

TEST REPORT

Report No. : HL80036A/2020
Page : 1 of 6
Date : NOV. 04, 2020

RIM HK Limited

272-284 Des Voeux Road, RM 2002, 20/F HING YIP, Commercial Centre, Central Hong Kong

The following merchandise was submitted and identified by the applicant as:

Product Description: Task office chair
Style/Item No.: VK1405
Buyer/Order No.: RIM HK Limited
Manufacturer/Vendor: RIM HK Limited
Country of Origin: Taiwan

We have tested the submitted sample(s) as requested and the following results were obtained:

Type of chair: TYPE I, Tilting chair (with tilt locks, locking the chair changes to type III, fixed seat angle, fixed backrest)

Test Requested: For compliance with ANSI/BIFMA X5.1-2017 General-Purpose Office Chairs-Tests

Test Methods: According to test procedures of ANSI/BIFMA X5.1-2017

Test Results: ---See following sheet(s)---

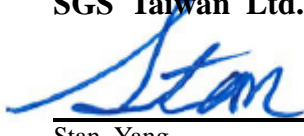
Date of Receipt : Aug. 04, 2020 & Sep. 14, 2020 & Sep. 21, 2020 & Oct. 21, 2020

Testing Period : Aug. 04, 2020 ~ Oct. 27, 2020

Conclusion: The submitted sample(s) **comply with** ANSI/BIFMA X5.1-2017 General-Purpose Office Chairs-Tests.

Note: This report supersedes the previous one bearing Report No: HL80036/2020, issued on 2020/10/28.

Signed for and on behalf of
SGS Taiwan Ltd.


Stan Yang
Team Leader



TEST REPORT

Evaluation	Citation/Method	Criteria	Results	Rating
PERFORMANCE				
Back Strength Test - Static - Type I & II - Functional Load	ANSI/BIFMA X5.1-2017 Clause 5.4.1	No structural breakage or loss of serviceability when 150 lb (667 N) is applied for 1 min. applied to 70° from back at 16 in above the seat. If the back is less than 17.8 in, the load is applied at the top of the back.	M	Pass
Back Strength Test - Static - Type I & II - Proof Load	ANSI/BIFMA X5.1-2017 Clause 5.4.2	No sudden and major change in the structural integrity (Loss of serviceability is acceptable) when 225 lb (1001 N) is applied for 1 min. applied to 70° from back at 16 in above the seat. If the back is less than 17.8 in, The load is applied at the top of the back.	M	Pass
Back Strength Test - Static - Type III - Functional Load	ANSI/BIFMA X5.1-2017 Clause 6.4.1	No loss of serviceability when 150 lb (667 N) is applied for 1 min. applied to 90° from back at 16 in above the seat. If the back is less than 17.8 in, the load is applied at the top of the back.	M	Pass
Back Strength Test - Static - Type III - Proof Load	ANSI/BIFMA X5.1-2017 Clause 6.4.2	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 225 lb (1001 N) is applied for 1 min. Applied 90° to the back at 16in. above the seat. If the back is less than 17.8 In, the load is applied at the top of the back.	M	Pass
Drop Test – Dynamic – Functional Load	ANSI/BIFMA X5.1-2017 Clause 7.4.1	No loss of serviceability when 102 kg (225 lbs.) weight free falls from 6 in. height to the center of the seat.	M	Pass
Drop Test Dynamic – Proof Load	ANSI/BIFMA X5.1-2017 Clause 7.4.2	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 136 kg (300 lbs.) weight free falls from 6 in. height to the center of the seat.	M	Pass
Swivel Test – Cyclic	ANSI/BIFMA X5.1-2017 Clause 8	No loss of serviceability after 60,000 cycles of rotation (360°) under a 122 kg (270 lbs.) load on the seat at its max. Height. Seat shall then withstand another 60,000 cycles of rotation at its lowest seating position. Total 120,000 cycles.	M	Pass
Tilt Mechanism Test – Cyclic – Type I & II	ANSI/BIFMA X5.1-2017 Clause 9	No loss of serviceability after 300,000 cycles under a 109 kg (240 lbs.) load to the center of the seat	M	Pass
Impact Test – Cyclic	ANSI/BIFMA X5.1-2017 Clause 10.3	No loss of serviceability in 100,000 cycles impact. A weight of 57 kg (125 lbs.) free falls onto the seat from 1.4 in. height.	M	Pass
Front Corner Load Ease Test – Cyclic – off Center	ANSI/BIFMA X5.1-2017 Clause 10.4	No loss of serviceability after 20,000 cycles to both front seat corners from a 890 N (200 lbs.) load positioned flush to both outer edges applied without impact for a total of 40,000 cycles Note: this test is done after “Impact test” on the same sample.	M	Pass
Stability Test – Rear Stability for type III	ANSI/BIFMA X5.1-2017 Clause 11.3.1	Apply only to chairs with backrests greater than 200mm Type III: Load the chair with 6 disks, apply a horizontal force to the highest disk. The location of the force application is 6 mm (0.25 in.) from the top of the disk. The force shall be: • F = 0.1964 (1195 – H) Newton. H is the seat height in mm. • [F = 1.1 (47 – H) pounds force.]. H is the seat height in inches. For chairs with seat height equal to or greater than 710 mm (28.0 in.), a fixed force of 93 N (20.9 lbf.) shall be applied. The chair shall not tip over.	M (Type III: F= 127.7 N)	Pass
Stability Test – Rear Stability for type I and II	ANSI/BIFMA X5.1-2017 Clause 11.3.2	Apply only to chairs with backrests greater than 200mm Load the chair with 13 disks, the chair shall not tip over.	M	Pass

