The following sample(s) was / were submitted and identified on behalf of the client as:

| Sample Description | $:$ PUBLIC SEATING / SEDUTE D' ATTESA |
| :--- | :--- |
| Style / Item No. | $:$ PANCA STEP SALA ATTESA |
|  | PANCA WAY SALA ATTESA |
| Supplier |  |
| Country of Origin |  |
| Sample Receiving Date |  |
| Test Performing Date |  |

Test Result Summary

| Test(s) Requested | Result(s) |
| :--- | :--- |
| EN 16139:2013/AC:2013 (Level 2) excluding information for use | PASS |

## Summary:

1. For further details, please refer to the following page(s).

Signed for and on behalf of Shunde Branch
SGS-CSTC Co., Ltd.


Bill Wang
Approved signatory


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Test Report

## Test Conducted:

EN 16139:2013/AC:2013 Furniture - Strength, durability and safety - Requirements for non-domestic seating excluding information for use.

## General Test Condition:

The following test program was conducted in a laboratory environment maintained at $15^{\circ} \mathrm{C}$ to $25^{\circ} \mathrm{C}$ and $50 \% \pm 5$ RH. The sample was individually tested after conditioning in the test environment for at least 24 hours prior to conducting the test.
The complete detailed procedures may be found in the referenced specification and are only summarized herein. Unless otherwise specified, the tests are carried out in the following order on the same sample.

## No. of Sample:

1 piece (Sample 1). For more sample information and pictures, please refer to the following page.
Test Severity: Level 2 (Extreme use). For the test severity in relation to applications, please refer to Annex A.

| Test | Test Description and Requirements | Test Results |
| :--- | :--- | :--- |
| 4 Safety Requirements | General <br> The seating shall be so designed as to minimise the risk of injury to <br> the user. <br> All accessible parts shall be so designed that physical injury and <br> damage are avoided. <br> This requirement is met when: <br> a) accessible corners are rounded or chamfered; <br> b) the edges of the seat, back rest and arm rests which are in <br> contact with the user when sitting in the chair are rounded or <br> chamfered; <br> c) the edges of handles are rounded or chamfered in the direction <br> of the force applied; <br> d) all other edges are free from burrs and rounded or chamfered; <br> e) the ends of hollow components are closed or capped. <br> Movable and adjustable parts shall be designed so that injuries and <br> inadvertent operation are avoided. <br> It shall not be possible for any load bearing part of the seating to <br> come loose unintentionally. <br> All parts which are lubricated to assist sliding shall be designed to <br> protect users from lubricant stains when in normal use. |  |
| 4.1 | PASS |  |
| Shear and squeeze points (8 ~ 25 mm) |  |  |



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| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| 4.2.1 | Shear and squeeze points when setting up and folding Unless 4.2.2 or 4.2.3 are applicable, shear and squeeze points that are created only during setting up and folding, including tipping seat actions, are acceptable, because the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately upon experiencing pain. <br> The edges of parts moving relative to each other and creating shear and squeeze points shall be as specified in 4.1. | PASS |
| 4.2.2 | Shear and squeeze points under the influence of powered mechanisms <br> With the exception of tipping seats there shall be no shear and squeeze points created by parts of the seating operated by powered mechanisms, e.g. springs and gas lifts. | N/A |
| 4.2.3 | Shear and squeeze points during use <br> There shall be no shear and squeeze points created by forces applied during normal use as well as during normal movements and actions, see Table 1. | PASS |
| 4.3 | Stability <br> The seating shall not overturn under the following conditions: <br> a) by pressing down on the front edge of the seat surface in the med <br> b) by applying a load on the seat surface via the front corner; <br> c) by leaning sideways on an item of seating with or without arm res <br> d) by leaning against the back rest; <br> e) by sitting on the front edge of the seat; <br> f) by loading the foot rest. | lane; |
| 4.3.2 | Swiveling chairs <br> Requirements a) to e) are considered to be met if the seating complies with EN 1335-2:2009. <br> Requirements f) are considered to be met if the seating complies with EN 1022:2005; 6.3. | N/A |
| 4.3.3 | Non Swiveling chairs <br> Requirements a) to f) are considered to be met if the seating complies with EN 1022:2005. | PASS |



Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1335-2:2009, 4.3 | Stability during use <br> The chair shall not overbalance under the following conditions: <br> a) by pressing down on the front edge of the seat surface in the most adverse position; <br> b) by leaning out over the arm rests; <br> c) by leaning against the back rest; <br> d) by sitting on the front edge. <br> Requirement a) is fulfilled if the chair does not overbalance when tested according to 7.1.1 of EN 1335-3:2009 with the forces and numbers of cycles according to Table A. 1 of this standard. <br> Requirements b) and d) are fulfilled if the chair does not overbalance when tested according to 7.1.2, 7.1.3, 7.1.4 and 7.1.5 of EN 1335-3:2009 with the forces and numbers of cycles according to Table A. 1 of this standard. <br> Requirement c) is fulfilled if the chair does not overbalance when tested according to 7.1.6 or 7.1.7 of EN 1335-3:2009 with the forces and numbers of cycles according to Table A. 1 of this standard. |  |
| EN 1335-3:2009, 7.1.1 | Front edge overturning <br> Do not position the chair with the stops against the supporting points Fix the strap to the chair, i.e. the force is applied at the point on the front edge that is furthest from the axis of rotation, and allow the mass 27 kg to hang freely. | N/A |
| EN 1335-3:2009, 7.1 .2 | Forwards overturning <br> Position the chair with two adjacent supporting points on the front against the stops. <br> Apply by means of the stability loading device a vertical force 600 N acting 60 mm from the front edge of the load bearing structure of the seat at those points most likely to result in overturning. Apply for at least 5 s a horizontal outwards force 20 N from the point on the seat surface where the vertical force is applied. | N/A |
| EN 1335-3:2009, 7.1 .3 | Forwards overturning for chairs with footrest <br> For chairs with footrests repeat the principle of 7.1.2 on the footrest. For round cross section ring shaped footrests, the vertical force 1100 N shall be applied through the centre of the ring cross section. | N/A |
| EN 1335-3:2009, 7.1.4 | Sideways overturning for chairs without arm rests Position the chair with two adjacent supporting points on one side against the stops. <br> Apply by means of the stability loading device a vertical force 600 N acting 60 mm from the side edge of the load bearing structure of the seat at those points most likely to result in overturning. Apply for at least 5 s a horizontal sideways force 20 N outwards from the point on the seat surface where the vertical force is applied. | N/A |



