

<b>Prüfbericht-Nr.:</b> <i>Test Report No.:</i>	<b>174059135/GZF/01-01a.rev.02</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	174059135	Seite 1 von 6 Page 1 of 6
<b>Kunden-Referenz-Nr.:</b> <i>Client Reference No.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date:</i>	02.12.2016	
<b>Auftraggeber:</b> <i>Client:</i>	HAINAN UNIHOPPER HARDWARE CO.,LTD / ROOM 11C , 11FLOOR , ZHENGHAO PLAZA , NO.59 , GUOMAO ROAD , HAIKOU CITY , HAINAN			
<b>Prüfgegenstand:</b> <i>Test item:</i>	Gas Hinge			
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	Gas Hinge # HG1112			
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	Mechanical & Physical Testing & Salt Spray Test			
<b>Prüfgrundlage:</b> <i>Test specification:</i>	EN 15570:2008 & ISO 9227 EN 15570:2008 Clause 6.3.7_Durability (Level 2) &ISO 9227_5% salt spray test_48 hours			
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	02.12.2016			
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	A000444557-001~004			
<b>Prüfzeitraum:</b> <i>Testing period:</i>	02.12.2016 – 10.01.2017			
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	Unit 201, NO.7 Caipin Road, Guang-zhou, P.R. China			
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.			
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass			
<b>geprüft von / tested by:</b>	<i>Johnny Liu</i>	<b>kontrolliert von / reviewed by:</b>	<i>Kingsley He</i>	
10.01.2017 Johnny Liu / Engineer		10.01.2017 Kingsley He / Reviewer		
<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name / Stellung</b> <i>Name / Position</i>
				<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges / Other:</b>	The Salt Spray Test result is provided to client for their own analysis.			
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut 3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good 3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b>  <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>				

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**Produktbeschreibung**  
**Product description**

1	<b>Produktdetails</b> <i>Product details</i>	Gas Hinge
2	<b>Maße / Gewicht</b> <i>Dimensions / Weight</i>	Size: L117 X W66 X H26mm Weight: 114g
3	<b>Bedienelemente</b> <i>Operating elements</i>	Hinge with damper
4	<b>Ausstattung / Zubehör</b> <i>Equipment / Accessories</i>	N/A
5	<b>Verwendete Materialien</b> <i>Used materials</i>	Metal
6	<b>Sonstiges</b> <i>Other</i>	Test door type: B (700 X 600 X 19mm) Test door weight: 5.24kg

Pic. 1: Overview of hinge



Pic. 2: Overview of hinge



Pic . 3 Overview of door for test



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Absatz	EN 15570:2008 & ISO 9227	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

**EN 15570: 2008** Hardware for furniture – Strength and durability of hinges and their components – Hinges pivoting on a vertical axis

<b>1</b>	<b>Scope</b>		
<b>2</b>	<b>Normative references</b>		
<b>3</b>	<b>Terms and definitions</b>		
<b>4</b>	<b>General test conditions</b>		
<b>5</b>	<b>Test apparatus</b>		
<b>6</b>	<b>Test methods and requirements</b>		
6.1	General		/
6.2	Overload tests		/
6.2.1	Vertical static overload		N/T
6.2.2	Horizontal static overload		N/T
6.3	Functional tests	Test parameter see Annex B	/
6.3.1	General		
6.3.2	Operating forces		/
6.3.2.1	General		
6.3.2.2	Closing force, hinges with self-closing mechanisms (≥ 0,5 N)		N/T
6.3.2.3	Opening and closing forces (< 20 N)		N/T
6.3.3	1 <sup>st</sup> vertical static load test		N/T
6.3.4	1 <sup>st</sup> horizontal static load		N/T
6.3.5	Slam shut		N/T
6.3.6	Determination of referent point for the door sagging		/
6.3.7	Durability (0° to max. 130°)	Load and test rate used: 2 kg, 4 cycles/min; Total 60,000 cycles .	P
6.3.8	Deflection (sagging) test (≤ 0.5 % of width of the door)		N/T
6.3.9	2 <sup>nd</sup> vertical static load		N/T
6.3.10	2 <sup>nd</sup> horizontal static load		N/T
6.4	Corrosion resistance (EN ISO 6072-2)	Salt spray test was requested instead by client	N/T
<b>7</b>	<b>Test report</b>		
<b>Annex A</b>	<b>(normative) Product Information system</b>	Not provided	/
A.1	General		
A.2	Field of application		N/T
A.3	The mass and size of the door		N/T
A.4	Adjustment systems and spring and damper mechanisms		N/T
A.5	Corrosion test		N/T

