

**INSTRUCTION MANUAL FOR THE FITTING, CARE AND USE OF
HARDWOOD FLOORING MADE BY
ZENON SPÓŁKA Z O.O. REGISTERED OFFICE IN BRUSY**

I. GENERAL PRODUCT INFORMATION

- 1.1 All flooring manufactured by ZENON Sp. z o.o., such as solid planks, parquet, and the surface layers of engineered boards, and others, are natural materials.
- 1.2. Every element and batch of our products may have various physical, chemical and decorative features.
- 1.3. Solid planks, parquet, or engineered boards are heat-retaining materials and provide good acoustic insulation.
- 1.4. Pre- finished lacquered flooring is factory-varnished and is coated with either matt or semi-matt varnish and then hardened with UV rays, with a final anti-scratch surface coat.
- 1.5. Pre-finished oiled flooring is factory oiled. Detailed information is available from ZENON Sp. z o.o.
- 1.6. Before laying the floor the Customer is required to become acquainted with the hereby ***Instruction Manual for the Fitting, Care and Use of Hardwood Flooring made by ZENON Sp. z o.o., registered office in Brusy as well as with the Warranty Terms and Conditions.***
- 1.7. Failure to comply with the recommendations concerning the *Instruction Manual* referred to in item 1.6. will result in the loss of any rights the Customer is entitled to under warranty and surety.
- 1.8. The products of ZENON Sp. z o.o. are designed only for direct installation indoors.

II. PRODUCT QUALITY INSPECTION

- 2.1. Prior to, as well as in the course of installation of the product, the Customer is obliged to thoroughly check the product for the presence of any potential defects, and to get acquainted with the hue and grain of the wood. In the event of installation of any product with visible defects, the Manufacturer shall be held free of any liability for damage which the Customer suffers as a result. Any defects and irregularities should be reported to the Seller immediately.
- 2.2. Installation of the flooring shall mean the acceptance of its technical condition and appearance.
- 2.3. Naturally occurring characteristics of wood, such as differences in grain, colour, mineral streaks and knots as well as any acoustic effects such as creaking are not considered defects. These characteristics appear with different intensity, depending on the selected variety as well as the class of wood, and cannot be the subject of any complaints.
- 2.4. In time, as a consequence of exposure to sunlight the oxidizing process may be visible on the surface of flooring products and this may, in turn, cause a gradual darkening of the floor surface.
- 2.5. Loss of lustre on the floor surface during its lifetime is not regarded as a fault of the floor and cannot be the subject of any complaints.

III. STORAGE AND ACCLIMATISATION OF FLOORING PRODUCTS

3.1. Floor panels should be stored in a horizontal position, in closed, dry, airy rooms (with efficient ventilation), in factory closed packages. The product cannot be exposed directly to sunlight and moisture whilst in storage

3.2. The product should be stored at a temperature of 18 - 22°C with a relative air humidity of 45% - 65%. Maintaining of the aforementioned climatic conditions will make it possible to preserve the factory humidity of the product equal to 9% (\pm 2%), as well as its properties, and to gain an optimal hygroscopic balance between the surroundings and the product.

3.3. Due to the necessity of acclimatisation of the flooring in the target room, the product must be stored in the place of installation, in factory closed packages, for as long as possible, in the conditions as defined in item 3.2.

3.4. During colder months when heating is used, if a significant decrease of the relative air humidity below the values indicated in point 3.2 occurs air humidifiers must be used.

3.5. Storage of the product in a vertical position is unacceptable. It should be stored in such a way to prevent the warping of wood.

3.6. It is forbidden to transport flooring products to an unfinished building which has not been closed in, i.e. without windows and/or doors and in which "wet work" - concrete, bricklaying and plastering as well any other wet works have not been completed and dried out.

IV. UNDERLAY PREPARATION AND CLIMATIC CONDITIONS IN THE AREA TO BE FITTED

4.1. Any underlay under the floor which is to be fitted should fulfil all requirements as determined for underlays applied under natural wood floors.

4.2. Prior to the commencement of any works, in each individual case, a specialised flooring fitter should assess and check the underlay resistance, evenness, cohesion, and humidity.

