

HERRINGBONE WITH DROPLOCK400 (DL400)

Featuring **⊗ ISOCORE** Technology[™]

INSTALLATION GUIDE CARE AND MAINTENANCE

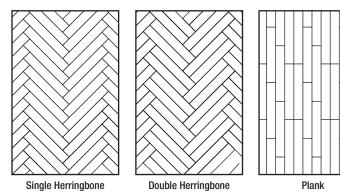
Product Description 7mm x 120mm x 720mm Grade Levels Above Grade / On Grade / Below Grade

Installation Method Floating - 2-Sided Drop and Lock

GET TO KNOW HERRINGBONE DL400 MULTILAYER FLOORING

FEATURING ISOCORE TECHNOLOGY[®] AND 2 SIDED DROP AND LOCK DROPLOCK 400 SYSTEM

• LVT **HERRINGBONE DL400** MULTILAYER FLOORING is a patterned flooring which can be installed in 3 different formats. It can be installed as a herribone, a double herringbone, but also as plank flooring.



- LVT HERRINGBONE DL400 MULTILAYER FLOORING is featured with the revelutionary patented Droplock 400 system. This special vertical locking system featuring a fold-down locking system on both the long side and the short side.
- General information: When installing LVT HERRINGBONE DL400 MULTILAYER FLOORING, always use best practices and follow the applicable standards for the installation of floor coverings, such as BS 8203 in the UK and VOB, Part C, DIN 18365 in Germany and all other relevant European, national and local standards.

- LVT HERRINGBONE DL400 MULTILAYER FLOORING is intended for interior commercial use only and is suitable for above-grade (suspended) on-grade (incontact with ground) and below grade (basement) applications. However, LVT HERRINGBONE DL400 MULTILAYER FLOORING should not be installed in locations where the substrate beneath the building structure is exposed to the elements.
- LVT HERRINGBONE DL400 MULTILAYER FLOORING is to be installed as a floating floor system and must be free to move as a monolithic unit in response to changes in temperature. It must not be glued, nailed, or fastened to the substrate, walls or fixed to any part of the building structure. Permanent fixtures such as walls, partitions, shelving, cabinets, displays, counters, tracks for transition profiles and similar items should be installed first, then fit LVT HERRINGBONE DL400 MULTILAYER FLOORING around them, leaving a space for expansion and contraction. Fill expansion spaces around potentially wet areas with premium waterproof 100 % silicone sealant. Always remove standing water, pet urine and other liquids promptly.
- Direct sunlight may cause LVT HERRINGBONE DL400 MULTILAYER FLOORING to fade or to expand causing the floor to warp or to separate. Protect LVT HERRINGBONE DL400 MULTILAYER FLOORING from direct sunlight using window treatments or UV tinting on windows.
- LVT **HERRINGBONE DL400** MULTILAYER FLOORING is a waterproof floating floor, but it should not be used to seal an existing floor from moisture. LVT **HERRINGBONE DL400** MULTILAYER FLOORING cannot inhibit the growth of mould or prevent structural problems associated with, or caused by flooding, excessive moisture, alkalis in the subfloor, or conditions arising from hydrostatic pressure. Regardless of location, always remove standing water, urine and other liquids promptly. Jobsite moisture issues must be addressed and corrected prior to installation.

This document supersedes all printed and electronic Installation and Technical Guides previously distributed for HERRINGBONE DROPLOCK400 MULTILAYER FLOORING.

PRE-INSTALLATION ESSENTIALS

Your job will be smooth, fast and easy when you follow the essentials every time you install LVT **HERRINGBONE DL400** MULTILAYER FLOORING.

EVALUATE THE JOB SITE

Exterior

Damage caused by water and high humidity should be addressed prior to installing LVT **HERRINGBONE DL400** MULTILAYER FLOORING.

- Examine the driveway, parking areas and landscaping surrounding the building. Be sure that they slope and direct water away from the foundation.
- Inspect gutters, down spouts and drains for blockage. Remove clogs caused by leaves, dirt and debris, allowing runoff to flow freely away from the foundation.
- Check crawl spaces for cross-ventilation air vents. Crawl spaces should be insulated according to the latest building code requirements.

Interior

Jobsite moisture issues must be addressed and corrected prior to installation.

- Examine the installation site for leaky plumbing, including leaks from sprinkler heads, toilets, water heaters, water fountains, radiators or any other water-bearing fixtures or pipes.
- Inspect substrates for levelness. They must be sturdy, sound, and flat within 3 mm in a 1.8 metre radius, or 5 mm within a 3 metre radius. The substrate should not slope more than 25 mm per 1.8 metres in any direction.
- It is required to test concrete substrate for moisture and pH before installing LVT HERRINGBONE DL400 MULTILAYER FLOORING. Test results should not exceed 85 % relative humidity (RH). pH tests for alkalinity levels should register between 7 and 9.
- It is required to test wood substrates for moisture. Obvious signs of moisture issues include warping, peaking, degradation of the integrity of the substrate, rusted fasteners, and rusted floor registers. Even if obvious signs are not present, the material should be tested using a professional moisture meter and moisture levels should not exceed 14 %.

