



TEST REPORT

Report No. 010122070024

DATED: 18 AUGUST 2022

Client : BENITHEM SDN BHD
PTD 10710, JLN KAMPUNG AIR PUTIH,
JLN SAWAH, 81500 PEKAN NANAS, JOHOR,
MALAYSIA

Attn : TAN CHIN TECK

Buyer : /

Sample Description : KNIGHT CHAIR

Item No. : /

SKU No. : /

Model / Style : /

Age Grade : /

Manufacturer : BENITHEM SDN BHD

Country of Origin : MALAYSIA

Country of Destination : /

Test Sample Received : RECEIVED ON 07/07/2022

Test Period : FROM 07/07/2022 TO 29/07/2022

TEST REQUESTED	CONCLUSION	REMARK
ANSI/BIFMA X5.1-2017 – GENERAL-PURPOSE OFFICE CHAIRS - TESTS	PASS	/

Remark(s):

The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council.

For technical enquiries or any other concerns,
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SAMPLE PHOTOS





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PHYSICAL CHARACTERISTICS:

Overall Dimensions (mm)			
Depth:	610	Weight (kg):	16.4
Width:	705	Seat Height (mm):	550
Height:	1115	Backrest Length (mm):	580
Arm Length:	225	Backrest Width (mm):	420
Arm Span:	560	Arm Width:	95

TEST RESULT(S):

ANSI/BIFMA X5.1-2017 – General-Purpose Office Chairs - Tests

Clause	Test	Parameters	Results	Requirement
5	Back Strength Test – Static – Type I & II	Functional load = 667 N Proof load = 1,001 N Duration = 1 min	PASS	Functional load: No loss of serviceability.
6	Back Strength Test – Static – Type III	Functional load = 667 N Proof load = 1,001 N Duration = 1 min	PASS	Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable.
7	Drop Test – Dynamic	Highest seat position: Functional load = 102 kg Proof load = 136 kg Drop ht = 152 mm Lowest seat position: Functional load = 102 kg Proof load = 136 kg Drop ht = 152 mm	PASS	Functional load: No loss of serviceability. Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable.
8	Swivel Test – Cyclic	Seat load = 122 kg Total cycles = 120,000 • 60,000 highest position • 60,000 lowest position Rate = 5 - 15 cycles/min	PASS	No loss of serviceability.
9	Tilt Mechanism Test – Cyclic	Chair height: Mid-point Seat load = 109 kg Cycles = 300,000 Rate = 10 - 30 cycles/min	PASS	No loss of serviceability to the tilt mechanism.



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TEST RESULT(S): (Continued)

Clause	Test	Parameters	Results	Requirement
10	Seating Durability Tests – Cyclic a) Impact Test	Chair height: Mid-point Unlocked Seat load = 57 kg Drop ht = 36 mm Cycles = 100,000 Rate = 10 - 30 cycles/min	PASS	No loss of serviceability. If applicable, the chair base (center structure) shall not touch the test platform as a result of the impact loads.
	b) Front Corner Load-Ease Test – Cyclic – Off Center	Chair height: Mid-point Seat load = 890 N Cycle = 40,000 Rate = 10 - 30 cycles/min	PASS	
11	Stability Tests: a) Rear Stability	i) Type I & II Loading = 13 disks	PASS	Chair shall not tip over.
		ii) Type III Loading = 6 disks Seat height ≤ 710 mm, Force = 0.1964 (1195 - 550) = 127 N	PASS	
	b) Front Stability	Vertical Load = 61kg Horizontal force = 20 N	PASS	
12	Arm Strength Test – Vertical – Static	Functional load = 750 N Duration = 1 min Proof load = 1,125 N Duration = 15 sec	PASS	Functional load: No loss of serviceability. For a height adjustable arm, it must hold the position within 6mm. Proof Load: No sudden & major change in structural integrity. For a height adjustable arm, it must not have a sudden drop in height of greater than 25mm. Loss of serviceability is acceptable.
13	Arm Strength Test – Horizontal – Static	Functional load = 445 N Duration = 1 min Proof load = 667 N Duration = 15 sec	PASS	Functional load: No loss of serviceability. Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable.
14	Back Durability Test – Cyclic – Type I	Seat weight = 109 kg Loading force = 445 N Cycles = 120,000 Rate = 10 - 30 cycles/min	PASS	No loss of serviceability.
15	Back Durability Test – Cyclic – Type II & III	Seat weight = 109 kg Loading force = 334 N Cycles = 120,000 Rate = 10 - 30 cycles/min	PASS	



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TEST RESULT(S): (Continued)

Clause	Test	Parameters	Results	Requirement
16	Caster / Chair Base Durability Test – Cyclic	Total load with chair weight = <u>138 kg</u>	PASS	No loss of serviceability.
	- Pedestal Base Chairs	Cycles: 2,000 (Obstacles) 98,000 (No obstacles) Rate = 10 ± 2 cycles/min	NA	
	- Non-pedestal chairs with casters			No part of caster shall separate from base.
17	Leg Strength Test – Front & Side Application	Functional load = 334N Proof load = 503N Duration = 1 min (each front leg)	NA	Functional load: No loss of serviceability.
	- Front Load Test			Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable.
18	Footrest Static Load Test – Vertical	Functional Load, Force, F1 =	NA	Functional Load: No loss of serviceability or sudden loss of footrest height.
		Footrest adjustment, Force F1 = Force, F2 = Duration =		
19	Footrest Durability Test – Vertical – Cyclic	Proof Load, Force = Duration =	NA	Proof Load: No sudden & major change in structural integrity. Loss of serviceability is acceptable.
		Loading force = Cycles = Rate =	NA	No loss of serviceability. Adjustable footrest that move more than 25mm in the first 500 cycles shall be considered to have lost their serviceability.
20	Arm Durability Test – Cyclic	Applied force = 400 N Cycles = 60,000 Rate = 10 - 30 cycles/min	PASS	No loss of serviceability.
21	Out Stop Tests for Chairs with Manually Adjustable Seat Depth	Seat weight = 74 kg Loading weight = 25 kg Cycles = 25	PASS	



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TEST RESULT(S): (Continued)

Clause	Test	Parameters	Results	Requirement
22	Tablet Arm Static Load Test	Applied load = Duration =	NA	No sudden and major change in the structural integrity of the chair. After test, tablet arm must allow egress from the unit; other losses of serviceability are acceptable.
23	Tablet Arm Load Ease Test – Cyclic	Force = Cycles = Rate =	NA	No loss of serviceability.
24	Structural Durability Test – Cyclic	Seat weight = Force = Cycles = Rate =	NA	

Notes:

1. NA: Not applicable as features not available.
2. NT: Not tested.

TT: Test terminated due to earlier failure

END OF REPORT

This report sets forth our findings solely with respect to the test samples identified herein. The results in this report are not representative of the quality or characteristics of the lot/batch from which a test sample was taken or any similar or identical product unless specifically and expressly noted. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client, GIC Testing & Inspection Services Pte. Ltd. therefore assumes no responsibility for the accuracy of information on the brand name, model/ style number, consignment or any information supplied. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission.