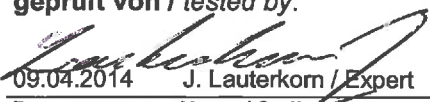
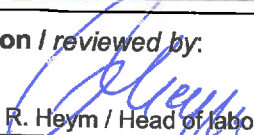


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Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	26.02.2014	
Auftraggeber: <i>Client:</i>	Gispen International B.V. Parallelweg West 23, 4104 AZ Culemborg, NIEDERLANDE			
Prüfgegenstand: <i>Test item:</i>	Office work chair			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	Zinn			
Auftrags-Inhalt: <i>Order content:</i>	Prüfung der mechanischen Sicherheit			
Prüfgrundlage: <i>Test specification:</i>	DIN EN 1335-1, DIN EN 1335-2, DIN EN 1335-3 (DIN EN 1335-1: 2002-08, Office furniture - Office work chair - Part 1: Dimensions - Determination of dimensions; DIN EN 1335-2: 2010-01, Office furniture - Office work chair - Part 2: Safety requirements; DIN EN 1335-3: 2009-08, Office furniture - Office work chair - Part 3: Test methods)			
Wareneingangsdatum: <i>Date of receipt:</i>	12.02.2014			
Prüfmuster-Nr.: <i>Test sample No.:</i>	60830-1			
Prüfzeitraum: <i>Testing period:</i>	25.02.2014 – 07.04.2014			
Ort der Prüfung: <i>Place of testing:</i>	Furniture testing laboratory Nürnberg			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland LGA Products GmbH			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
 09.04.2014 J. Lauterkorn / Expert		 09.04.2014 R. Heym / Head of laboratory		
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
Sonstiges / Other: Currently neither a safeguard clause procedure has been invoked nor is an increase in accidents known for this / these product(s).				
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: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(all) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(all) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
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 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>				

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Liste der verwendeten Prüfmittel
List of used test equipment

Prüfmittel <i>Test equipment</i>	Prüfmittel-Nr. / ID-Nr. <i>Equipment No. / ID-No.</i>	Nächste Kalibrierung <i>Next calibration</i>
Vernier calliper	04841	18.07.2014
Tape measure	05013	24.10.2015
Seat impactor 25kg	04944	03.12.2014
Seat-backrest test stand	04900	30.01.2015
Hight measure	05007	30.01.2016
Measure stand for swivel chairs	04997	07.08.2017
Steel measure 500 mm	04996	13.01.2016
Steel measure 1000 mm	04859	13.01.2016
Vernier calliper 750 mm	04868	01.08.2014
Stability test stand	05003	10.09.2014
Load for stability test stand	05004	10.09.2014
Rolling resistance testing stand	04990	30.01.2015
Measure for measurement „t“ of the base	04994	30.01.2015
Multiple test stand for chairs	04986	30.01.2015
Seat-backrest test stand	04954	30.01.2015
model for chairs	05037	07.08.2014
Dynamometer 1000 N	04876	25.07.2014
Industrial scale 300 kg	04988	15.04.2014
Loading pads for stability test of tilting chairs	04998	12.09.2016

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Produktbeschreibung
Product description

Office work chair „Zinn“

Height adjustable via gas spring Stabilus STAB-O-MAT 4D. (Certification No.: 62723)

Seat mechanism C10 made of aluminum die casting from Bock with synchronous action, adjustable in basic position, with forward inclined seat position.

Initial tension of the tilt spring by means of twist grip.

Seat shell S5 made of plastic PA6 GF 30 with 8 mm flat steel bearer.

Backrest bearer and -frame made of plastic PA6 GF 30 with mesh covering, optional with mesh layer, as well as separately adjustable lumbar support.

Base made of plastic (PA6 GF 30).

5 brake unloaded twin castors type "H" and "W" ø 60 mm.

H x W x D: 1050 x 690 x 650 mm

Weight: 16,15 kg

Pic 1: Frontview



Pic 2: Sideview



Pic 3: Backside view



Pic 4: Detail mechanism



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Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