ATTENTION: Mould and mildew grow only in the presence of moisture. Jobsite moisture issues must be addressed and corrected prior to installation.

IDENTIFY YOUR SUBSTRATE

Approved Substrates

LVT **HERRINGBONE DL400** MULTILAYER FLOORING is suitable for use over a wide variety of substrates.

Concrete

All subfloors should be tested and prepared according to the applicable standards for the installation of floor coverings, such as BS 8203 in the UK and VOB, Part C, DIN 18365 in Germany and all other relevant European, national and local standards.

LVT **HERRINGBONE DL400** MULTILAYER FLOORING is waterproof, but jobsite moisture issues must be corrected before installation begins to prevent serious damage to the subfloor and surrounding structure, and to discourage the growth of mould and mildew. Concrete substrates must be sturdy, sound, and flat within 3 mm within a 1.8 metre, or 5 mm within a 3 metre radius. The substrate should not slope more than 25 mm per 1.8 metres in any direction. Moisture and alkalinity tests should be performed on all concrete substrates regardless of grade level or age of slab. Test results should not exceed 85 % relative humidity. pH tests for alkalinity levels should register between 7 and 9. All moisture tests should be conducted several days prior to installation to be sure that the substrate is in compliance.

Underfloor Heating

Installations where underfloor heating is used, follow current DIN 18365 and EN 1264 Standards. The maximum working temperature on the surface of the substrate is 30 $^{\circ}$ C. Installation over electrical systems is not allowed.

Timber, Particleboard & Chipboard

Wooden substrates must be sturdy, sound, and flat within 3 mm within a 1.8 metre radius, or 5 mm within a 3 metre radius. The substrate should not slope more than 25 mm in 1.8 metres in any direction. It is recommended to perform moisture tests prior to installation to prevent serious damage to the subfloor and surrounding structure, and to discourage the growth of mould and mildew. Moisture readings should never exceed 14 % for plywood,

particleboard and chipboard substrates. If moisture readings exceed 14 %, it is advisable to correct moisture issues at the jobsite before installing LVT **HERRINGBONE DL400** MULTILAYER FLOORING.

Tile, Terrazzo, Asbestos Tile, Resilient Tile, Noncushion Sheet Vinyl & Metal

Existing floors must be firmly attached to the structural floor. In order to prevent vertical deflection (movement) and potential damage to the integrity of the LVT **HERRINGBONE DL400** MULTILAYER FLOORING flooring, all substrates must be sturdy, sound, and flat within 3 mm within a 1.8 metre radius, or 5 mm within a 3 metre radius. The substrate should not slope more than 25 mm per 1.8 metres in any direction. Fill in grout lines on ceramic tiles, terrazzo, quarry tiles and similar floors with cementitious leveling and patching compound.

UNACCEPTABLE SUBSTRATES

Remove the floors noted below and remove old adhesive before installing LVT **HERRINGBONE DL400** MULTILAYER FLOORING. Encapsulate adhesive and cutback residue by covering with a suitable smoothing compound to create a barrier.

- Parquet Over Concrete
- Hardwood Over Concrete
- Cushion Back Sheet Vinyl
- Engineered Hardwood Over Concrete
- Carpeting/Carpet Pad
- Floating Floors
- Sleeper Substrates

PREPARE THE JOB SITE

Careful preparation is the key to outstanding results. All trades must finish before installing LVT **HERRINGBONE DL400** MULTILAYER FLOORING.

- Building envelope should be fully enclosed with windows and exterior doors permanently installed.
- Turn on central heating ventilation and/or air-conditioning at least one week prior to installation: Room temperature should be maintained between 18 °C and 29 °C at least 48 hours prior to installation and continuously between 12 °C – 35 °C for the life of the floor.

PRE-INSTALLATION ESSENTIALS cont.

