in_2024	3.9	7.6
Octave Mirage_Foam/Latex_14 in_2024	4.5	7.3
Octave Vista_Foam_12 in_2023	4.5	7.3
Polysleep Sierra_Foam_9 in_2024	4.7	7.2
Polysleep Zephyr 2.0_Foam_12 in_2024	2.6	8.4
Puffy Lux_Foam_12 in_2024	5.7	6.6
Puffy Mattress_Foam_10 in_2024	5.0	7.0
Seahorse Everlasting Firm_Foam_8 in_2024	7.4	5.6
Seahorse Everlasting Soft_Foam_8 in_2024	5.8	6.5
Sealy Cocoon_Foam_8 in_2022	6.7	6.0
Sealy Posturepedic Optimum Chill Trio Dione_Foam_10 in_2024	4.9	7.1
Serta iComfort TempActiv II_Foam_11 in_2023	5.3	6.8
Silk & Snow Foam_Foam_10 in_2024	5.5	6.7
Simmons Gel Memory Foam_Foam_8 in_2024	3.9	7.7
Structube Loft 8_Foam_8 in_2024	6.5	6.1
Tempur-Pedic ProAdapt Teal_Foam_12 in_2024	9.5	4.3
Tempur-Pedic Tempur-Cloud_Foam_10 in_2022	8.9	4.6
The Casper_Foam_10 in_2023	5.7	6.6
The Polysleep_Foam_10 in_2024	3.1	8.1
Tuft & Needle Original_Foam_9.5 in_2024	9.5	4.3

**Motion Isolation: Hybrid**

Mattress	Average Peak Acceleration [g]	Out of 10
Beautyrest Imperial Granite_Hybrid_12 in_2024	5.0	7.0
Bedstory Queen Mattress_Hybrid_12 in_2024	4.3	7.4
Casper Atlas_Hybrid_10 in_2024	3.4	8.0
Casper Snow_Hybrid_12 in_2024	3.6	7.9
Crystli Memory Foam Hybrid_Innerspring_10 in_2024	4.4	7.4
Dormeo One_Hybrid_11 in_2024	4.7	7.2
DreamCloud Premier_Hybrid_14 in_2024	4.0	7.6
Dreamstar Hilton_Hybrid_13 in_2024	5.6	6.6
Emma Hybrid Comfort_Hybrid_13 in_2024	5.5	6.7
Endy-Hybrid_Hybrid_13 in_2023	4.8	7.2
GhostBed Fusion_Hybrid_11 in_2024	4.2	7.5
Helix Midnight_Hybrid_11.5 in_2024	3.5	7.9
Hush Graph-Iced Hybrid_Hybrid_12 in_2024	3.3	8.0
IKEA Valevag_Hybrid_9.5 in_2024	4.4	7.4
Kingsdown Passions Beckingham_Hybrid_14.5 in_2024	4.3	7.4
Kingsdown Silent Partner Fairhaven_Hybrid_14 in_2022	7.8	5.3
Kingsdown Studio Acton_Hybrid_10 in_2024	4.9	7.1
Logan & Cove Choice_Hybrid_12 in_06/2024	4.1	7.5
Logan & Cove Frontier_Hybrid_13 in_2024	5.0	7.0
Logan & Cove Pinnacle_Hybrid_15 in_2024	7.5	5.5
Nolah Evolution Firm_Hybrid_15 in_2024	7.2	5.7
Original Hamuq Hybrid_Hybrid_13 in_2024	3.3	8.0
Purple Restore Hybrid Firm_Hybrid_11.5 in_2024	4.2	7.5
Saatva Classic Luxury Firm_Hybrid_11.5 in_2024	6.0	6.4
Sealy Posturepedic Hollycourt_Hybrid_14.25 in_2024	6.5	6.1
Serta iComfort Hybrid_Hybrid_14 in_2024	3.8	7.7
Serta Perfect Sleeper Elite Aero_Hybrid_10.5 in_2024	5.7	6.6
Serta Perfect Sleeper Elite Percevall_Hybrid_11.5 in_2024	6.1	6.3
Silk & Snow Hybrid_Hybrid_12 in_2024	3.5	7.9
Silk & Snow Organic Firm_Hybrid_10 in_2024	4.4	7.4
Silk & Snow Organic Medium_Hybrid_Firm_12 in_2024	4.1	7.5
Silk & Snow Organic Plush_Hybrid_14 in_2024	4.3	7.4
Simba 1500_Hybrid_10 in_2023	4.1	7.5
Simba 2500_Hybrid_12 in_2024	3.9	7.7
Simba 5000_Hybrid_14 in_2023	4.3	7.4
Spa Sensations_Innerspring_8 in_2024	4.9	7.1