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| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1335-3:2009, 7.1 .5 | Sideways overturning for chairs with arm rests <br> Position the chair with two adjacent supporting points on one side against the stops. <br> Apply by means of the stability loading device a vertical force 250 N acting at a point 100 mm from the fore and aft centre line of the seat at the side where the supporting points are restrained and between 175 mm and 250 mm forward of the rear edge of the seat. Apply a vertical downward force 350 N acting at points on the arm rest which is on the same side as the restrained supporting points up to a maximum 40 mm inwards from the outer edge of the upper surface of the arm rest, but not beyond the centre of the arm rest, and at the most adverse position along its length. Apply a horizontal sideways force 20 N outwards from the same point for at least 5 s . | N/A |
| EN 1335-3:2009, 7.1.6 | Rearwards overturning for chairs without back rest inclination Position the chair with two adjacent supporting points on the back against the stops. When an independent lumbar adjustment is fitted it shall be set in the most adverse configuration. <br> A vertical force 600 N shall be applied at point " A " and a horizontal force 192 N shall be applied at point " B ". If the back rest pad is pivoting around a horizontal axis above the height of the seat and is free to move, the horizontal force shall be applied on the axis. If height adjustable, the axis shall be set as close as possible to300 mm above point "A". | N/A |
| EN 1335-3:2009, 7.1.7 | Rearwards overturning for chairs with adjustable back rest inclination <br> Do not position the chair with the supporting points against the stops. When an independent lumbar adjustment is fitted it shall be set in the most adverse configuration. Load the chair with 13 discs so that the discs are firmly settled against the back rest. If the height of the stack of discs exceeds the height of the back rest, prevent the upper discs from sliding off by the use of a light support. | N/A |
| EN 1022:2005, 6 | Test procedure and requirements, all seating: experimental meth |  |
| EN 1022:2005, 6.2 | Forwards overbalancing, all seating <br> Apply a force $\mathrm{Fv}=600 \mathrm{~N}$ vertically (for multiple sitting places to a maximum of 2 places) by means of the loading pad acting at those points 60 mm behind the front edge of the load bearing structure most likely to result in overturning. <br> At each loaded position apply a force $\mathrm{FH}=20 \mathrm{~N}$ for at least 5 s horizontally outwards along a horizontal line extended forward from the point where the base of the loading pad meets the upper surface of the seat. | PASS |
| EN 1022:2005, 6.3 | Forwards overturning for seating with footrest <br> For seating with footrests repeat the procedure in 6.2 applying the vertical and horizontal loads to the footrests. <br> For footrests of tubular construction the loads shall be applied along the centre line of the tube. | N/A |



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Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1022:2005, 6.4 | Sideways overbalancing, all seating without arms Apply a force $\mathrm{Fv}=600 \mathrm{~N}$ vertically by means of the loading pad at those points 60 mm behind the edge of the load bearing structure of the side nearest the stopped feet most likely to result in overturning. Apply a sideways force $\mathrm{FH}=20 \mathrm{~N}$ horizontally outwards for at least 5 s along a line from the point where the base of the loading pad meets the upper surface of the seat. | N/A |
| EN 1022:2005, 6.5 | Sideways overbalancing, all seating with arms Apply a vertical force F1 = 350 N by means of the loading pad at a position on the centre line of the arm up to a maximum 40 mm inwards from the outer edge of the arm structure at the most adverse position along its length. <br> Apply a vertical force F2 $=250 \mathrm{~N}$ at a point 100 mm to the side of the fore and aft centre line of the seat (Figure 6) which is nearest the stopped feet and at the same distance from the backrest as the arm loads. <br> Apply a horizontal force $\mathrm{F}_{\mathrm{H}}=20 \mathrm{~N}$ outwards, and perpendicular to the line joining the stopped feet, for at least 5 s , at the upper surface of the armrest in line with the vertical arm force and on the side with stopped feet. | PASS |
| EN 1022:2005, 6.6 | Rearwards overbalancing, all seating with backs <br> This sub-clause only applies to seating with backs extending 50 mm or more above the unloaded seat. <br> All adjustable backs shall be set in their most upright position. <br> Apply a vertical force $\mathrm{Fv}=600 \mathrm{~N}$ to the seat by means of the loading pad (4.2) at the seat loading point (A) determined by the loading point template. <br> Determine the distance $(\mathrm{H})$ in millimeters between the loaded seat and the floor. For seating having a value of $\mathrm{H} \geq 720 \mathrm{~mm}$ uses a force $\mathrm{F}_{\mathrm{H}}=80 \mathrm{~N}$. <br> For seating having a value of $\mathrm{H}<720 \mathrm{~mm}$ calculate the force F , in newtons, required from the following formula: $F_{H}=0,2857$ (1000$H$ ). Where: $H$ is in millimeters; $F$ is in newtons. <br> Apply the force F horizontally for at least 5 s in a rearward direction to the back of the seating at the point (B) determined by the loading point template, or at the top edge of the back rest, whichever is the lower. When the seating has more than one sitting place, carry out the procedure on two most adverse sitting places simultaneously. | $\begin{gathered} \text { PASS } \\ \mathrm{H}=350 \mathrm{~mm} \\ \mathrm{~F}=186 \mathrm{~N} \end{gathered}$ |
| EN 1022:2005, 7 | Test procedures and requirements for seating with variable geometry: experimental method. |  |
| EN 1022:2005, 7.3 | Tilting chairs <br> The test method applies to all values of $\theta \geqslant 10$ and values of $\gamma$ between $90^{\circ}$ and $170^{\circ}$. If the seating has a locking system it shall be set in the fully tilted position. <br> Load the seat with 11 loading discs ( $10 \mathrm{~kg} \mathrm{)} \mathrm{so} \mathrm{that} \mathrm{the} \mathrm{discs} \mathrm{are}$ firmly settled against the back rest. | N/A |



Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1022:2005, 7.4 | Rocking chairs <br> Load the chair with 8 loading discs ( 10 kg ) so that the discs rest against the chair back. <br> Rock the chair forwards as far as is practicable or until the back is vertical. Allow the chair to rock rearwards freely under gravity. | N/A |
| EN 1022:2005, 7.5 | Reclining chairs with footrest <br> The test method applies to all values of $\theta \geqslant 10$ and values of $\gamma$ between $90^{\circ}$ and $170^{\circ}$. <br> With the chair in the fully reclined configuration, load the back of the chair with 8 loading discs ( 10 kg ) by means of the support device and place 3 loading discs ( 10 kg ) onto the footrest at a distance Z from the intersection of the seat and back. | N/A |
| EN 1022:2005, 7.6 | Footrest test <br> In some cases the forward stability test cannot be carried out on a reclining chair because the footrest folds up. In this case, the forward stability test shall be applied with the footrest in the folded condition only. <br> However, in those cases where the footrest does not fold as the sitter's weight is moved towards the footrest (e.g. lever operated chairs) the forward stability test shall be applied to the footrest in its fully extended position. | N/A |
| EN 1022:2005, 7.7 | Reclining chairs without footrest <br> The test method applies to all values of $\theta \geqslant 10$ and values of $\gamma$ between $90^{\circ}$ and $170^{\circ}$. <br> Load the back of the chair with 8 loading discs ( 10 kg ) by means of the support device and place three loading discs onto the front of the seat of the chair at a distance X from the intersection of the seat and back. | N/A |
| 4.4 | Rolling resistance of the unloaded chair <br> This subclause is only applicable to single seating units fitted with castors or wheels. <br> The unloaded seating shall not roll unintentionally. <br> This requirement is met when: <br> the rolling resistance is $\geq 12 \mathrm{~N}$ when tested in accordance with EN 1335-3:2009, 7.4; and all castors are of the same type. | N/A |
| EN 16139:2013, 5 | Safety, strength and durability requirements <br> These safety, strength and durability requirements are fulfilled when during and after testing in accordance with Table 1: <br> a) there are no fractures of any member, joint or component; <br> b) there are no loosening of joints intended to be rigid; <br> c) no major structural element is significantly deformed; <br> d) the chair fulfils its functions after removal of the test loads. |  |



| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1728:2012, 6.4 | Seat static load and back static load test <br> Only the vertical seat static force shall be applied to items without a back rest. Apply the downward force Fv at the seat loading position. With the downward force maintained, apply the back force $\mathrm{F}_{\mathrm{H}}$ at back loading position. Remove the back load and then the seat load. Seating with a fixed back position, and seating with reclining mechanisms that cannot be locked into a fixed position, shall be tested for the number of 10 cycles; Seating with reclining mechanisms that can be set or locked in a number of positions shall be tested for 5 cycles in the most upright position, and 5 cycles in the most adverse reclined position. The force Fv and $\mathrm{F}_{\mathrm{H}}$ are decided by following rules: <br> - When $\varnothing$ min $\geqslant 70^{\circ}, F v=2000 \mathrm{~N}, \mathrm{~F}_{\mathrm{H}}=700 \mathrm{~N}$; <br> - When $55^{\circ} \leqslant \varnothing$ min $<70^{\circ}$, <br> $\mathrm{Fv}=2000 \mathrm{~N} x \sin \varnothing \mathrm{~min}$ <br> $\mathrm{F}_{\mathrm{H}}=\left(\varnothing / 60^{\circ}-0.1666\right) \times 700 \mathrm{~N} \times \cos \varnothing \mathrm{min}$ <br> - When $\varnothing$ min $<55^{\circ}$, $\begin{aligned} & \mathrm{Fv}=0.75 \times 2000 \mathrm{~N} \\ & \mathrm{~F}_{\mathrm{H}}=0.75 \times 700 \mathrm{~N} \times \cos \varnothing \mathrm{min} \end{aligned}$ | PASS |
| EN 1728:2012, 6.5 | Seat front edge static load <br> Apply the vertical force of 1600 N using the seat loading pad at a point on the seat centre line 100 mm inwards from the front edge of the structure. <br> For multiple seating units, the seat front edge static load test shall be carried out simultaneously on the same seats as used for the seat and back static load test During the test, load the seat(s) that are not being tested with the specified seat load for parts not undergoing test, applied at the seat loading position. Repeat above operation for 10 cycles. | PASS |
| EN 1728:2012, 6.6 | Vertical load on back rests <br> The test is only applicable for chairs without head/neck rest and for chairs with a height of the backrest < 1000 mm above ground. Apply the vertical force of 1800 N to the seat loading point and maintain for the duration of the test. <br> Apply the downwards static force of 900 N to the top of the back rest, on the centre line of the back. Apply the force through the seat loading pad. If it is not possible to use the seat loading pad, apply the force with the smaller seat loading pad. <br> For multiple seating units, the downwards static force shall be applied simultaneously on the same positions as used for the seat and back static load test. During the test, load the seat(s) that are not being tested with 750 N at the seat loading position. <br> If the seating tends to overturn, reduce the downwards static force(s) on the back rest to a magnitude that just prevents overturning. Repeat above operation for 10 cycles. | PASS |



Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 1728:2012, 6.8 | Foot rest static load test <br> Apply the downward force of 750 N to the seat at the seat loading point. <br> Apply a vertical force of 1600 N by means of the local loading pad ( $\mathrm{D}=100 \mathrm{~mm}$ ) acting 80 mm from front edge of the load bearing structure of the foot rest at those points most likely to cause failure. For round cross section ring shaped footrests, the force shall be applied through the centre of the ring cross section. Repeat above operation for 10 cycles. | N/A |
| EN 1728:2012, 6.9 | Leg rest static load test <br> This test is only applicable to leg rests designed to support the full weight of the user. <br> Apply the downward force of 750 N to the seat at the seat loading point. <br> Using the seat loading pad, apply the vertical force of 1600 N 100 mm in from the outer edge of the leg rest at the point most likely to cause failure. Repeat above operation for 10 cycles. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.10 \end{gathered}$ | Arm rest sideways static load test <br> For seating with one arm rest, apply an outward force of 900 N to the arm rest at the point along the arm rest most likely to cause failure, but not less than 100 mm from the end of the arm rest structure. Apply the force using the local loading pad ( $D=100 \mathrm{~mm}$ ). For seating with two arm rests, apply an outward force to each arm rest of the unit simultaneously. <br> For seating with three or more arm rests, carry out the test on one pair of adjacent arm rests. All different arm rest designs shall be tested. <br> Repeat above operation for 10 cycles. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.11 \end{gathered}$ | Arm rest downwards static load test <br> For seating which only has one arm rest, or which has two arm rests where the distance between the centre of the arm rests is more than 1000 mm , apply the vertical force 900 N at the points along the arm rest most likely to cause failure, but not less than 100 mm from the end of the arm rest structure. <br> For seating with two arm rests, where the distance between the centre of the arm rests is 1000 mm or less, apply the vertical force simultaneously to both arm rests. <br> For seating with three or more arm rests, carry out the test on one pair of adjacent arm rests. All different arm rest designs shall be tested. <br> Repeat above operation for 5 cycles. <br> Loading pad: $\mathrm{D}=200 \mathrm{~mm}$ or 100 mm | PASS |



