

Date received: 12/10/15

Date of issue: 28/12/15

Report consists of 13 test reports.

Defects before testing: None

Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## SAMPLE N° 202858

Overall dimensions: 660 x 660 x 1160 (h) mm

### List performed tests:

1. Office work chair: dimensions EN 1335-1:2000 AC:2002
2. General design requirements EN 1335-2:2009, clause 4.1
3. Information for use EN 1335-2:2009, clause 5
4. Seat and back static load test 1335-3:2009 AC:2009, clause 7.2.1-7.2.2
5. Seat and back durability - EN 1335-3:2009 AC:2009 - Clause 7.3.1
6. Arm rests durability EN 1335-3:2009 AC:2009, clause 7.3.2
7. Arm rest downward static load test-central EN 1335-3:2009 AC:2009, clause 7.2.3
8. Stability EN 1335-3:2009 AC:2009, clause 7.1
9. Rolling resistance of unloaded chair EN 1335-3:2009 AC:2009, clause 7.4
10. Arm rest downward static load test - front EN 1335-3:2009 AC:2009, clause 7.2.4
11. Arm rest sideways static load test EN 1335-3:2009 AC:2009, clause 7.2.5
12. Swivel test EN 1335-3:2009 AC:2009, clause 7.3.3
13. Castors and chair base durability EN 1335-3:2009 AC:2009, clause 7.3.5



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Managing Director  
Dr. Andrea Glavon

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## SAMPLE N° 202858

Date of issue: 28/12/15  
Sample weight: Not determined  
Sample name: EXAGONUS ASYNCRO



Side view



Rear view



Bottom view

## TEST REPORT

202858 / 1

Date received: 12/10/15  
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BRADO S.P.A.  
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ITALIA

## Office work chair: dimensions EN 1335-1:2000 AC:2002

### 1. General features

#### 1.1 Seat

depth: - adjustable with  
horizontal movement  
x fixed

inclination: - fixed  
x adjustable

#### 1.2 Backrest

height: - fixed  
x adjustable  
- adjustable lumbar support

inclination: - fixed  
x adjustable

#### 1.3 Seat and back synchronized

Yes

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*Managing Director*  
*Dr. Andrea Giavon*

# TEST REPORT

**202858 / 1**

Date of issue:

28/12/15

Sample name:

EXAGONUS ASYNCRO

## Type of chair: B

### Test Results:

All linear dimensions are in mm

symbol	Parameter	requirement	measured	conformity
<b>SEAT</b>				
a	seat height	420 to 510	402 to 516	yes
	adjustment range	100 min	114	yes
b	seat depth - non adjustable	380 ÷ 440	428	yes
	seat depth - adjustable	400 to 420	//	//
	adjustment range	50 min	//	//
c	depth of seat surface	380 min	452	yes
d	seat width	400 min	473	yes
e	inclination of seat surface - non adjustable	-2° ÷ - 7°	//	//
	inclination of seat surface - adjustable	-2° to - 7°	-1,3°±0,6* to -8,8°±0,6*	yes
<b>BACK REST</b>				
f	height of the back supporting point "S" non adjust.	170 ÷ 220	//	//
	height of the back supporting point "S" adjust.	170 to 220	168,9±0,7* to 228,8±0,7*	yes
	adjustment range	50 min	59,9	yes
g	height of the back pad - adjustable in height	220 min	506	yes
	height of the back pad - non adjustable in height	260 min	//	//
h	height of the upper edge of the back rest	360 min	563	yes
i	back rest width	360 min	455	yes
k	horizontal radius of the back rest	400 min	> 400	yes
l	back rest inclination (adjustment range)	15° min	32°	yes
<b>ARM REST</b>				
n	length of arm rest	200 min	229	yes
o	width of arm rest	40 min	75	yes
p	height of armrest - adjustable	200 to 250	197,3±0,7* to 269	yes
	height of armrest - non adjustable	200 ÷ 250	//	//
q	distance from the front of the arm rest to the front edge of the seat	100 min	111	yes
r	clear width between the arm rests	460 ÷ 510	482	yes
<b>UNDERFRAME</b>				
s	maximum offset of the underframe	415 max	353	yes
t	stability dimension	195 min	225	yes

\*The result is the average of 3 measures

Unless otherwise specified, measurement uncertainties expanded to a confidence level of about 95% are ±5 mm for linear measures, ±2° for angles, ±10mm for the height of the back supporting point "S".

The measurement uncertainties stated in this document have been determined according to UNI CEI ENV 13005:2000. They were estimated as expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally k=2.