TEST REPORT

Evaluation	Citation/Method	Criteria	Results	Rating
PERFORMANCE				
Stability Test – Front Stability	ANSI/BIFMA X5.1-2017 Clause 11.4	The chair is obstructed with a 13mm (½ in.) obstruction to the chair casters/legs. A downward load of 61 kgs (135 lbs.) is centered 60 mm (2.4 in.) from the seat front center edge. The seat shall withstand a 20 N (4.5lbf.) horizontally from the front seat edge without tipping.	M	Pass
Arm Strength Test Vertical – Static – Functional Load	ANSI/BIFMA X5.1-2017 Clause 12.4	No loss of serviceability when 750 N (169 lbs.) is applied for 1 min. The vertical load is uniformly applied along a 127 mm (5 in.) length at the apparent weakest point.	M	Pass
Arm Strength Test Vertical - Static - Proof Load	ANSI/BIFMA X5.1-2017 Clause 12.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1125 N (253 lbs.) is applied for 15 sec. The vertical load is uniformly applied along a 127 mm (5 in.) length at the apparent weakest point.	M	Pass
Arm Strength Test - Horizontal – Static – Functional Load	ANSI/BIFMA X5.1-2017 Clause 13.4	No loss of serviceability when 445 N (100 lbs.) for 1 min. is applied horizontally outward to the armrest at the most forward point of the armrest.	M	Pass
Arm Strength Test - Horizontal – Static - Proof Load	ANSI/BIFMA X5.1-2017 Clause 13.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 667 N (150 lbs.) for 15 sec. is applied horizontally outward to the armrest at the most forward point of the armrest.	M	Pass
Back Durability Test – Cyclic – Type I	ANSI/BIFMA X5.1-2017 Clause 14	No loss of serviceability in 120,000 cycles with a 109 kg (240 lbs.) in the center of the seat and a 445 N (100 lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406 mm (16 in.), test at the center of chair back for 80,000 cycles and then 102 mm (4 in.) off-center 40,000 cycles, half to each side.	M	Pass
Back Durability Test – Cyclic – Type II & III	ANSI/BIFMA X5.1-2017 Clause 15	No loss of serviceability in 120,000 cycles with a 109 kg (240 lbs.) in the center of the seat and a 334 N (75 lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406 mm (16 in.), test at the center of chair back for 80,000 cycles and then 102 mm (4 in.) off-center 40,000 cycles, half to each side.	M	Pass
Caster / Chair Base Durability Test - For Pedestal Base Chair	ANSI/BIFMA X5.1-2017 Clause 16.1	No loss of service after 2,000 cycles over a hard surface with 3 obstacles and 98,000 cycles over a smooth hard surface without obstacles under a 122 kg (270 lbs.) load on the seat. Test stroke is 762 mm (30 in.) minimum. The caster should not separate under 22 N (5 lbs.) pulling force in line with the caster stem after the cycling test.	M	Pass
Caster / Chair Base Durability Test for Chairs with Legs	ANSI/BIFMA X5.1-2017 Clause 16.2	No loss of service after 2,000 cycles over a hard surface with 2 obstacles and 98,000 cycles over a smooth hard surface without obstacles under a 122 kg (270 lbs.) load on the seat. Test stroke is 762 mm (30 in.) minimum. The caster should not separate under 22 N (5 lbs.) pulling force in line with the caster stem after the cycling test.	N/A	/
Leg Strength Test -Front Load - Functional Load	ANSI/BIFMA X5.1-2017 Clause 17.3	No loss of serviceability when a force of 334 N (75 lbf.) is applied to each front leg individually for 1 minute.	N/A	/
Leg Strength Test- Front Load - Proof Load	ANSI/BIFMA X5.1-2017 Clause 17.3	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 503 N (113 lbf.) is applied to each front leg individually for 1 minute.	N/A	/
Leg Strength Test -Side Load - Functional Load	ANSI/BIFMA X5.1-2017 Clause 17.4	No loss of serviceability when a force of 334 N (75 lbf.) is applied once to each front and rear leg individually for 1 minute.	N/A	/
Leg Strength Test -Side Load - Proof Load	ANSI/BIFMA X5.1-2017 Clause 17.4	No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 503 N (113 lbf.) is applied once to the front and rear leg individually for 1 minute.	N/A	/