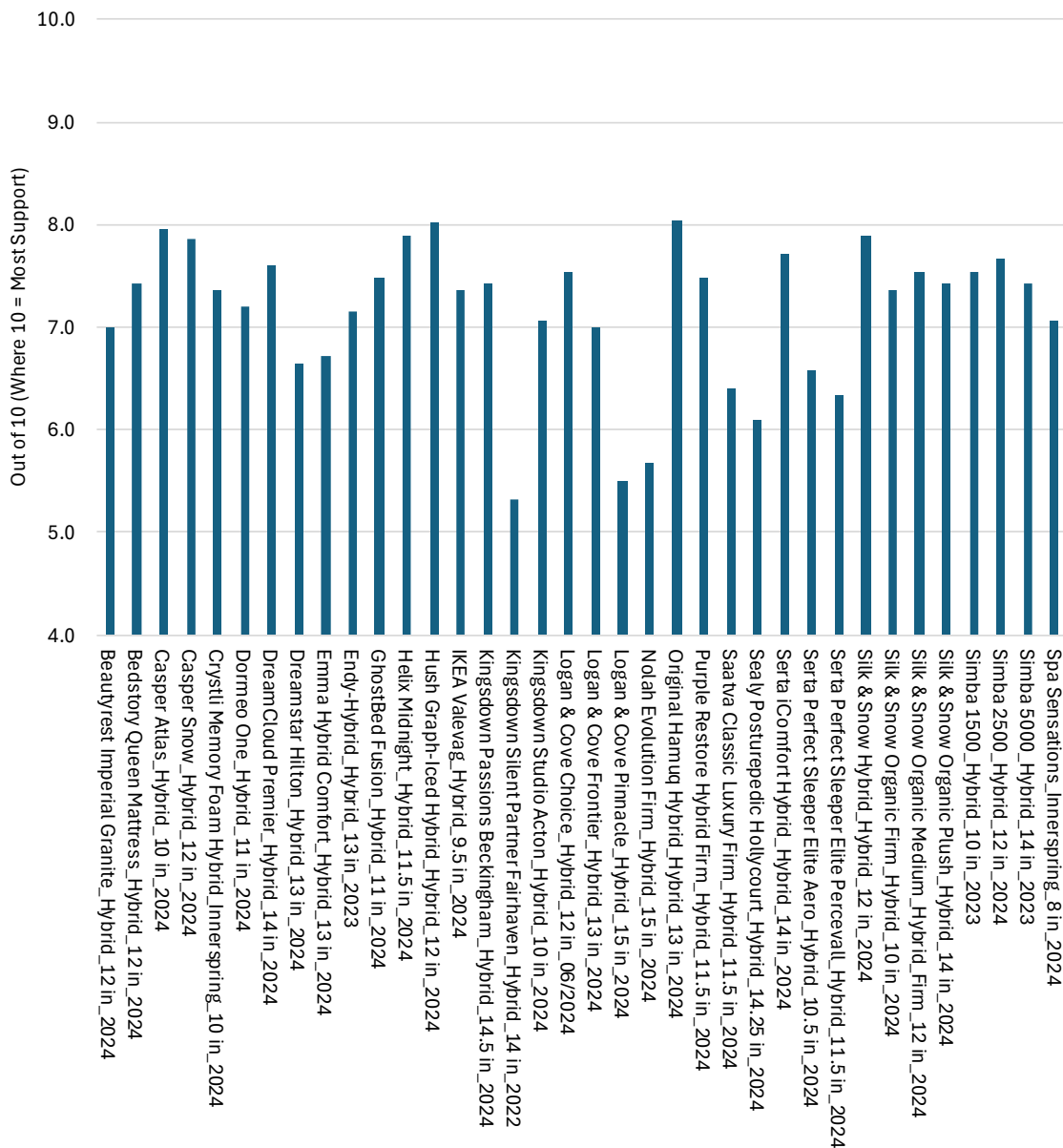


Motion Isolation Out of 10: Foam & Foam/Latex





Motion Isolation Out of 10: Hybrid





REBOUND HEIGHT TEST RESULTS

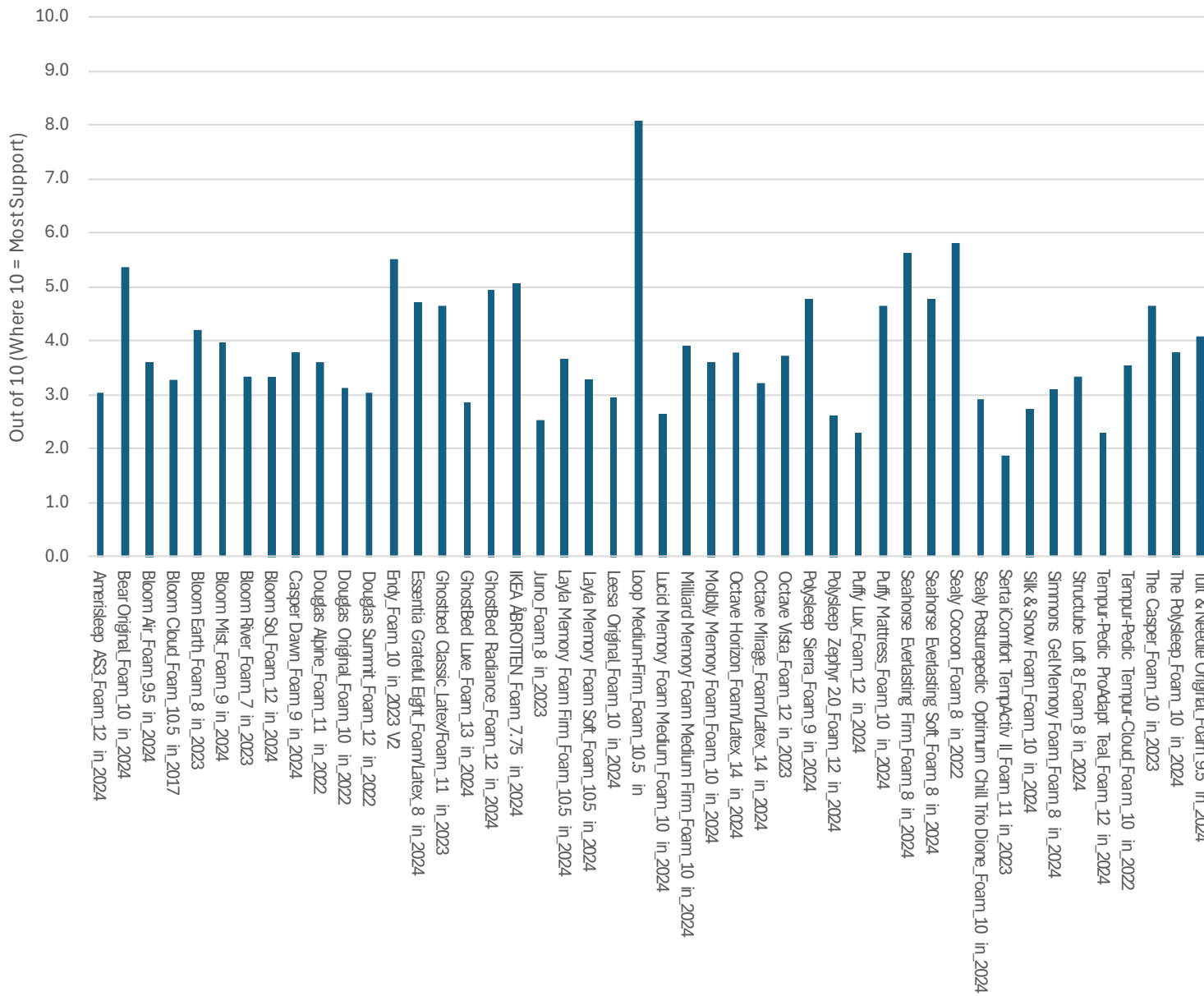
Bounciness: Foam & Foam/Latex					
Mattress	Rebound	Rebound	Rebound	Rebound	Out of 10
	Height Run 1, [in]	Height Run 2, [in]	Height Run 3, [in]	Height Average, [in]	
Amerisleep AS3_Foam_12 in_2024	3.5	3.2	3.8	3.5	3.0
Bear Original_Foam_10 in_2024	7.5	7.8	7.2	7.5	5.4
Bloom Air_Foam_9.5 in_2024	4.5	4.8	4.2	4.5	3.6
Bloom Cloud_Foam_10.5 in_2017	3.6	4.0	4.2	3.9	3.3
Bloom Earth_Foam_8 in_2023	5.5	5.4	5.6	5.5	4.2
Bloom Mist_Foam_9 in_2024	5.1	5.3	4.9	5.1	4.0
Bloom River_Foam_7 in_2023	3.8	4.0	4.2	4.0	3.3
Bloom Sol_Foam_12 in_2024	4.0	4.3	3.7	4.0	3.3
Casper Dawn_Foam_9 in_2024	4.8	4.6	5.0	4.8	3.8
Douglas Alpine_Foam_11 in_2022	4.5	4.3	4.7	4.5	3.6
Douglas Original_Foam_10 in_2022	3.8	3.8	3.5	3.7	3.1
Douglas Summit_Foam_12 in_2022	3.5	3.3	3.7	3.5	3.0