4.3. Any unevenness and dirt such as old oils, wax, grease, varnish, paint, or the remnants of previous floor covering which could limit the adhesion strength – should be removed from the area before the underlay is installed.

4.4. Underlay requirements:

- the underlay should be even, permanently dry, strong, free of scratches, contamination, paint, oil, old adhesive, grease, and remains of any old floor covering;
- wall humidity: below 3%;
- concrete/cement underlay humidity: below 1.8%;
- anhydrite/gypsum underlay humidity: below 0.5%;

- underlay temperature: between 15°C and 18°C;
- underlay evenness - deviations not greater than +/-3 mm per 2 linear metres screed;
- the underlay should have a minimal resistance of 25-30 Mpa to compression, 3.5 Mpa to trimming and 1.5 Mpa to detachment.

4.4.1. Regardless of the method and the type of installation, the humidity of the underlay must be measured beforehand using the carbide method and a CM Gerät instrument.

4.4.2. The underlay should be provided with an adequate thermal and anti-moisture insulation.

4.4.3. Cracks in the underlay should be removed using clamps and polyurethane resin, whereas weak and dusty underlays should be reinforced with epoxide or polyurethane priming; where required – a viscose expanding mat should be laid.

4.5. If a screed floor surface is uneven, it should be levelled with a filler, surfacer, or levelling mass suitable for application under wooden floors.

4.6. Room requirements:

4.6.1. Prior to and during the course of installation of the floor, adequate climatic conditions should be maintained – with the following parameters:

- relative air humidity: between 45% and 65%;
- room air temperature: between 18°C and 22°C;

4.6.2. Humidity and temperature in the room should be checked regularly during the whole process of flooring assembly.

4.6.3. We recommend the installation of a weather station or a moisture meter in order to enable control of the climatic conditions in the room.

V. CHEMICAL AGENTS SELECTION

5.1. It is absolutely forbidden to use dispersion adhesives to install the products.

5.2. The selection of appropriate chemical agents and the method of assembly will be the responsibility of the flooring fitter; in the case of any doubts it is recommended to contact the seller.

5.3. Selection of the appropriate fixing agent depends on the type of underlay, dimensions of the woodblocks and planks as well as on the fact whether the floor is made of finished or unfinished material.

5.4. The application of inappropriate fixing agents and a weak or faulty underlay may be the reason for detachment of the flooring from the underlay.

5.5. Same brand chemical agents should be used for each project and the manufacturers' technical recommendations should be followed closely.

VI. METHODS OF ASSEMBLY

6.1. Assembly of the floor with screws/nails:

- 20mm - as self-supporting structure on joists (supports)
- 15/20mm – on a professionally assembled underlay made of wooden boards
- 15/20mm – on a permanently fixed floor made of solid wood (e.g. old floor planks)

6.2. Assembly of the floor with adhesives:

- 15/20mm - (planks more than 160 mm wide, installation on joists) on a professionally assembled underlay made of wooden boards
- 15/20mm - (planks more than 160 mm wide, installation on joists) on a professionally prepared cement/anhydrite underlay (designed for use under wooden floors).

VII. FLOOR ASSEMBLY

7.1. Before installation, a person with relevant qualifications assigned to install the product along with the buyer or a person appointed by him will be obliged to fill in and sign the ***construction site induction manifest*** (Appendix 1).

7.2. The product must be installed in accordance with the principles of flooring fitting.

7.3. Installation of parquet and solid planks is absolutely forbidden on underfloor heating.

7.4. Flooring can be installed on concrete, wooden and ceramic bases. Anhydrite bases are not recommended.

7.5. Assembly with screws/nails:

7.5.1. *On underlay (floors) of solid wood*

The existing floor should be fixed stable and permanent. Planks should be laid crosswise to those existing ones. In order to eliminate air noises, an acoustic insulation may be applied, for instance cork or other material available on the market.

7.5.2. *On wooden or woodlike boards (e.g. OSB)*

Prior to placing the underlay, the cleanliness and evenness of the base should be checked. The thickness of the underlay should be determined by the flooring fitter.

7.5.3. *On joists*

Joist humidity should be the same as the humidity of the planks to be fitted.

7.6. Assembly with adhesives:

7.6.1. On concrete, wooden, ceramic, and anhydrite underlays (designed for wooden floors).

7.6.2. In the case of concrete/anhydrite or laminate board an appropriate agent reinforcing the underlay should be used.

7.6.3. When assembling solid planks with "finish" type surface, an adhesive appropriate for ready-made floors should be used, depending on the type of underlay used and the dimensions of the planks

7.6.4. The adhesive should be distributed on the base – never on the surface elements -with a trowel with properly matched triangular teeth. The adhesive should not be put on the tongue and in the groove.

7.6.5. Drying times of single and two-component adhesives may vary, therefore the adhesive should not be mixed and put on the surfaces if the amount exceeds the maximum drying time of the adhesive. The drying time of the adhesives may vary depending on the conditions within the room.

7.6.6. Planks and parquet should be laid on a fresh coat of adhesive, and then they should be pressed with hand and hammered with a mallet in order to join the tongue and groove or the butting surfaces.

7.6.7. If at the end of the day the fitting is incomplete then the section immediately completed prior to termination of the day's work should be have some weight/pressure placed onto it to ensure it does not lift from the base floor.

7.6.8 Special attention should be paid when applying adhesive on products with finished surfaces, in order not to contaminate the surface. If any adhesive gets on the surface of the floor, it should be immediately removed with a cleaning agent recommended by the adhesive manufacturer.

7.6.9. The choice of the adhesive should be made depending on the required elasticity and adhering strength, depending on the quality of the base and the dimensions of the planks or woodblocks.

7.7. After completion of the floor fitting, it should be left unused for at least 2 weeks until the adhesive hardens (in compliance with the manufacturer's instructions) and the acclimatisation of the flooring in a given room.

7.8. After finishing the assembly, but not earlier than on the next day, the clearance wedges should be removed.

VIII. INSTALLATION INSTRUCTION MANUAL

8.1. The direction of laying the planks is usually oriented in respect of the main source of light in a room. Individual elements should be laid along the main direction of the light entering the room, subject to detailed terms and conditions following from this document.

8.2. The room width should be checked to be sure that the width of the last row is not less than 5 cm. The length of each element should be at least 30 cm.

8.3. The first row should be adjusted by means of a chalk line or a ruler and then the elements should be laid from left to right with the tongue facing the wall.

8.4. Laying the second row can be started using the plank cut out from the first row. If it is shorter than 30 cm, a new plank should be used.

8.5. When fitting the last row of planks or woodblocks, it should be laid provisionally and the shape of the wall should be mapped. When cutting to fit, the expansion joint clearance should be preserved.

8.6. Between the assembled floor and the wall, around each room, a clearance of 7 – 12 mm (expansion joint) should be allowed.

8.7. Between the assembled floor and the wall, around each room, a clearance of 7 – 12 mm should be allowed, depending on the type of the skirting boards used.

8.8. In passages between rooms and where other types of flooring join, as well as in the cases of:

- solid planks, when the floor length exceeds 8 m and the width 6 m
- engineered boards, when the floor length exceeds 12 m and the width 8 m

Expansion joints should be made and then filled in with natural cork or any other elastic filler.

8.9. An expansion joint should also be allowed around all permanently fixed elements such as heating system pipes, pillars, door and window frames, built-in objects, etc.

8.10. The expansion joints should be adjusted and be appropriate for the dimensions of the room in which the wooden floor is to be installed.

8.11. After completion of the assembly of the floors and when the adhesive is dry, the skirting boards should be fitted. They may not press on the floor and should not be fixed onto the planks or woodblocks.

IX. FLOOR INSTALLATION ON UNDERFLOOR HEATING

9.1. In the event of assembly of flooring made by Floors Sp. z o.o. on underfloor heating, the recommendations in the "*Instruction Manual*" and in this section should be applied accordingly.

9.2. When underfloor heating is used, only use engineered board made by ZENON Sp. z o.o. intended to be applied on underfloor heating.