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| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.13 .1 \end{gathered}$ | Vertical upwards static load on arm rests - Seating which may be moved when occupied <br> This test is only applicable to seating where it is expected that it may be moved when occupied by lifting by the arm rests. Place the seat load with 1200 N at the seat loading point. Apply an upwards force simultaneously to both arms, at the balance point, sufficient to lift the seating. Lower the chair so that it rests on the floor. Repeat above operation for 10 cycles and maintains at least 10 seconds during each cycles. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.13 .2 \end{gathered}$ | Vertical upwards static load on arm rests - Stacking seating This test applies only to stacking seating units where the stack is moved by lifting by the arm rests. Normally this test does not apply when the manufacturer supplies devices for moving the seating or when the information for use includes instructions for moving the stack of chairs without lifting by the arm rests. Load the chair with 1200 N at the seat loading point. Apply an upwards force sufficient to lift the seating simultaneously to both arms at the balance point. Lower the seating unit so that it rests on the floor. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.17 \end{gathered}$ | Combined seat and back durability test <br> Only the vertical seat durability force shall be applied to items without a back rest. Apply the downward force Fv at the seat loading position. With the downward force maintained, apply the back force FH at back loading position. Remove the back load and then the seat load. Seating with a fixed back position, and seating with reclining mechanisms that cannot be locked into a fixed position, shall be tested for the number of 200000 cycles; Seating with reclining mechanisms that can be set or locked in a number of positions shall be tested for 100000 cycles in the most upright position, and 100000 cycles in the most adverse reclined position. The force Fv and FH are decided by following rules: $\begin{aligned} & -\quad \text { When } \varnothing \min \geqslant 70^{\circ}, F v=1000 \mathrm{~N}, \mathrm{~F}_{\mathrm{H}}=300 \mathrm{~N} ; \\ & -\quad \text { When } 55^{\circ} \leqslant \varnothing \min <70^{\circ}, \\ & \mathrm{Fv}=1000 \mathrm{~N} \times \sin \varnothing \mathrm{min} \\ & \mathrm{~F}_{\mathrm{H}}=\left(\varnothing / 60^{\circ}-0.1666\right) \times 300 \mathrm{~N} \times \cos \varnothing \mathrm{min} \end{aligned}$ $\begin{aligned} & -\quad \text { When } \varnothing \min <55^{\circ}, \\ & \mathrm{Fv}=0.75 \times 1000 \mathrm{~N} \\ & \mathrm{~F}_{\mathrm{H}}=0.75 \times 300 \mathrm{~N} \times \cos \varnothing \mathrm{min} \end{aligned}$ | PASS |



| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.18 \end{gathered}$ | Seat front edge durability test <br> Apply the vertical seat durability force $\mathrm{Fv}=800 \mathrm{~N}$ using the smaller seat loading pad ( $\mathrm{D}=100 \mathrm{~mm}$ ) alternately on two points each 100 mm from the front edge of the seat structure and as near as possible to either side of the seat but not less than 100 mm from the edges. One cycle is one application of the specified force to each load position. <br> For seating where it is not possible to apply the force at two points, the force shall be applied to a single position on the longitudinal axes at a point 100 mm from the front edge of the seat structure. One cycle is two applications of the specified force. <br> Repeat above operation for 100000 cycles. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.20 \end{gathered}$ | Arm rest durability test <br> The test load of 400 N shall be applied simultaneously on two points for 60000 cycles, at the point most likely to cause failure, but not less than 100 mm from the front or rear edge of the arm rest length and through the centre of the width of the arm rest, but not more than 100 mm from the inner edge of the arm rest. <br> The force shall be applied at an angle of $(10 \pm 1)^{\circ}$ to the vertical, and to both arm rests simultaneously for seating with only one seating position and to one arm rest only for seating with multiple seating positions. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.21 \end{gathered}$ | Foot rest durability test <br> Apply a vertical force of 1000 N by means of the local loading pad acting 80 mm from front edge of the load bearing structure of the foot rest at those points most likely to cause failure. For round cross section ring shaped footrests, the force shall be applied through the centre of the ring cross section. Repeat above operation for 100 000 cycles. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.15 \end{gathered}$ | Leg forward static load test <br> For seating with a single seat, apply the seat load $\mathrm{Fv}=1800 \mathrm{~N}$ at the seat loading position. Apply the horizontal force $F_{H}=620 \mathrm{~N}$ centrally to the rear of the seat, at seat level, in a forward direction, by means of the local loading pad ( $\mathrm{D}=100 \mathrm{~mm}$ ). For seating with multiple seating positions, apply the horizontal force of the most adverse seat position. For seating with only three legs, one foot on the fore and aft centre line of the item of seating and one other foot shall be restrained by stops. Repeat above operation for 10 times. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.16 \end{gathered}$ | Leg sideways static load test <br> Apply the seat load $\mathrm{Fv}=1800 \mathrm{~N}$ at any position not more than 150 mm from the unload edge of the seat. Apply a horizontal force $\mathrm{F}_{\mathrm{H}}=760 \mathrm{~N}$ centrally to the unrestrained side of the seat, at seat level, in a direction towards the restrained feet. For seating with only three legs, one foot on the fore and aft centre line of the item of seating and one other foot shall be restrained by stops. Repeat above operation for 10 times. | PASS |



Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.24 \end{gathered}$ | Seat Impact Test <br> Place one layer of 25 mm thick foam on the seat. Determine the height of fall from the position of the impactor when it is resting on the surface of that layer of foam. Place a second layer of 25 mm thick foam between the striking surface and the chair seat for the test. Allow the seat impactor to fall freely from the height of 300 mm onto the seat loading position, Repeat the test at one other position considered likely to cause failure, but not less than 100 mm from any edge of the seat. For multiple seating units, apply the test to one end seat and an intermediate seating position. Repeat above operation for 10 times. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.25 \end{gathered}$ | Back Impact Test <br> Allow the impact hammer ( 6.5 kg ) to fall freely from the height $\mathrm{H}=$ 330 mm or an angel $\theta=48^{\circ}$ onto the center of the top outside of the chair back for 10 times. <br> If the item has no back, strike the centre of the seat rear edge. <br> If a stool or bench has no easily determined rear edge, apply the test in the direction most likely to cause failure. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.26 \end{gathered}$ | Arm rest impact test <br> Allow the impact hammer ( 6.5 kg ) to fall freely from the height $\mathrm{H}=$ 330 mm or an angel $\theta=48^{\circ}$ onto the position most likely to cause failure, but not less than 50 mm from the end of the arm rest for 10 times. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.27 .1 \end{gathered}$ | Drop test for multiple seat units <br> Lift the item at one end/side and allow it to fall freely from the 450 mm so that the feet or castors strike the floor for 5 times. Repeat the test on the other end of the item. | PASS |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.14 \end{gathered}$ | Vertical static load on auxiliary writing surfaces Apply the downwards force of 300 N by means of the local loading pad to the point on the writing surface furthest from any support, but not less than 100 mm from any edge of the writing surface. Repeat above operation for 10 times. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.22 \end{gathered}$ | Auxiliary writing surfaces durability test Apply a downwards vertical force of 150 N at the same position as specified in 6.14 using the local loading pad for 20000 cycles. | N/A |



