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Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2023.04.27	
Auftraggeber: <i>Client:</i>	Comfort Office Furniture Co., Ltd GuangDong Room 1901, No. 6 Xingsha Road, Nansha Street, Nansha District, Guangzhou			
Prüfgegenstand: <i>Test item:</i>	Ergohuman Office Chair			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	EHE2/EHL2			
Auftrags-Inhalt: <i>Order content:</i>	Mechanical safety test according to client's requirement			
Prüfgrundlage: <i>Test specification:</i>	BS 5459-2:2000+A2:2008 (Excluding clause 5)			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2023.04.27			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003468647-001			
Prüfzeitraum: <i>Testing period:</i>	2023.04.27 – 2023.08.08			
Ort der Prüfung: <i>Place of testing:</i>	Unit A01-02, No.11 Nanyun 5 Rd, GuangZhou, China			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>x Tom He</u>	genehmigt von: <i>authorized by:</i>	<u>x Kingsley He</u>	
Datum: <i>Date:</i> 2023.08.16	Signed by: Tom He	Ausstellungsdatum: <i>Issue date:</i> 2023.08.16	Signed by: Kingsley He	
Stellung / Position:	Tom He / Test Engineer	Stellung / Position:	Kingsley He / Reviewer	
Sonstiges / <i>Other:</i>				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* 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. <i>This test report only relates to the above mentioned 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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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.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>
4	<p>Die Entscheidungsregel für Konformitätserklärungen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird.</p> <p><i>The decision rule for statements of conformity in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report.</i></p>

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Produktbeschreibung
Product description

1	Produktdetails <i>Product details</i>	Ergohuman Office Chair
2	Maße / Gewicht <i>Dimensions / Weight</i>	H x W x D: (1138 ~ 1235) x 700 x 345 mm Weight: 23.64 kg
3	Bedienelemente <i>Operating elements</i>	Office chair.
4	Ausstattung / Zubehör <i>Equipment / Accessories</i>	N/A
5	Verwendete Materialien <i>Used materials</i>	Metal, plastic, foam, and textile.
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:

Pic. 1: Front view



Pic. 2: Side view



Pic. 3: Back view



Pic. 4: Bottom view



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Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse – Bemerkungen/ Measuring results - Remarks	Ergebnis Result
BS 5459-2:2000+A2:2008			
Specification for performance requirements and tests for office furniture — Part 2: Office pedestal seating for use by persons weighing up to 150 kg and for use up to 24 hours a day, including type-approval tests for individual components			
1	<p>Scope This part of BS 5459 specifies performance requirements and test methods for the structural safety and stability of office pedestal seating when used by persons weighing up to 150 kg, or when used for up to 24 hours a day, including chairs for use with tables and desks higher than those specified in BS EN 527-1. This Part of BS 5459 also specifies requirements and test methods for type approval of bases, columns, seat actions, back stems and locking devices. NOTE 1 BS EN 1335-2 and BS EN 1335-3 contain requirements and test methods for office pedestal seating which is intended for use for up to 8 hours a day by persons weighing up to 110 kg. This standard does not apply to office visitors' chairs. NOTE 2 Office visitors' chairs are chairs used in the office environment which are not classed as office work chairs and which are used for long or short meetings or consultations, as well as for reading, writing, listening and waiting.</p>		
2	Normative references		
3	Terms and definitions		
4	Requirements		
4.1	Durability		Pass
4.2	Component durability		Pass
4.3	Stability		Pass
4.4	Safety		Pass
4.5	Type approval of bases, columns, seat actions, back stems and locking devices		/
4.5.1	General		N/A
4.5.2	Seat actions		N/A
4.5.3	Columns, bases, back stems and locking devices		N/A
4.5.4	Additional requirements for bases with structural components incorporating plastics		N/A
4.6	Criteria for failure and safe failure		/
5	Marking		
5.1	Complete chairs	Not requested by client	N/T
5.2	Columns, bases, seat actions, back stems and locking devices	Not requested by client	N/T
Annex A	Test methods		
A.1	General		
A.2	Principle		
A.3	Apparatus		
A.4	Determination of seat and back loading points		/
A.5	Durability and safety tests		
A.5.1	Fore-and-aft safety		Pass
A.5.2	Seat impact		Pass
A.5.3	Back impact		Pass

