

Prüfbericht-Nr.: Test report no.:	CN21GBV2 001	Auftrags-Nr.: Order no.:	244364306	Seite 1 von 10 Page 1 of 10
Kunden-Referenz-Nr.: Client reference no.:	/	Auftragsdatum: Order date:	29.Sep, 2021	
Auftraggeber: Client:	Nouhaus Inc. 10985 Oleanedr Avrnue.Fontana.CA 92337			
Prüfgegenstand: Test item:	ERGOPRO			
Bezeichnung / Typ-Nr.: Identification / Type no.:	NHO-0005BL/NHO-0005SR/ NHO-0005BG/NHO-0005BU			
Auftrags-Inhalt: Order content:	Mechanical Tests			
Prüfgrundlage: Test specification:	BIFMA X5.1:2017 General-Purpose Office Chairs – Tests			
Wareneingangsdatum: Date of sample receipt:	07.Sep, 2021			
Prüfmuster-Nr.: Test sample no.:	244364306			
Prüfzeitraum: Testing period:	07.Sep, 2021 - 27.Sep, 2021			
Ort der Prüfung: Place of testing:	Sci. & Tec.Park,Sunshine Ind. Zone,Dipu town,Anji			
Prüflaboratorium: Testing laboratory:	TUV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:		genehmigt von: authorized by:		
Datum: Date:	29.Sep, 2021	Ausstellungsdatum: Issue date:	29.Sep, 2021	
Stellung / Position:	Kimi Xu / PE	Stellung / Position:	Jin Yuan / Reviewer	
Sonstiges / Other:	Manufactureer: REDACTED Country of Origin: CHINA			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
<p>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. 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.</p>				

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Anmerkungen
Remarks

- | | |
|----------|---|
| 1 | <p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.
Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p> |
| 2 | <p>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</p> <p><i>As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</i></p> |
| 3 | <p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben.
Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.
Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p> |
| 4 | <p>Clause(s) with the symbol “ / ” in the result refers to the result(s) of its sub-clause(s).</p> |
| 5 | <p>The tests were applied at applicant lab, the applicant lab has CNAS ISO 17025 accrediting scope for applied standard.</p> |

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Produktbeschreibung
 Product description

1	Produktdetails <i>Product details</i>	ERGOPRO
2	Maße / Gewicht <i>Dimensions / Weight</i>	H × W × D: 1185 / 1330 × 765 × 734 mm, Weight: 22.7 kg
3	Bedienelemente <i>Operating elements</i>	/
4	Ausstattung / Zubehör <i>Equipment / Accessories</i>	/
5	Verwendete Materialien <i>Used materials</i>	/
6	Sonstiges <i>Other</i>	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
7	Prüfmusterbereitstellung: <i>Test sample obtaining:</i>	<input checked="" type="checkbox"/> Sending by customer <input type="checkbox"/> Sampling by TÜV Rheinland Group <input type="checkbox"/> others:

Top view



Side view



Back view



Bottom view



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Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse – Bemerkungen / Measuring results - Remarks	Ergebnis Result
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ANSI/BIFMA X5.1:2017 - General-Purpose Office Chairs – Tests			
1	Scope		
2	Definitions		
3	General		
4	Types of Chairs	Type I, II & III	/
5	<p>Backrest Strength Test - Static - Type I and II</p> <p>Function load: No loss of serviceability when 667 N (150 lbs.) is applied for 1 min. Applied 70° to the back at 16 in. above the seat.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1001N (225 lbs.) is applied for 1 min. Applied 70° to the back at 16 in. above the seat.</p>		Passed
6	<p>Backrest Strength Test - Static - Type III</p> <p>Function load: No loss of serviceability when 667 N (150 lbs.) is applied for 1 min. Applied 90° to the back at 16 in. above the seat.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 1001 N (225 lbs.) is applied for 1 min. Applied 90° to the back at 16 in. above the seat.</p>		Passed
7	<p>Drop Test – Dynamic</p> <p>Function load: No loss of serviceability when 102kg (225 lbs.) weight free falls from 6 in height to the center of the seat.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 136kg (300 lbs.) weight free falls from 6 in height to the center of the seat.</p>		Passed
8	<p>Swivel Test – Cyclic</p> <p>No loss of serviceability after 60,000 cycles of rotation (360°) under a 122 kg (270 lb.) 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.</p>		Passed

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9	Tilt Mechanism Test – Cyclic No loss of serviceability after 300,000 cycles under a 109kg (240lbs.) load to the center of the seat.		Passed
10	Seating Durability Tests - Cyclic		/
10.3	Impact Test No loss of serviceability in 100,000 cycles impact. A weight of 57kg (125 lbs.) free falls onto the seat from 1.4 in. height.		Passed
10.4	Front Corner Load-Ease Test – Cyclic – Off-center No loss of serviceability after load each seat front corner with 890 N (200 lbf.) for 20,000 cycles, total 40,000 cycles. Note: this test is done after “Impact test” on the same sample.		Passed
11	Stability Tests		/
11.3	Rear Stability		/
11.3.1	Rear Stability Test for Type III Chairs Place a support fixture made of a 1.5 mm ±0.4 mm (0.060 in. ± 0.015 in.) thick polypropylene, 356 mm (14 in.) wide and 711 mm (28 in.) tall against the chair back so that it approximates the contour of the back. Load the chair with 6 disks (10 kg each). Place the first disk on the seat so it touches the support fixture. As each disk is added to the stack slide it along the lower disk until it contacts the support fixture. 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. For chairs with seat height (as measured at the front of the bottom of the lowest disk when all disks are in the chair) less than 710 mm (28.0 in.), calculate the force as follows: <ul style="list-style-type: none"> • $F = 0.1964 (1195 - H)$ 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.		Passed

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11.3.2	<p>Rear Stability Test for Type I and II Chairs</p> <p>Rear Stability Test for Type I and II Chairs Place a support fixture made of a 1.5 mm ± 0.4 mm (0.060 in. ± 0.015 in.) thick polypropylene, 356 mm (14 in.) wide and 711 mm (28 in.) tall against the chair back so that it approximates the contour of the back. Load the chair with 13 disks. Place the first disk on the seat so it touches the support fixture. As each disk is added to the stack slide it along the lower disk until it contacts the support fixture. If the chair does not tip over and the tilt mechanism does not tilt to its most rearward position (i.e., at its tilt stop) when the disks are placed in the chair, the chair shall also be tested according to 12.3.1 with the chair in the unlocked position. The chair shall not tip over.</p>		Passed
11.4	<p>Front Stability</p> <p>Test Procedure - Alternative A (This alternative may only be used on chairs that do not have a seat surface that will support the stability loading fixture (i.e., mesh, web or strap seat support surfaces)) Apply a vertical load of 600 N (135 lbf.), through a 200 mm (7.87 in.) diameter disk, the center of which is 60 mm (2.4 in.) from the front center edge of the load-bearing surface of the seat. Apply a horizontal force of 20 N (4.5 lbf.) at the same level of the plane of the top of the seat. The force shall be coincident with the side-to-side centerline of the seat.</p> <p>-Test Procedure - Alternative B Apply a vertical load of 600 N (135 lbf.), by means of the front stability loading fixture at a point 60 mm (2.4 in.) from the front center edge of the load-bearing surface of the chair. Apply a horizontal force of 20 N (4.5 lbf.) at the same level of the plane of the top of the seat. The force shall be coincident with the side-to-side centerline of the seat. The chair shall not tip over as the result of the force application.</p>		Passed

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12	<p>Arm Strength Test - Vertical – Static</p> <p>Function load: No structural breakage or loss of serviceability when 750 N (169 lb) for 1 min. Is applied. The vertical load is uniformly applied through a 5 In. area at the apparent weakest point.</p> <p>Proof load: No structural breakage or loss of serviceability when 750 N (169 lb) for 1 min. Is applied. The vertical load is uniformly applied through a 5 In. area at the apparent weakest point.</p>		Passed
13	<p>Arm Strength Test - Horizontal – Static</p> <p>Function load: No loss of serviceability when 445N (100 lbs.) for 1 min. is applied horizontally outward to the armrest at the most forward point of the armrest.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when 667N (150 lbs.) for 15 seconds. is applied horizontally outward to the armrest at the most forward point of the armrest.</p>		Passed
14	<p>Backrest Durability Test - Cyclic - Type I</p> <p>No loss of serviceability in 120,000 cycles with a 109 kg (240 lbs.) in the center of the seat and a 445N (100 lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406mm (16 in.), test at the center of chair back for 80,000 cycles and then 102mm (4 in.) off-center 40,000 cycles, half to each side.</p>		Passed
15	<p>Backrest Durability Test - Cyclic - Type II and Type III</p> <p>No loss of serviceability in 120,000 cycles with a 109 kg (240 lbs.) in the center of the seat and a 334N (75 lbf.) 90° to the center of the chair back. For chairs with a back width greater than 406mm (16 in.), test at the center of chair back for 80,000 cycles and then 102mm (4 in.) off-center 40,000 cycles, half to each side.</p>		Passed
16	<p>Caster/Chair Base Durability Test – Cyclic</p> <p>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 lb.) load on the seat. Test stroke is 762mm (30 in.) minimum. The caster should not separate under 22N (5 lbs.) pulling force in line with the caster stem after the cycling test.</p>		Passed