Endy_Foam_10 in_2023 V2	7.8	8.0	7.6	7.8	5.5
Essentia Grateful Eight_Foam/Latex_8 in_2024	6.4	6.6	6.2	6.4	4.7
Ghostbed Classic_Latex/Foam_11 in_2023	6.3	6.5	6.1	6.3	4.6
GhostBed Luxe_Foam_13 in_2024	3.2	3.4	3.0	3.2	2.9
GhostBed Radiance_Foam_12 in_2024	6.8	7.0	6.6	6.8	4.9
IKEA ÅBROTTEEN_Foam_7.75 in_2024	7.0	7.3	6.7	7.0	5.1
Juno_Foam_8 in_2023	2.6	2.6	2.6	2.6	2.5
Layla Memory Foam Firm_Foam_10.5 in_2024	4.5	4.5	4.8	4.6	3.7
Layla Memory Foam Soft_Foam_10.5 in_2024	4.0	3.8	4.0	3.9	3.3
Leesa Original_Foam_10 in_2024	3.3	3.5	3.4	3.4	3.0
Loop Medium-Firm_Foam_10.5 in	12.2	12.5	11.9	12.2	8.1
Lucid Memory Foam Medium_Foam_10 in_2024	2.5	3.0	3.0	2.8	2.6
Milliard Memory Foam Medium Firm_Foam_10 in_2024	5.0	5.2	4.8	5.0	3.9
Molblly Memory Foam_Foam_10 in_2024	4.5	4.8	4.2	4.5	3.6
Octave Horizon_Foam/Latex_14 in_2024	5.0	4.8	4.6	4.8	3.8
Octave Mirage_Foam/Latex_14 in_2024	3.8	3.6	4.0	3.8	3.2
Octave Vista_Foam_12 in_2023	4.7	4.5	4.9	4.7	3.7
Polysleep Sierra_Foam_9 in_2024	6.5	6.8	6.2	6.5	4.8
Polysleep Zephyr 2.0_Foam_12 in_2024	2.8	2.5	3.1	2.8	2.6
Puffy Lux_Foam_12 in_2024	2.2	2.0	2.4	2.2	2.3
Puffy Mattress_Foam_10 in_2024	6.3	6.0	6.6	6.3	4.7
Seahorse Everlasting Firm_Foam_8 in_2024	7.9	8.0	8.1	8.0	5.6
Seahorse Everlasting Soft_Foam_8 in_2024	6.5	6.8	6.2	6.5	4.8
Sealy Cocoon_Foam_8 in_2022	8.0	8.0	8.0	8.0	5.8
Sealy Posturepedic Optimum Chill Trio Dione_Foam_10 in_2024	3.3	3.6	3.0	3.3	2.9
Serta iComfort TempActiv II_Foam_11 in_2023	1.5	1.7	1.3	1.5	1.9
Silk & Snow Foam_Foam_10 in_2024	3.0	3.3	2.7	3.0	2.7
Simmons Gel Memory Foam_Foam_8 in_2024	3.6	3.3	3.9	3.6	3.1
Structube Loft 8_Foam_8 in_2024	3.9	4.0	4.1	4.0	3.3
Tempur-Pedic ProAdapt Teal_Foam_12 in_2024	2.3	2.5	1.9	2.2	2.3
Tempur-Pedic Tempur-Cloud_Foam_10 in_2022	4.4	4.6	4.2	4.4	3.6
The Casper_Foam_10 in_2023	6.3	6.1	6.5	6.3	4.7
The Polysleep_Foam_10 in_2024	4.8	5.0	4.6	4.8	3.8
Tuft & Needle Original_Foam_9.5 in_2024	5.3	5.0	5.6	5.3	4.1