NOTE: the back supporting point has been determined by setting the back rest in its most upright position because the method described in EN 1335-1:2000 clause 3.6 is not applicable.

## TEST REPORT

**202858 / 2**

Date received: 12/10/15  
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Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## General design requirements EN 1335-2:2009, clause 4.1

Requirements	Remarks
a) Parts in contact by user: Distance of accessible movable parts shall be either $\leq 8$ mm and $\geq 25$ mm in any position during movement.	Yes
b) Corners and edges in contact by user: Minimum radius of corners and edges: 2 mm	Yes
c) Edges of handles: Minimum radius of handle edges: 2 mm	Yes
d) All other edges: Rounded or chamfered:	Yes
e) Ends of hollow components: Closed or capped	Yes
f) It shall be possible to operate the adjusting devices from sitting position in the chair:	Yes
g) It shall not be possible for any load bearing part to come loose unintentionally:	Yes
h) Lubricated parts: All parts which are lubricated shall be protected	Yes

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## TEST REPORT

**202858 / 3**

Date received: 12/10/15  
Date of test: 23/11/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
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ITALIA

## Information for use EN 1335-2:2009, clause 5

Statement checked	Remarks
Information for use in the language of the country in which the chair will be delivered to the end user.	Italian language
Information regarding the intended use.	Present
Information regarding possible adjustments and chair type	Present
Instruction for operating the adjusting mechanisms.	Present
Instruction for the care and the maintenance of the chair.	Present
Information regarding adjustment of the seat and back rest.	Present
Advice that only trained personnel may replace or repair seat height adjustment components with energy accumulators.	Present
Information on the choice of castors in relation to the floor surface.	Present

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## TEST REPORT

**202858 / 4**

Date received: 12/10/15  
Date of test: 14/10/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## Seat and back static load test 1335-3:2009 AC:2009, clause 7.2.1-7.2.2

### Seat front edge static load, clause 7.2.1

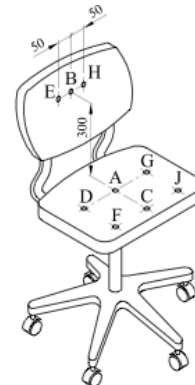
Seat height: highest position  
Seat depth: foremost position

Test results:

Seat load N	Number of cycles	Back rest inclination mechanism	Remarks
1.600	10	F	No defects

### Seat and back static load test, clause 7.2.2

Seat height: highest position  
Seat inclination: horizontal  
Back rest in height: highest position  
Back rest in depth: rearmost position  
Position of castors: perpendicular to the base arms  
Tension of mechanism spring: medium



Test results:

Seat load N	Back force N	Number of cycles	Loading point	Back rest inclination mechanism	Remarks
1.600	530	5	A - B	Locked	No defects
1.600	530	5	A - B	Unlocked	No defects

Note: According to EN 1335-3:2009 back force has been reduced from 560 N to 530 N to avoid tipping.

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## TEST REPORT

**202858 / 5**

Date received: 12/10/15  
Date of test: 15/10/15  
Date of issue: 28/12/15



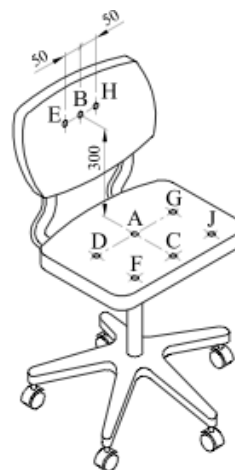
Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## Seat and back durability - EN 1335-3:2009 AC:2009 - Clause 7.3.1

### Seat and back durability clause 7.3.1

Seat height: highest position  
Seat inclination: horizontal  
Back rest in height: highest position  
Back rest in depth: rearmost position  
Position of castors: perpendicular to the base arms  
Tension of mechanism spring: medium



### Test results:

Number of cycles	Loading point	Force N	Back rest inclination mechanism	Remarks
120.000	A	1.500	Locked	No defects
40.000	C B	1200 320	Locked	No defects
40.000	C B	1200 320	Unlocked	No defects
20.000	J E	1200 320	Unlocked	No defects
20.000	F H	1200 320	Unlocked	No defects
20.000	D G	1100 1100	Unlocked	No defects

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**TEST REPORT**

**202858 / 6**

Date received: 12/10/15  
Date of test: 17/11/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

**Arm rests durability EN 1335-3:2009 AC:2009, clause 7.3.2**

Arm rest durability, clause 7.3.2

Seat height: lowest position  
Seat inclination: horizontal  
Armrest positioning: highest

Test results:

Load on arm rest N	Number of cycles	Remarks
400	60.000	No defects

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## TEST REPORT

**202858 / 7**

Date received: 12/10/15  
Date of test: 25/11/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

### Arm rest downward static load test-central EN 1335-3:2009 AC:2009, clause 7.2.3

Arm rest downward static load test - central, clause 7.2.3

Seat height: lowest position  
Seat inclination: horizontal  
Armrest positioning: highest

Test results:

Load on the arm rest	Number of cycles	Remarks
750	5	See note
900	5	No defects

Note: after the functional load of 750 N the chair does not overbalance.