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17	<p>Leg Strength Test - Front and Side Application</p> <p>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 lb.) load on the seat. Test stroke is 762mm (30 in.) minimum. The caster should not separate under 22N (5 lbs.) pulling force in line with the caster stem after the cycling test.</p>		/
17.3	<p>Front Load Test</p> <p>Function load: No loss of serviceability when a force of 334N (75 lbf.) is applied to each front leg individually for 1 minute.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 503N (113 lbf.) is applied to each front leg individually for 1 minute.</p>		N/A
17.4	<p>Side Load Tests</p> <p>Function load: No loss of serviceability when a force of 334N (75 lbf.) is applied once to each front and rear leg individually for 1 minute.</p> <p>Proof load: No sudden and major change in the structural integrity (loss of serviceability is acceptable) when a force of 503N (113 lbf.) is applied once to the front and rear leg individually for 1 minute.</p>		N/A
18	<p>Footrest Static Load Test – Vertical</p> <p>Function load: 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, 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 .</p> <p>There shall be no loss of serviceability or sudden loss of footrest height.</p> <p>Proof load: 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</p>		N/A

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	<p>apparent weakest point of the structure for one (1)minute in the vertical downward direction.</p> <p>The load applied once shall cause no sudden and major change in the structural integrity of the unit. Loss of serviceability is acceptable.</p>		
19	<p>Footrest Durability Test - Vertical – Cyclic</p> <p>No loss of serviceability after 50,000 cycles of a 890N (200 lbf) load vertical along 102mm (4 in.) length of the footrest at the apparent weakest point of the structure.</p>		N/A
20	<p>Arm Durability Test – Cyclic</p> <p>No structural breakage or loss of serviceability when a force of 400N (90 lbf.) is applied to each arm at a 10° angle ±1° for 60,000 cycles</p>		Passed
21	<p>Out Stop Tests for Chairs with Manually Adjustable Seat Depth</p> <p>Place 74 kg (163 lb.) rigid mass in the center of the seat, 25 kg (55lbf.) hanging weight shall be held at its most rearward position, then released, permitting it to move forward rapidly and impact the out stops. Repeat for a total of 25 cycles. There shall be no loss of serviceability to the unit.</p>		Passed
22	<p>Tablet Arm Chair Static Load Test</p> <p>Apply a load of 68 kg (150 lb.) through a 203 mm diameter area 25 mm from the edge of the surface at its apparent weakest point, for five (5) minutes. Shall cause no sudden and major change in the structural integrity of the chair at the first load, and after performing the test, the tablet arm must allow egress form the unit; other losses of serviceability are acceptable.</p>		N/A
23	<p>Tablet Arm Chair Load Ease Test – Cyclic</p> <p>A 343 N (77 lb.) bag shall be raised until the entire weight is off the tablet surface and then eased (without impact) onto the surface, repeat for a total of 100,000 cycles without loss of serviceability to the unit.</p>		N/A

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24	<p>Structural Durability Test – Cyclic</p> <p>[This test applies to chairs that do not swivel. It does not apply to chairs with casters or products with seat heights greater than 24 inches.] Place a weight of 109 kg (240 lb.) in the center of the seat. Apply a force of 334 N (75 lbf.) at an appropriate rate between 10 and 30 cycles per minute on the seat structural frame for 25,000 cycles.</p>		N/A
/	<p>Base Test (informative)</p> <p>No sudden and major change in the structural integrity under 11,100 N (2500 lbs.) compression 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.</p>		Passed

*** End of test report ***