- › **The engineered board is a product designed to be installed on underfloor heating, but only on water-based heating systems. Parquets and planks made of solid wood should never be fitted on underfloor heating.**

9.3. Flooring on underfloor heating system based on water must be installed by specialists holding relevant knowledge and qualifications.

9.4. The temperature on the surface of a wooden floor fitted on the underfloor heating must not exceed a temperature of 26 °C.

9.5. When underfloor heating is installed and covered by concrete or cement-gypsum mortar, it is very important to ensure that the surfaces are completely dry (this process can take several weeks). Wait until the base humidity is stabilised at the average required in Chapter VI.

9.6. In order to prepare correctly prepare the base when assembling the floor on underfloor heating, the heating of the underlay should be done twice, due to the presence of residual moisture.

9.6.1. After fitting the underlay, it should be heated no earlier than:

- after 7 days – for anhydrite underlay
- after 21 days – for cement underlay

- respectively shorter in the case of rapid-hardening cements (self-levelling mass) - as directed by the manufacturer of the material

9.6.2. The underlay heating procedure should be agreed upon in detail with the flooring fitter, depending on the heating system solution, so as to ensure the correct humidity of the base onto which the two-layer planks are to be laid.

9.6.3. The fitter of the underfloor heating system must fill in the base heating report for the base fitted with underfloor heating system (Appendix No. 3).

9.7. It is recommended that protective seals are used on the floor heating, which is a simple way to check the temperature in the underlay during the heating process.

9.8. A drawing indicating the places where the seals, i.e. temperature measuring points, were installed should be appended. The use of temperature seals checks of the correct exploitation of the floor.

9.9 In the case where a water underfloor heating system is placed in only part of a room and not in the whole of it, the expansion joints should be made to separate the part with the underfloor heating from the part with no underfloor heating.

9.10. The screed fitter should leave information in writing for the flooring fitter about the screed moisture measuring points, and in the case of laying a floor in a room without a basement – a design of the horizontal insulation in the base which is placed on the ground.

9.11. The fitter of the underfloor heating system should leave for the flooring fitter a report on heating the underlay and the layout of the heating system pipes and their insulation as well as information on the depth of the pipes in the underlay.

9.12. Prior to installation of engineered boards on the underfloor heating, the heating should be switched off until the floor reaches room temperature.

9.13. The flooring fitter should start the assembly of the floor when the floor has reached adequate temperature and humidity.

9.14. The condition allowing assembly of the boards on the underfloor heating is the presentation of:

- a) construction site induction manifest (Appendix No. 1)
- b) report on heating the base with the underfloor heating system (Appendix No. 3)

9.15. Once the floor is installed, the underfloor heating system should be gradually returned to work. This decision must be made by the flooring fitter, as it depends on the type of the adhesive applied.

9.16. Hairline cracks appearing between the boards are unavoidable and they appear due to low air humidity just over the surface of the floor. It is not a defect of the boards; it is a natural phenomenon for floors made of natural wood.

9.17. No carpets should be placed on heated wooden floors because a heat zone is created there with no air exchange. Covering a wooden floor fitted on the underfloor heating with carpets, furniture etc. will result in

exceeding the acceptable temperatures on the surface of the wooden floor and subsequently damage the floor - in the form of cracks, splits, and gaps.

X. COMPLETION OF ASSEMBLY

10.1. Having completed the assembly, do not sand the floor for a period of up to 14 days after it is fitted, to allow the stabilisation of stresses in the product caused by its installation as well as to allow the wood to achieve a hygroscopic balance. During this period nothing should be put on the floor and nobody should walk on it.

10.2. The floor should be sanded 14 days after completion of the assembly of the floor, it should be sanded, filled, and polished according to flooring fitting technology. Then, according to the technology and Customer's expectations, the floor should be finished appropriately, unless the type of floors does not require such processing, i.e. varnished or oiled "finished" floors.

10.3. Then the assembled and sanded floor should be varnished or oiled. The type of varnish/oil as well as the amount of these agents should be selected, taking into account the intended use of the room where the floor is situated as well as the expected intensity and frequency of usage.