	General information		
	The test report contents mechanical safety requirements based on DIN EN 1335-1, DIN EN 1335-2 and DIN EN 1335-3 as well as additional safety-related tests and requirements towards the state of the art. The tests acc. to the standards were divided in dimensional tests, safety strength tests and functional tests, a standard-independent numbering system was used. The content of the test basics was shortened. For details be referred to the original documents.		
1	Determination of dimensions acc. to DIN EN 1335-1		
	The chair shall provide support to the thighs and the lumbar region with sufficient depth and height to provide all users with a sitting position suited to their activity and their height. The dimension of the chair shall comply with type "A", "B" or "C". Details of measuring see appendix.	Type A	P ☒ F ☐ N/A ☐ N/T ☐
2	General design requirements acc. to DIN EN 1335-2 cl. 4.1		
2.2	Corners and edges, trapping, pinching and shearing acc. to DIN EN 1335-2 cl. 4.1.1		
	- distance of accessible movable parts either ≤ 8 mm or ≥ 25 mm in any position during movement - accessible corners rounded with minimum 2 mm radius - edges of the seat, back rest and arm rests which are in contact with the user when sitting in the chair rounded with minimum 2 mm radius - edges of handles rounded with minimum 2 mm radius in the direction of the force applied - other edges free from burrs and rounded or chamfered - ends of accessible hollow components closed or capped		P ☒ F ☐ N/A ☐ N/T ☐
2.3	Adjusting devices acc. to DIN EN 1335-2 cl. 4.1.2		
	Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided. It shall be possible to operate the adjusting devices from a sitting position in the chair.		P ☒ F ☐ N/A ☐ N/T ☐
2.4	Connections acc. to DIN EN 1335-2 cl. 4.1.3		
	It shall not be possible for any load bearing part of the chair to come loose unintentionally.		P ☒ F ☐ N/A ☐ N/T ☐

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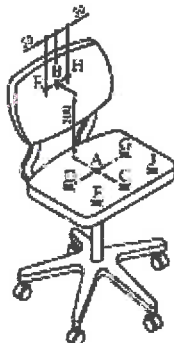
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2.5	Avoidance of soiling acc. to DIN EN 1335-2 cl. 4.1.4		
	All parts which are lubricated to assist sliding (greasing, lubricating, etc.) shall be designed to protect users from lubricant stains when in normal use.		P ☒ F ☐ N/A ☐ N/T ☐
3	Stability acc. to DIN EN 1335-2 cl. 4.3, DIN EN 1335-3 cl. 7.1		
	Front edge overturning ≥ 27 kg Forward overturning vertical load: 60 kg, horizontal force: ≥ 20 N Sideways overturning without arms vertical load: 60 kg, horizontal force: ≥ 20 N Sideways overturning with arms vertical load: 25/35 kg, horizontal force: ≥ 20 N Rearwards overturning without back rest inclination vertical load: 60 kg, horizontal force: ≥ 192 N Rearwards overturning with back rest inclination ≥ 13 discs Stability of footrest vertical load: 110 kg, horizontal force: ≥ 20 N	35 kg 61 N N/A 50 N N/A 13 discs N/A	P ☒ F ☐ N/A ☐ N/T ☐
4	Rolling resistance of unloaded chair		
4.1	Rolling resistance of unloaded chair DIN EN 1335-2 cl. 4.4, DIN EN 1335-3 cl. 7.4		
	- all castors identical in construction - rolling resistance ≥ 12 N	15 N	P ☒ F ☐ N/A ☐ N/T ☐
4.2	Additional rolling resistance of unloaded chair for GS-certification DIN EN 1335-2: 2002 cl. 4.4, DIN EN 1335-3: 2000 cl. 6.1, cl. 6.2		
	- all castors identical in construction - rolling resistance for castors type "H" ≥ 15 N - rolling resistance for castors type "W" ≥ 12 N - measuring of rolling resistance after durability test		P ☒ F ☐ N/A ☐ N/T ☐

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Absatz	DIN EN 1335-1, DIN EN 1335-2, DIN EN 1335-3	Messergebnisse - Bemerkungen	Bewertung
Clause	Anforderungen - Prüfungen / Requirements - Tests	Measuring results - Remarks	Evaluation