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Absatz <i>Clause</i>	Anforderungen - Prüfungen / <i>Requirements - Tests</i>	Messergebnisse – Bemerkungen/ <i>Measuring results - Remarks</i>	Ergebnis <i>Result</i>
A.5.4	Drop		Pass
A.5.5	Side-to-side safety		Pass
A.6	Stability test		
A.6.1	General		/
A.6.2	Forward and sideways overturning		/
A.6.2.1	Forward overturning for all chairs, and sideways overturning for chairs without arms		Pass
A.6.2.2	Sideways overturning for armchairs		Pass
A.6.3	Rearward overturning (all chairs)		/
A.6.3.1	Rearward overturning		Pass
A.6.3.2	Accidental rearward overturning		Pass
A.6.4	Rearward overturning of tilting and reclining chairs		Pass
A.7	Durability of components		/
A.7.1	General		Pass
A.7.2	Arm sideways static load		Pass
A.7.3	Arm downward static load		Pass
A.7.4	Arm impact		Pass
A.7.5	Chair swiveling		Pass
A.7.6	Seat height adjustment		Pass
A.7.7	Footrest fatigue		N/A
A.7.8	Durability of controls		Pass
A.7.9	Locking device fatigue		N/A
A.8	Type-approval tests for columns, bases, actions, back stems and locking devices		/

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Absatz Clause	Anforderungen - Prüfungen / Requirements - Tests	Messergebnisse – Bemerkungen/ Measuring results - Remarks	Ergebnis Result
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/	Table A.1 — Summary of tests		
Clause no.	Test description	Test parameters	
A.5.1	Fore-and-aft safety	Seat load V_1 : for chairs with full back inclination, θ , of 75° or less for other chairs	1 500 N \times sin θ 1 400 N
		Back load H_1 : for chairs with full back inclination, θ , of 75° or less for other chairs	1 500 N \times cos θ 400 N
		Load applied to front edge V_2	1 400 N
		Maximum number of cycles	500 000
A.5.2	Seat impact	Drop height	350 mm
A.5.3	Back impact	Drop height	330 mm
		Angle	48°
A.5.4	Drop	Drop height:	
		for leg length < 200 mm	250 mm
		for leg length \geq 200 mm	450 mm
A.5.5	Side-to-side safety	Downward vertical load	1 200 N
		Maximum number of cycles	250 000
A.6.2.1	Forward overturning for all chairs, and sideways overturning for chairs without arms	Downward vertical force	600 N
		Horizontal force	20 N
A.6.2.2	Sideways overturning for armchairs	Downward vertical force on seat	250 N
		Downward vertical force on arm	350 N
		Horizontal force	20 N
A.6.3.1	Rearward overturning	Downward vertical force on seat	600 N
		Overturning force F :	
		for chairs with $h \geq$ 720 mm	80 N
		for chairs with $h <$ 720 mm	285.7 [1-($h/1\ 000$)] N
A.6.3.2	Accidental rearward overturning	See A.6.3.2	
A.6.4	Rearward overturning of tilting and reclining chairs	13 discs	
A.7.2	Arm sideways static load	Outward horizontal force	600 N
A.7.3	Arm downward static load	Downward vertical force	1 200 N
A.7.4	Arm impact	Angle	48°
A.7.5	Chair swivelling	Downward vertical force	1 200 N
		Number of cycles	100 000
A.7.6	Seat height adjustment	Downward vertical force	1 200 N
		Number of cycles	10 000
Table A.1 — Summary of tests (continued)			
Clause no.	Test description	Test parameters	
A.7.7	Footrest fatigue	Downward vertical force	1 200 N
		Number of cycles	200 000
A.7.8	Durability of controls	Force	100 N
A.7.9	Locking device fatigue	Back load H_1	(see A.5.1)
		Number of cycles	500 000
A.8	Type approval of columns, bases, actions, back stems and locking devices	See Tables A.3 to A.7.	

*** End of test report***