10.4. Do not use the floor before finishing the process of onsite finishing eg: lacquering or oiling. 10.5. Depending on the anticipated finished floor usage, (abrasion of varnish/oil coating), repeat the floor varnishing/oiling procedure. Follow the recommendations provided on the package by the manufacturer of the applied product.

10.6. The fitted skirting boards should be finished in the same way as the floor surface.

10. 7. Within 7 days of completing the installation of the floor, the flooring fitter, along with the buyer or a person appointed by him will be obliged to fill in as well as sign the ***certificate of acceptance of the installed floor*** (Appendix No. 2).

10.8. The Customer shall be obliged to provide the Seller with copies of the following documents prepared by the flooring fitter (Contractor):

- construction site induction manifest - within 7 days from the date of introduction of the products to the construction site;
- certificate of acceptance of the installed floor - within 7 days from the date of installation of the floor.

XI. OPTIMUM FLOOR USE CONDITIONS

11.1. Due to the hygroscopic properties of wood, the products react to any change in surrounding conditions. The floor absorbs moisture from the surroundings, and it expands when the air humidity increases, and shrinks when the air humidity decreases.

11.2. If the relative air humidity in the room is too low, the assembled floors may, for example, shrink, dry up or crack.

11.3. If the relative air humidity in the room is too high, the assembled floors may, for example swell and bulge.

11.4. In the rooms where our floors have been laid, the following, constant climatic conditions should be maintained:

- relative air humidity: between 45% and 65%;
- air temperature: between 18 °C and 22 °C;
- the temperature of the floor surface on the underfloor heating must not exceed 26 °C.

The table below indicates the wood humidity equivalent in relation to the surrounding conditions:

	Relative air humidity %	Air temperature °C									
		0	5	10	15	20	25	30	35	40	45
In winter, the relative air humidity decreases during the heating period in the room	100	29,0	28,7	28,5	28,4	28,3	28,2	28,1	28,0	28,0	27,9
	95	24,6	24,4	24,2	24,0	23,8	23,8	23,6	23,2	23,0	22,8
	90	21,0	20,8	20,6	20,4	20,2	20,0	19,7	19,4	19,1	18,9
	85	19,2	18,8	18,5	18,3	18,1	17,8	17,5	17,2	16,8	16,5
	80	17,5	17,2	17,0	16,7	16,3	16,0	15,7	15,3	15,0	14,7
	75	15,3	15,2	15,0	14,9	14,7	14,4	14,1	13,8	13,6	13,3
	70	13,6	13,4	13,2	13,1	13,0	12,8	12,6	12,4	12,1	11,8
	65	12,3	12,2	12,0	11,8	11,6	11,4	11,2	11,0	10,8	10,6
	60	11,3	11,0	10,8	10,6	10,5	10,4	10,3	10,1	10,0	9,7
	55	10,2	10,1	10,0	9,9	9,8	9,7	9,5	9,3	9,1	8,9
	50	9,6	9,4	9,2	9,1	9,0	8,8	8,6	8,4	8,2	8,0
	45	8,8	8,7	8,6	8,5	8,3	8,1	7,9	7,7	7,5	7,3
	40	8,2	8,1	8,0	7,8	7,6	7,4	7,2	7,0	6,8	6,6
	35	7,2	7,0	6,9	6,8	6,7	6,6	6,5	6,4	6,2	6,0
	30	6,3	6,2	6,1	6,0	5,9	5,9	5,7	5,6	5,4	5,2
	25	5,4	5,3	5,2	5,1	5,0	4,9	4,8	4,7	4,6	4,5
	20	4,7	4,6	4,5	4,4	4,3	4,2	4,1	4,0	3,9	3,8
15	3,9	3,8	3,7	3,6	3,5	3,4	3,3	3,2	3,1	3,0	
10	2,7	2,7	2,7	2,7	2,6	2,6	2,6	2,5	2,5	2,5	

11.5. Should the acceptable (min. and max.) air temperatures as well as relative air humidity be exceeded, the room should be provided with sufficient additional moisture (air humidifiers) or with heaters in order to raise or lower the temperature. The aforementioned activities should always be performed gradually.