5	Strength and durability tests acc. to DIN EN 1335-2 cl. 4.5																								
	The requirements are fulfilled when after the tests acc. to DIN EN 1335-3 cl. 7.2.1, cl. 7.2.2, cl. 7.2.6, cl. 7.3.1 and cl. 7.3.2: - there are no fractures of any member, joint or component - there is no loosening of joints intended to be rigid - no major structural element is significantly deformed - the chair fulfils its functions after removal of the test loads and when after the test in 7.2.3 of DIN EN 1335-3 the arm rests show no fracture.																								
5.1	Seat front edge static load test DIN EN 1335-3 cl. 7.2.1																								
	10 cycles 1600 N		P F N/A N/T	☒ ☐ ☐ ☐																					
5.2	Seat and back static load test DIN EN 1335-3 cl. 7.2.2																								
	10 cycles Seat: 1600 N Back: 560 N		P F N/A N/T	☒ ☐ ☐ ☐																					
5.3	Foot rest static load test DIN EN 1335-3 cl. 7.2.6																								
	10 cycles 1300 N	No footrest	P F N/A N/T	☐ ☐ ☒ ☐																					
5.4	Seat and back durability DIN EN 1335-3 cl. 7.3.1																								
	 Table 2 — Seat and back durability test <table><tr><th>Step</th><th>Loading point (see Figure 6)</th></tr><tr><td>1</td><td>A</td></tr><tr><td>2</td><td>C-B</td></tr><tr><td>3</td><td>J-E</td></tr><tr><td>4</td><td>F-H</td></tr><tr><td>5</td><td>D-G</td></tr></table> Key <table><tr><td>A: loading point "A"</td><td>D: loading point "D"</td><td>G: loading point "G"</td></tr><tr><td>B: loading point "B"</td><td>E: loading point "E"</td><td>H: loading point "H"</td></tr><tr><td>C: loading point "C"</td><td>F: loading point "F"</td><td>J: loading point "J"</td></tr></table> All chairs shall be tested to steps 1 to 5 (see table 2).				Step	Loading point (see Figure 6)	1	A	2	C-B	3	J-E	4	F-H	5	D-G	A: loading point "A"	D: loading point "D"	G: loading point "G"	B: loading point "B"	E: loading point "E"	H: loading point "H"	C: loading point "C"	F: loading point "F"	J: loading point "J"
Step	Loading point (see Figure 6)																								
1	A																								
2	C-B																								
3	J-E																								
4	F-H																								
5	D-G																								
A: loading point "A"	D: loading point "D"	G: loading point "G"																							
B: loading point "B"	E: loading point "E"	H: loading point "H"																							
C: loading point "C"	F: loading point "F"	J: loading point "J"																							
	Figure 6 — Loading points																								

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5.4.1	Seat and back durability - step 1		
	120 000 cycles Seat (Loading point "A"): 1500 N		P ☒ F ☐ N/A ☐ N/T ☐
5.4.2	Seat and back durability - step 2		
	Test performance acc. to DIN EN 1335-3 cl. 7.3.1 or DIN EN 1335-3: 2000 cl. 7.2, depending on higher stress for the construction of the chair. 80 000 cycles Seat (Loading point "C"): 1200 N Back (Loading point "B"): 320 N		P ☒ F ☐ N/A ☐ N/T ☐
5.4.3	Seat and back durability - step 3		
	Test performance acc. to DIN EN 1335-3 cl. 7.3.1 or DIN EN 1335-3: 2000 cl. 7.2, depending on higher stress for the construction of the chair. 20 000 cycles Seat (Loading point "J"): 1200 N Back (Loading point "E"): 320 N		P ☒ F ☐ N/A ☐ N/T ☐
5.4.4	Seat and back durability - step 4		
	Test performance acc. to DIN EN 1335-3 cl. 7.3.1 or DIN EN 1335-3: 2000 cl. 7.2, depending on higher stress for the construction of the chair. 20 000 cycles Seat (Loading point "F"): 1200 N Back (Loading point "H"): 320 N		P ☒ F ☐ N/A ☐ N/T ☐
5.4.5	Seat and back durability - step 5		
	20 000 cycles Seat (Loading point "D" and "G"): 1200 N lateral alternating		P ☒ F ☐ N/A ☐ N/T ☐

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5.5	Arm rest durability DIN EN 1335-3 cl. 7.3.2		
	60 000 cycles 400 N		P ☒ F ☐ N/A ☐ N/T ☐
5.6	Arm rest downward static load test - central DIN EN 1335-3 cl. 7.2.3		
	5 cycles 750 N		P ☒ F ☐ N/A ☐ N/T ☐
	5 cycles 900 N		P ☒ F ☐ N/A ☐ N/T ☐
6	Requirements for chairs with self-supporting gas spring		
6.1	Safety class of gas spring tube DIN 4550 cl. 5		
	Maximum permissible distance "u" between seat front edge and the center of the gas spring in accordance with safety class may not be exceeded.		P ☒ F ☐ N/A ☐ N/T ☐
6.2	General safety requirements DIN 4550: 2004 cl. 6.1		
	Self-supporting gas springs must have a tripping device on the face side and have to be made of one part in the load bearing area.		P ☒ F ☐ N/A ☐ N/T ☐
6.3	Gas spring taper DIN 4550 cl. 6.2, 6.3		
	- overlapping minimum 80 % - one-piece taper - radius minimum 1 mm at the bottom edge - taper with smooth surface		P ☒ F ☐ N/A ☐ N/T ☐
6.4	Durability test for self-supporting energized devices DIN 4550 cl. 7.2		
	Test certificate for durability test		P ☒ F ☐ N/A ☐ N/T ☐