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Annex B	<b>(normative) Test parameter</b>				
	<b>Table B.2 – Overload tests</b>				
	<b>Clause / Test</b>	<b>Unit</b>	<b>Loads</b>		
		<b>1</b>	<b>2</b>	<b>3</b>	
6.2.1 Vertical static overload	kg	-	20	30	
6.2.2 Horizontal static overload	N	-	60	80	
	<b>Table B.3 – Functional tests</b>				
<b>Clause / Test</b>	<b>Unit</b>	<b>Loads and cycles</b>			
		<b>1</b>	<b>2</b>	<b>3</b>	
6.3.3 and 6.3.9 Vertical static load	kg	10	15	20	
6.3.4 and 6.3.10 Horizontal static load	N	25	30	40	
6.3.5 Slam shut (m <sub>2</sub> )	kg	2	3	4	
6.3.5 Additional slam shut for doors with dampers (m <sub>3</sub> )	kg	min. 1, max. 2	min. 1, max. 2	min. 1, max. 2	
6.3.7 Durability	cycles	20 000	40 000	80 000	

**Test Information:**

Sample description: Hinge

Test item: Salt Spray Test

Test method: ISO 9227: 2012

Tested sample: 2 pcs

Test conditions:

Concentration of solution collected: (5±1)% NaCl (m/m)

Chamber temperature: (35±2)°C

Volume of salt solution collected: (1.0~2.0) ml/(80cm<sup>2</sup>·h)

pH of collected solution at (23±3)°C: 6.5~7.2

Exposure period: 48h

Salt spray type: NSS

Evaluation method : ISO 10289:2001

Test result(s):

Rust Grade		
Sample 1	Sample 2	General level
8	8	8

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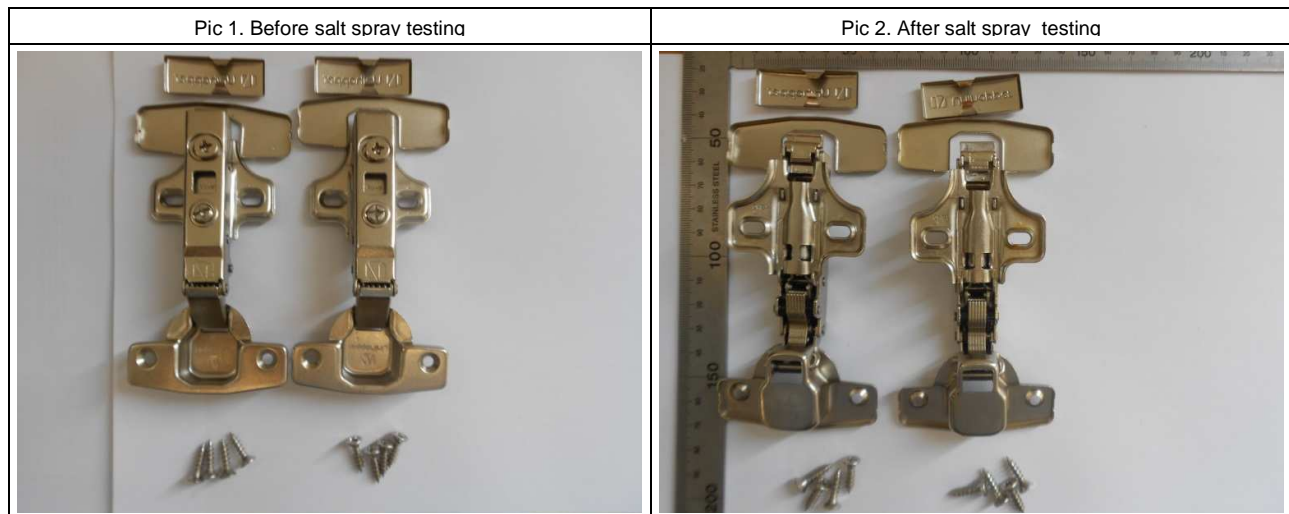
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Note# 1. Rust grade refers to ISO 10289:2001, as follows:

Percent of surface rusted, A (%)	Rust Grade
$A \leq 0.01$	10
$0.01 < A \leq 0.03$	9
$0.03 < A \leq 0.1$	8
$0.1 < A \leq 0.3$	7
$0.3 < A \leq 1.0$	6
$1.0 < A \leq 3.0$	5
$3.0 < A \leq 10.0$	4
$10.0 < A \leq 16.0$	3
$16.0 < A \leq 33.0$	2
$33.0 < A \leq 50.0$	1
$50 < A$	0

**Pictures of remarks:**



**Remark:**

- Clause(s) with the symbol “ / ” in the result refers to the result(s) of its sub-clause(s).
- This test report does not give evidence of the compliance of relevant standard(s) by the submitted sample but only the requested test(s).

\*\*\* End of test report \*\*\*