

Rigorous testing of Multifit Bed Rails ensures your rail lasts the distance and complies with current standards.



Measuring the opening sizes to see that the distance between the upright tubes is more than 250 mm.



Here Jim is inserting a cone of specific size and shape into the gap between the bars of the Safety rail.



A test for stability and strength. This rail is being pulled across the bed with a force of 500 new tons. That's approx equal to the force required to lift 50 KG.



A test for stability and strength. This rail is being pulled out from the bed with a force of 500 new tons. That's approx equal to the force required to lift 50 KG.



Here downward pressure of 750 Newton's is put on the end of the rail. That's approx equal to the force required to lift 75KG.



Here lateral force of 50 Newton's is pulled from the side of the rail. That's approx equal to the force required to lift 50KG.

CERTIFICATE OF TEST

Report Number 15569/1 strength & stability of MultiEt bed rails.

TEST DATE 17/2/07

A Issued by
 Jim Saunders, (Technician)
 MATERIALS & TESTING LABORATORIES LTD.
 172A MAUNA ROAD
 Mt Wellington
 Auckland PH 09 5790262

B Client / Request for Test
 1 WAGNE MANNON OF MultiEt Hospital Supplies Ltd P.O. Box 748
 Whakatane, requested that MATERIALS & TESTING LABORATORIES
 test their bed rails (LOAD TEST)

C Reference: MultiEt BED RAILS.

D TEST METHOD BASED ON

① British Standards BS EN 170 / 2000

S.4.12 TEST METHOD FOR THE STRENGTH AND RIGIDITY OF 308
 RAILS & GRAB HANDLES.

Refer Test Results for Applied Loads & Load Directions.

E Sample Furnishings

BED USED: BEDS 2 US, SLEEPHEAD Single, chiropractic Junior
 Mattress Dimensions: Depth 250mm / Width 900mm / Length 2030.

F Test Equipment used

Spring Scale

Hydraulic Ram / Gauge Set Serial No 34399/15

G Results

Code	Applied Downforce Direction 750 (N)	Inward Direction 300 (N)	Outward Direction 300 (N)	Horizontal Direction 300 (N)
MF3 / 1 TW	No Failure observed	No Failure observed	No Failure observed	No Failure observed

* Type Tested MF3/1TW at clients request to cover Models MF3/1WB MF3/1ST

Code	Downforce Direction	Inward Direction 300 (N)	Outward Direction 300 (N)	Horizontal Direction 300 (N)
MF3 / 1	NOT TESTED	No Failure observed	No Failure observed	No Failure observed

* Type Tested MF3/1 at clients request to cover Models MF3/D MF3/IS

Code	Downforce Direction 350 (N)	Inward Direction 350 (N)	Outward Direction 350 (N)	Horizontal Direction 350 (N)
MF3 / 1 WT	NOT TESTED	No Failure observed	No Failure observed	No Failure observed

Uses of a Bed Lever

Bed levers or bed grab handles as they are sometimes called are used in the following ways :

- 1/. To assist in transferring on and off a bed
- 2/. To assist with sitting up in bed
- 3/. To assist in repositioning or rolling over in bed.
- 4/. Occasionally a person might fall in the bedroom and the rail could be used to assist a person to stand.

How the maximum user weight was calculated.

A 95 kg person was asked to use the bed lever in the ways described above. The load imposed on the bed lever was measured with a set of Camry scales. The maximum load imposed by a 95kg person onto the bedrail was 22kg.

$22\text{kg load} / 95 \text{ kg person} = .242\text{kg of load per } 1 \text{ kg of person} \times 150\text{kg max user weight} = 34.73\text{kg}$

This calculation shows that a 150kg person would impose a load 34.73 kg onto the bed lever.

Maximum user 150Kg

Our tests on the previous page show our bed levers passing load tests of 35N or 35kg without showing any signs of failure.

Therefore we have set the Maximum user limit on the bed lever at 150Kg