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## TEST REPORT

### 202858 / 8

Date received: 12/10/15  
Date of test: 12/10/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## Stability EN 1335-3:2009 AC:2009, clause 7.1

Loads, masses and cycles according to table A1 of EN 1335-2:2009

Positioning of chair components: as specified in Table 1 of EN 1335-3:2009

Front edge overturning, clause 7.1.1 : does not overturn

Forwards overturning, clause 7.1.2 : does not overturn

Forwards overturning for chairs with footrest, clause 7.1.3 : /

Sideways overturning, clause 7.1.4 : /

Sideways overturning for chairs with arms, clause 7.1.5 : does not overturn

Rearwards overturning

Fixed back chair, clause 7.1.6 : /

Chair with back rest inclination, clause 7.1.7 : does not overturn

Note: The test has been carried out after the functional load on the arm rest.

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## TEST REPORT

**202858 / 9**

Date received: 12/10/15  
Date of test: 25/11/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## Rolling resistance of unloaded chair EN 1335-3:2009 AC:2009, clause 7.4

### Rolling resistance of unloaded chair, clause 7.4

Type of castors: W  
Test surface: steel floor  
Test speed: 50 mm/s  
Seat height: lowest position

### Test results:

Measured resistance of castors N	Minimum allowed resistance N	Remarks
34,4	12	No defects

Unless otherwise specified, measurement uncertainty expanded to a confidence level of about 95% are  $\pm 2,0$  N.

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## TEST REPORT

**202858 / 10**

Date received: 12/10/15  
Date of test: 25/11/15  
Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

### Arm rest downward static load test - front EN 1335-3:2009 AC:2009, clause 7.2.4

Arm rest downward static load test - front, clause 7.2.4

Seat height: lowest position  
Seat inclination: horizontal  
Armrest positioning: highest

Test results:

Load on the arm rest N	Number of cycles	Remarks
450	5	No defects

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## TEST REPORT

**202858 / 11**

Date received: 12/10/15  
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Date of issue: 28/12/15



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

### Arm rest sideways static load test EN 1335-3:2009 AC:2009, clause 7.2.5

Arm rest sideways static load test, clause 7.2.5

Seat height: lowest position  
Seat inclination: horizontal  
Armrest positioning: highest

Test results:

Horizontal force N	Number of applications	Remarks
400	10	No defects

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# TEST REPORT

## 202858 / 12

Date received: 12/10/15  
Date of test: 16/12/15  
Date of issue: 28/12/15



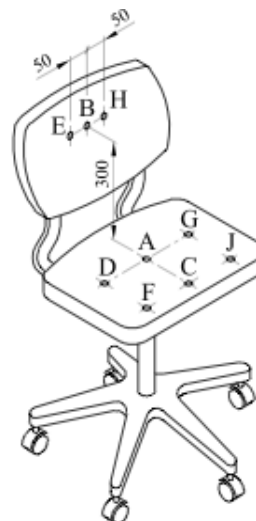
Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

### Swivel test EN 1335-3:2009 AC:2009, clause 7.3.3

Swivel test, clause 7.3.3

Seat height: highest position  
Position of seat: horizontal  
Back rest in height: highest position  
Back rest in depth: rearmost position



Test results:

Seat load on point A kg	Seat load on point C kg	Number of cycles	Remarks
60	35	120.000	No defects

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## TEST REPORT

**202858 / 13 S**

Date received: 12/10/15  
Date of test: 25/11/15  
Date of issue: 11/01/16



Sample name: EXAGONUS ASYNCRO

BRADO S.P.A.  
VIA CAL DI MEZZO 3  
31030 BIGOLINO DI VALDOBBIADENE (TV)  
ITALIA

## Castors and chair base durability EN 1335-3:2009 AC:2009, clause 7.3.5

Castors and chair base durability, clause 7.3.5

Type of castors: W

Movement of rotating table: from 0° to 180° and back

Rotation speed: 6 rotation/min

Seat height: lowest position

Seat inclination: horizontal

Test results:

Seat load kg	Number of cycles	Remarks
110	36.000	No defects

This document replaces the previous one with the same reference and with date of issue 28/12/15.

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