

**TEST CERTIFICATE No.: 5101888701**

Client:	Manfred Frank Systems Ltd
Order No.:	TBA
Sample Description:	Manfred Frank Micro Master Hinge
Identification:	Manfred Frank Patent
Material Specification:	Stainless Steel
Tested in accordance with:	Load Test Simulating requirements for Display Case Doors of Mercedes Museum

Scope: Two Micro Master hinges such as the one pictured were used as bottom and top hinges to support a test frame which simulated the display doors at the Mercedes Museum Stuttgart

Details are: Door height 4060mm  
 Door Width: 1365 mm  
 Door Weight : 223Kg

Micro Master



The vertical distance between hinges was 3912mm  
 A Safety Factor on weight of 2.5 was applied  
 A weight of 572 Kg was applied vertically at a horizontal distance from the hinge of a half door panel width: i.e. 661.5mm. The frame components also weighed 99Kg so the required loading was exceeded which makes this a conservative test  
 The height adjusters were adjusted to share load equally between the two hinges  
 The "door" was swung back and forwards ninety degrees under load  
 Load was applied for more than 5 minutes  
 The hinges were inspected after loading for damage

Findings:  
 We found no damage to the hinge



Bottom Hinge

Weights Were measured with SGS Asset 5142 Calibrated 13/2/05  
 Testing Carried out at Manfred Frank Systems East Tamaki Auckland

Test Rig

Acceptance Criteria:	No damage under the required loading		
Tested by:	Dr. D. L. Holt	Date:	May 2: 2005
Checked by:	Dean Currie	Date:	May 2 2005

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Samples will be retained for two (2) weeks after test date before disposal at SGS New Zealand Limit's discretion. Returning of samples to be advised in writing. Storage (when agreed by SGS New Zealand Limited) or return of samples at client's expense.