Test Report

| Test | Test Description and Requirements | Test Results |
| :---: | :---: | :---: |
| EN 16139:2013, 7 | Information for use <br> 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: <br> a) information regarding the intended use (see Annex B); <br> b) if the chair is fitted with adjusting mechanisms: instruction for operating the adjusting mechanisms; <br> c) assembly instructions, where applicable; <br> d) instruction for the care and maintenance of the chair; <br> e) if the seating is fitted with castors: information on the choice of castors in relation to the floor surface; <br> f) if the seating is fitted with adjustment mechanisms comprising an energy accumulator, an additional note is required pointing out that only instructed personnel may replace and maintain adjustment mechanisms containing energy accumulators. | N/R |
| Additional Test (Recommended) |  |  |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.27 .2 \end{gathered}$ | Drop test for stacking seating <br> Using two chairs, stack one seating unit upon another and place one 10 kg loading disc on the seat of the upper seating unit located as far towards the rear of the seat as possible. If the mass of the test stack exceeds 20 kg , replace the disc with bag weights (or similar) and reduce the additional load until the mass of the stack is 20 kg . <br> The weight shall be held in position by straps round the seat of the upper seating unit or both seating units if there is insufficient space for the straps between the two seating units. <br> Support the bottom seating unit so that one leg is lifted to200 mm and the line joining that leg to the leg diagonally opposite is inclined $10^{\circ}$ to the horizontal. The two remaining legs shall be maintained at the same level. <br> Drop it on the rubber faced test floor for 10 times. The test shall be carried out on one front leg and one rear leg. <br> The test may be carried out by lifting the seating by means of three cords, which are adjusted in length so that the $10^{\circ}$ angle is obtained. | N/A |
| $\begin{gathered} \text { EN 1728:2012, } \\ 6.28 \end{gathered}$ | Backward fall test <br> Apply a rearward horizontal load to a point 50 mm below the top of the back rest in the centre of the back rest. <br> Measure the force required to lift the front legs off the floor. <br> If the measured force is less than 30 N , push the top of the back rest rearwards until it reaches the equilibrium point. Allow it to fall freely on its back, onto the rubber faced test floor, without initial force or velocity. <br> Repeat for 5 times. | N/A |



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| Test | Test Description and Requirements | Test Results |
| :---: | :--- | :---: |
|  | Drop test from the height of a table <br> This test is only applicable to seating that is designed to be placed <br> at high level (e.g. on a table top during cleaning). Support the <br> seating so that one leg is lifted to 600 mm and the line joining that <br> leg to the leg diagonally opposite is inclined $10^{\circ}$ to the horizontal. <br> The two remaining legs shall be maintained at the same level. <br> EN 1728:2012, <br> Drop it on to the rubber faced test floor for 10 times (5 times on one <br> front leg and 5 times on one rear leg). <br> The test may be carried out by lifting the seating by means of three <br> cords, which are adjusted in length so that the $10^{\circ}$ angle is <br> obtained. | $\mathrm{N} / \mathrm{A}$ |

Annex A: Test severity in relation to applications

| Test Severity | Type of Use | Application |
| :---: | :--- | :--- |
| 1 | General use | Areas in which seating is usually intended for mixed use (short-time and <br> for a period of several hours, light to heavy load). <br> Examples of end-use: all kind of applications in office buildings, <br> showrooms, public halls, function rooms, cafés, restaurants, canteens, <br> banks, bars. |
|  | Areas in which seating is occasionally or repeatedly subject to extremely <br> high loads due to their specific types of use or due to improper use. <br> Examples of end-use: night-clubs, police stations, transport terminals, |  |
|  | Extreme usesport changing rooms, prisons, barracks (non-controlled areas). |  |

## Remark:

1. N/A - Not applicable; N/R - Not Requested; N/P - Not provided.
2. For the sample information and pictures, please refer to the following page.
3. According to client's statements, the Style/ltem No. as stated on the first page are identical to test sample.


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Test Report

## SAMPLE INFORMATION AND PICTURES

Weight: $\quad 40.40 \mathrm{~kg}$
Overall Dimensions: 2380 mm L x 675 mm W x 788 mm H
Other Dimensions: /
Sample as Received


View 1
View 2


View 3


${ }^{* * *}$ End of Report ${ }^{* * *}$


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