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

TEST REPORT

Evaluation	Citation/Method	Criteria	Results	Rating
PERFORMANCE				
Footrest Static Load Test – Vertical - Functional Load	ANSI/BIFMA X5.1-2017 Clause 18.3	Apply a force F1 of 445 N (100 lbf.) uniformly along a 102 mm (4 in.) distance along the footrest but not greater than 51 mm (2 in.) from the outside edge at the apparent weakest point of the structure for one (1) minute in the vertical downward direction. If the footrest adjusts in height relative to the seat and allows for a force application 180 degrees (on the opposite side of the chair) from the primary force application, maintain force F1 and apply an additional force F2 of 445 N (100 lbf.) to the footrest at the opposing position for an additional one (1) minute. If applicable, remove force F2. Increase the force F1 to 200 lbf. for one (1) minute. There shall be no loss of serviceability or sudden loss of footrest height.	N/A	/
Footrest Static Load Test – Vertical - Proof Load	ANSI/BIFMA X5.1-2017 Clause 18.4	Apply a force of 1334 N (300 lbf.) uniformly along a 102 mm (4 in.) distance along the footrest but not greater than 51 mm (2 in.) from the outside edge at the apparent weakest point of the structure for one (1) minute in the vertical downward direction. The load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.	N/A	/
Footrest Durability Test	ANSI/BIFMA X5.1-2017 Clause 19	No loss of serviceability after 50,000 cycles of a 890 N (200 lbf) load vertical along 102 mm (4 in.) length of the footrest at the apparent weakest point of the structure. Adjustable footrests that move more than 25 mm (1 in.) in the first 500 cycles shall be considered to have lost their serviceability.	N/A	/
Arm Durability Test- Cyclic	ANSI/BIFMA X5.1-2017 Clause 20	No structural breakage or loss of serviceability when a force of 400 N (90 lbf.) is applied to each arm at a 10° angle ±1° for 60,000 cycles	M	Pass
Out Stop Tests for Chairs with Manually Adjustable Seat Depth	ANSI/BIFMA X5.1-2017 Clause 21	Place a 70 kg (154 lb) rigid mass in the center of the seat. Hold the seat at its most position. A cable is attached to the most rigid point of the vertical centerline of the seat. Hang a weight of 25 kg (55 lb) on the opposite end of the cable. Release the weight so it can drag the seat move forward rapidly and impact	M	Pass
Tablet Arm Static Load Test	ANSI/BIFMA X5.1-2017 Clause 22	Apply a load of 68 kg (150 lb) at the apparent weakest position for 5 minutes and remove the load. No sudden and major change in the chair when the application of the load.	N/A	/
Tablet Arm Load Ease Test – Cyclic	ANSI/BIFMA X5.1-2017 Clause 23	No loss of serviceability to the unit after loading the tablet surface with a weight of 25 kg (55 lb) for a total 100,000 cycles.	N/A	/
Structural Durability Test - Cyclic	ANSI/BIFMA X5.1-2017 Clause 24	Place a weight of 109 kg (240 lb.) in the center of the seat. A cycling device shall be attached to the unit frame midway between front and rear of the seat at the height of the midpoint of the seat frame structure. The cycling device shall be adjusted to apply a “push-pull” action, or alternately may be applied by alternating pull (or push) force application on alternating sides of the unit. Apply a force of 334 N (75 lbf.) at an appropriate rate between 10 and 30 cycles per minute. The device shall be cycled for 25,000 cycles. There shall be no loss of serviceability.	N/A	/
Base Test - Static	ANSI/BIFMA X5.1-2017 Appendix C	No sudden and major change in the structural integrity under 11,120 N (2500 lbs.) compressions for 1 min. The weight is then removed and reapplied for 1 min. The center column may not touch the test platform during load applications.	M	Pass