**Bounciness: Hybrid**

Mattress	Rebound	Rebound	Rebound	Rebound	Out of 10
	Height Run 1, [in]	Height Run 2, [in]	Height Run 3, [in]	Height Average, [in]	
Beautyrest Imperial Granite_Hybrid_12 in_2024	12.5	12.8	13.1	12.8	8.4
Bedstory Queen Mattress_Hybrid_12 in_2024	9.5	9.8	9.2	9.5	6.5
Casper Atlas_Hybrid_10 in_2024	10.0	9.6	10.4	10.0	6.8
Casper Snow_Hybrid_12 in_2024	3.5	3.8	3.2	3.5	3.0
Crystli Memory Foam Hybrid_Innerspring_10 in_2024	11.3	11.5	11.1	11.3	7.6
Dormeo One_Hybrid_11 in_2024	7.8	7.6	8.0	7.8	5.5
DreamCloud Premier_Hybrid_14 in_2024	7.3	7.5	7.1	7.3	5.2
Dreamstar Hilton_Hybrid_13 in_2024	10.3	10.5	9.9	10.2	6.9
Emma Hybrid Comfort_Hybrid_13 in_2024	7.2	6.9	7.5	7.2	5.2
Endy-Hybrid_Hybrid_13 in_2023	7.5	7.3	7.7	7.5	5.4
GhostBed Fusion_Hybrid_11 in_2024	8.7	8.4	9.0	8.7	6.1
Helix Midnight_Hybrid_11.5 in_2024	6.9	7.1	7.3	7.1	5.1
Hush Graph-Iced Hybrid_Hybrid_12 in_2024	5.4	5.3	5.3	5.3	4.1
IKEA Valevag_Hybrid_9.5 in_2024	3.0	3.3	2.7	3.0	2.7
Kingsdown Passions Beckingham_Hybrid_14.5 in_2024	8.0	8.1	7.9	8.0	5.6
Kingsdown Silent Partner Fairhaven_Hybrid_14 in_2022	8.8	9.0	8.6	8.8	6.1
Kingsdown Studio Acton_Hybrid_10 in_2024	13.3	13.6	13.0	13.3	8.7
Logan & Cove Choice_Hybrid_12 in_06/2024	8.2	8.0	8.4	8.2	5.8
Logan & Cove Frontier_Hybrid_13 in_2024	6.5	6.7	6.3	6.5	4.8
Logan & Cove Pinnacle_Hybrid_15 in_2024	7.3	7.0	6.7	7.0	5.1
Nolah Evolution Firm_Hybrid_15 in_2024	8.0	8.2	7.8	8.0	5.6
Original Hamuq Hybrid_Hybrid_13 in_2024	9.4	9.6	9.2	9.4	6.5
Purple Restore Hybrid Firm_Hybrid_11.5 in_2024	12.0	11.8	11.6	11.8	7.8
Saatva Classic Luxury Firm_Hybrid_11.5 in_2024	12.6	12.9	12.3	12.6	8.3
Sealy Posturepedic Hollycourt_Hybrid_14.25 in_2024	10.2	10.0	10.4	10.2	6.9
Serta iComfort Hybrid_Hybrid_14 in_2024	8.3	8.1	7.9	8.1	5.7
Serta Perfect Sleeper Elite Aero_Hybrid_10.5 in_2024	13.0	12.5	13.5	13.0	8.5
Serta Perfect Sleeper Elite Percevall_Hybrid_11.5 in_2024	11.8	12.0	11.6	11.8	7.8
Silk & Snow Hybrid_Hybrid_12 in_2024	5.0	5.3	4.7	5.0	3.9
Silk & Snow Organic Firm_Hybrid_10 in_2024	11.5	12.0	11.0	11.5	7.7
Silk & Snow Organic Medium_Hybrid_Firm_12 in_2024	10.8	12.1	10.5	11.1	7.5
Silk & Snow Organic Plush_Hybrid_14 in_2024	6.5	6.8	6.2	6.5	4.8
Simba 1500_Hybrid_10 in_2023	5.1	5.3	4.9	5.1	4.0
Simba 2500_Hybrid_12 in_2024	5.0	5.3	4.7	5.0	3.9
Simba 5000_Hybrid_14 in_2023	4.4	4.2	4.6	4.4	3.6
Spa Sensations_Innerspring_8 in_2024	18.0	18.5	17.5	18.0	10.0



Bounciness Out of 10: Foam & Foam/Latex





Bounciness Out of 10: Hybrid