11.6. In air-conditioned rooms, too low humidity may occur.

11.7. In summer, when the air humidity is greater, in the case of floors finished with waxes/oils, an insignificant oil extrusion between the elements of the floor may take place; this is a natural phenomenon.

11.8. In winter, when the air temperature is higher and the relative humidity is lower, a natural process of wood shrinking takes place and insignificant hairline cracks may appear; this is a natural phenomenon.

XII. MAINTENANCE

12.1. Due to the properties of wooden floors (e. g, water absorption), the first maintenance procedure (hydrophobisation) must be carried out before the floor is subject to use, but only in the case of floors finished with varnish or oil.

12.2. The type of agents and the method of maintenance should be decided by the flooring fitter and carried out with agents designed for this purpose. The information on appropriate agents may be obtained from the flooring Manufacturer.

12.3 Where the floor surface is finished by the flooring fitter, the process of the first maintenance (hydrophobisation) is not necessary.

12.4 The maintenance process should be repeated as necessary, depending on the degree of wear of the finishing layer.

XIII. CARE OF THE WOODEN FLOOR

13.1. The frequency of care activities should be adjusted to the intensity of the floor usage. The floor surface should be cleaned systematically in order to remove any dirt which can damage it.

13.2. The floors should be absolutely protected against water, mud, and sand.

13.3. Doormats should be used at the entrance to rooms with wooden flooring, which allow the removal of water, grit or sand from footwear easily. The usage of internal anti-slip doormats is also recommended.

13.4. Sand and dirt collected on the floor should be removed systematically with a soft-bristled brush or a vacuum cleaner on soft wheels and with a soft brush which will not scratch the floor.

13.5. Felt pads should be placed under such furniture as chairs, armchairs and tables, as well as protective mats under swivel chairs, or special wheels with rubber tires should be installed, to prevent the formation of scratches and dents in the floor.

13.6. The placement of flowerpots and containers with liquids which may leak, directly on to the floor, is forbidden.

13.7 Damp cleaning should use as little water as possible; the cloth must be well wrung.

13.8 After damp cleaning, on the floor surface, only a residual moisture should remain which will dry naturally. Polishing is not required.

13.9. It must be remembered that the use of excess water may cause the floor to change its colour as well as, warp and bulge.

13.10. Damp cleaning should use water with maintenance agents, in compliance with the instruction of the agent manufacturer.

13.11. If dirt is difficult to remove with a damp cloth, it is recommended to use proper cleaning agents in accordance with the instructions included on the label of the preparation.

13.12. If water or other liquids are spilt on the floor, they should be immediately removed from the floor and wiped dry.

13.13. Do not use alkaline agents (soap, ammonia), scrubbing agents, bleach, acids, or steam cleaners on the floor.

13.14 Furniture must not be dragged along the floor; carts or thick blankets should be used to move furniture or other heavy objects.

13.15. Adherence to the above recommendations, and the usage of professional cleaning agents intended for the maintenance and cleaning of wooden floors as recommended by the seller, the flooring fitter, or the manufacturer shall extend the life of the floor and decrease the risk of its wear but cannot exclude it completely.

XIV. POST-ASSEMBLY

14.1. Should other works be carried out in the future the floor must be adequately protected with cardboard or corrugated board.

14.2. The floor should not be covered with plastic foil as the wood can become damp and warped.

14.3. Wooden flooring can be renovated a few times, either by sanding and then oiling or varnishing.

14.4 The flooring fitter is obliged to provide the Customer with guidelines concerning maintenance and the correct usage of wooden floors. These guidelines should also include the temperature and humidity in the room, appropriate for maintaining the stability of floors made of natural wood.

**BY FOLLOWING THE ABOVE RECOMMENDATIONS, CUSTOMERS CAN ENJOY
THE QUALITY AND BEAUTY OF A ZENON WOODEN FLOOR FOR MANY YEARS**

THANK YOU FOR CHOOSING OUR FLOORING

Z E N O N