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

TEST REPORT

Report No. : HL80036A/2020

Page : 5 of 6

Results Key:

M	Meets	N/M	Does Not Meet
N/A	Not Applicable	N/T	Not Tested
C	Claimed	R	Recorded

Rating Key:

Pass
Fail

- Note:** 1. The content of this report is invalid if it is not presented as the entire report.
 2. The statement of conformity is based on the test results, but does not include the measurement uncertainty.

– Pictures –



Photo A: Appearance of the sample - front



Photo B: Appearance of the sample - side



Photo C: Appearance of the sample - back



Photo D: Type(s) of the chair

TEST REPORT

Report No. : HL80036A/2020

Page : 6 of 6

– Pictures –



Photo E: Appearance of the sample –
Receiving Date: Sep. 14, 2020 for clause 15 of
BIFMA X5.1-2017

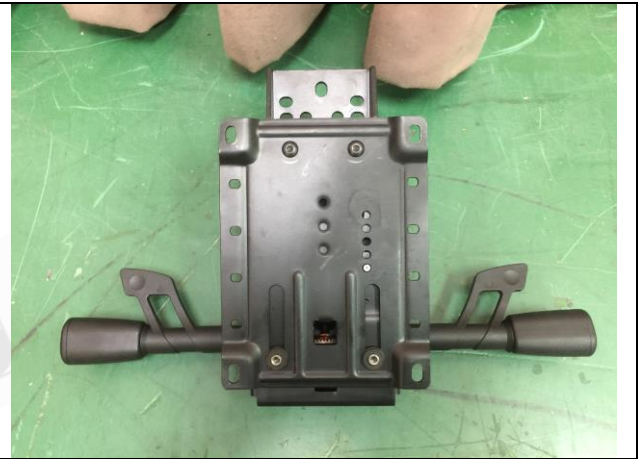


Photo F: Appearance of the sample –
Receiving Date: Sep. 21, 2020 for clause 11 of
BIFMA X5.1-2017



Photo G: Appearance of the sample –
Receiving Date: Oct. 21, 2020 for clause 12, 13
and 20 of BIFMA X5.1-2017



Photo H: Appearance of the sample –
Receiving Date: Oct. 21, 2020 for Appendix C
of BIFMA X5.1-2017

---End of Report---