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6.5	Marking of gas spring DIN 4550 cl. 9		
	- manufacturer - type designation - classification - date of production (week / year)		P ☒ F ☐ N/A ☐ N/T ☐
6.6	Safety advice on the chair DIN 4550 cl. 9		
	Conspicuously warning advice near the gas spring in German with the following content: "Achtung! Austausch und Arbeiten im Bereich des Sitzhöhenverstellelementes nur durch eingewiesenes Personal." We recommend the safety advice also in the language of the country in which it will be delivered to the end user.		P ☒ F ☐ N/A ☐ N/T ☐
6.7	Self assembly EK 5 / AK 3: 01-04		
	The decision of EK 5 / AK 3: 01-04 for self assembly office workchairs shall be considered.		P ☒ F ☐ N/A ☐ N/T ☐
7	Functional tests acc. to DIN EN 1335-3		
7.1	Arm rest downward static load test - front DIN EN 1335-3 cl. 7.2.4		
	5 cycles 450 N	not safety critical	P ☐ F ☐ N/A ☐ N/T ☒
7.2	Arm sideways static load test DIN EN 1335-3 cl. 7.2.5		
	10 cycles 400 N	not safety critical	P ☐ F ☐ N/A ☐ N/T ☒
7.3	Swivel test DIN EN 1335 cl. 7.3.3		
	120 000 cycles Seat (Loading point "A"): 60 kg Seat (Loading point "C"): 35 kg	not safety critical	P ☐ F ☐ N/A ☐ N/T ☒

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7.4	Foot rest durability DIN EN 1335-3 cl. 7.3.4		
	50 000 cycles 900 N	no footrest	P ☐ F ☐ N/A ☒ N/T ☐
7.5	Castor and chair base durability DIN EN 1335-3 cl. 7.3.5		
	36 000 cycles Seat (Loading point "A"): 110 kg	not safety critical	P ☐ F ☐ N/A ☐ N/T ☒
8	Information for use		
	Information for use shall be available in the language of the country in which it will be delivered to the end user. It shall contain at least the following details: - information regarding the intended use - information regarding possible adjustments and chair type - instruction for operating the adjusting mechanisms - instruction for the care and maintenance of the chair - information regarding all adjustments - information for chairs with seat height adjustments with energy accumulators that only trained personnel may replace or repair seat height adjustment components with energy accumulators - information on the choice of castors in relation to the floor surface		P ☒ F ☐ N/A ☐ N/T ☐

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9	Materials		
	Materials and its combinations shall not be toxic, among others the following certificates are necessary: - test certificate of harmful substances for wooden materials - test certificates of harmful substances for upholstery und cover materials - risk analysis for Polycyclic Aromatic Hydrocarbons (PAH) according to the valid ZEK requirement		P ☐ F ☐ N/A ☐ N/T ☒
10	Marking towards ProdSG section 2 § 6		
	Durable marking of product with name and contact address of manufacturer or importer and the product designation		P ☒ F ☐ N/A ☐ N/T ☐

ZUSATZ-DOKUMENTATION
ADDITIONAL DOCUMENTATION

Dimensions to EN 1335 - Office work chairs			Type A	
Denomination/code letter		nominal size (mm)	actual size (mm)	
Seat height ^{a)}	adjustable adj. range	a ≤ 400 to ≥ 510 ≥ 120	417 - 544 127	+ +
Seat depth	adjustable adj. range	b ≤ 400 to ≥ 420 ≥ 50	390 - 500 110	+ +
Depth of seat surface		c ≥ 380	455	+
Seat width		d ≥ 400	457	+
Inclination of seat surface	adjustable adj. range	e ≥ -2° to ≤ -7° ≥ 6°	1,5° - -8,7° 10,2°	+ +
Height of back supp. point "S" above the seat	adjustable adj. range	f ≤ 170 to ≥ 220 ≥ 50	215 *	+ *
Height of back rest	adjustable fixed	g ≥ 220 ≥ 260	* 533	* +
Height of upper edge of the back rest above the seat		h ≥ 360	541	+
Back rest width		i ≥ 360	437	+
Back rest radius horizontal		k ≥ 400		+
Back rest inclination	adj. range	l ≥ 15°	31°	+
Length of the armrest		n ≥ 200	228	+
Width of the armrest ^{b)}		o ≥ 40	93	+
Height of armrest fixed above the seat		p 200 to 250 ≤ 200 to ≥ 250	* 189 - 289	* +
Distance of armrest to the front edge of the seat ^{c)}		q ≥ 100	65 - 150	+
Clear width between ^{d)} armrests	fixed adjustable	r 460 to 510 ≤ 460 to ≥ 510	* 445 - 515	* +
Max. offset of the of the underframe ^{e)}		s ≤ 365	391	+
Stability dimension		t ≥ 195	274	+

a) The limits of the minimum adjustable range consider work heights of min 680 mm to 780 mm. Some users need a foot rest.

b) This requirement applies for a minimum length of "n".

c) This requirement applies for a length from 170 mm above point "A".

d) This requirement applies for ¼ of the seat depth "b" (measured from the seat front edge) with back rest setting most forwarded.

e) When castors are used the requirement is: 415 mm.