- LVT HERRINGBONE DL400 MULTILAYER FLOORING flooring is more dimensionallystable than typical floating wood or vinyl based flooring products, however 48 hour acclimation is required. LVT HERRINGBONE DL400 MULTILAYER FLOORING flooring subjected to extreme hot or cold conditions can cause the material to become too flexible or rigid, making the material difficult to install and potentially causing damage to the locking system. Optimum material and building temperature range for installation is 18 °C – 29 °C.
- Allow all other trades to finish
- Perform Recommended Moisture and pH Tests: See the "Identify Your Substrate" section of this manual for further information about suggested tests.
- Level uneven substrates: All subfloors must meet all minimum standard building codes. Fill large cracks and voids with cementitious leveling and patching compound. In order to prevent vertical deflection (movement) and potential damage to the integrity of the LVT HERRINGBONE DL400 MULTILAYER FLOORING flooring, all substrates must be sturdy, sound, and flat within 3 mm within a 1.8 metre radius, or 5 mm within a 3 metre radius. The substrate should not slope more than 25 mm per 1.8 metres in any direction.
- **Remove skirting mouldings**: Remove wall skirtings prior to installation. Leave appropriate expansion space between the edge of the flooring and walls or vertical surfaces.
- **Fill grout lines**: When installing over existing ceramic tile or stone floors fill the grout joints to obtain a smooth surface. Follow floor flatness requirements. Refer to chart on this page.
- Remove unapproved substrates
- **Remove or encapsulate old adhesive**: Old adhesives must be scraped up and left so that no ridges or puddles are evident and what remains is a thin, smooth film. Then encapsulate residue to prevent the new flooring from attaching itself to the substrate.
- Undercut wood door casings: Wood door casings should be undercut so that LVT HERRINGBONE DL400 MULTILAYER FLOORING will fit neatly beneath them, concealing the expansion space.
- Cut around metal door casings: Do not cut metal door casings. Cut LVT HERRINGBONE DL400 MULTILAYER FLOORING around them, leaving the appropriate expansion space. After installation, fill the space with a coordinating premium waterproof 100 % silicone sealant.
- Clean up the job site: Remove all debris, sweep and vacuum the subfloor. Smooth, non-porous floors should be damp-mopped after vacuuming and allowed to dry thoroughly before installing LVT HERRINGBONE DL400 MULTILAYER FLOORING. All dust must be removed prior to installation.

Check Batch Numbers And Manufacture Date

Locate the batch number on the short end of each carton and verify that all of the material for your job is from the same batch. Minor shade variations within the same batch number contribute to the natural look of LVT **HERRINGBONE DL400** MULTILAYER FLOORING. To avoid noticeable shade variations, do not install material from different batch numbers across large expanses.

To determine manufacture date, locate the batch number on the short end of the carton. It is the eight-digit number separated by decimal points beginning with the two-digit day, followed by the two-digit month, and finally the four-digit year.

> Batch Number/Manufacture Date 29.10.2013 DAY.MONTH.YEAR

KEY INSTALLATION CONSIDERATIONS

Subfloor Flatness Tolerances	5mm in 3 metres or 3 mm in 1.8 metres Slope no more than 25 mm in 1.8 metres
Damp Proof Membrane – 0.20 mm	Not Required
ls underlayment (underlay) required	No – LVT MULTILAYER FLOORING includes an integral pre-attached underlayment
Acclimation Requirements	Residential not required Light commercial 48 hours*
Transition Requirements (T-Mould) for Large Spaces	Required in rooms greater than 30,3 meters in either direction
Transition Requirements (T-Mould) Doorways/ Thresholds	Required
Installation over existing ceramic tile floor	Filling grout lines required, follow subfloor flatness requirements
Glue Down Installation	Not Required/Not Recommended
Internal Subfloor Relative Humidity (RH) Recommendations	Maximum 85 % RH when tested with a hygrometer, in accordance with BS 8203: 2001. Appendix A
Underfloor Heating	Approved – Substrate surface temp. not to exceed 30 °C Installation over electrical systems is not allowed
3-Season/Non-Climate Controlled Environments	Not Recommended
Expansion Requirements	6mm around perimeter walls, pipes, & heavy fixed objects such as cabinetry**
Optimal Interior Environmental Conditions	During Installation: 18 °C During life of flooring: 12 °C – 35 °C) / 40 % – 60 % RH
Definition of Waterproof"	Structural integrity of flooring will not degrade due to contact with moisture/water***

*LVT **HERRINGBONE DL400** MULTILAYER FLOORING flooring is more dimensionally stable than typical floating wood or vinyl based flooring products, however acclimation is required subjecting. LVT **HERRINGBONE DL400** MULTILAYER FLOORING flooring to extreme hot or cold conditions can cause the material to become too flexible or rigid, making the material difficult to install and potentially causing damage to the locking system. Optimum material and building temperature range for installation is 18 °C – 29 °C.

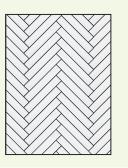
If installing LVT **HERRINGBONE DL400 MULTILAYER FLOORING in an environment that has a length or width greater than 20 metres, a T-Moulding should be utilized to separate the floor into two (2) separate sections.

***While LVT **HERRINGBONE DL400** MULTILAYER FLOORING is waterproof, it is not intended for use as a moisture mitigation system.

ATTENTION: Only installation techniques described in this installation guide are warranted. Installations involving custom cutting are not warranted. Please refer to the LVT **HERRINGBONE DL400** MULTILAYER FLOORING warranty for complete warranty details and exclusions.

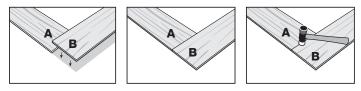
INSTALLATION FOR LVT MULTILAYER FLOORING WITH DROPLOCK 400 -LONG AND SHORT SIDE DROP LOCK SYSTEM

This installation demonstrates how to install **LVT HERRINGBONE DL400 MULTILAYER FLOORING** in a single herringbone pattern.

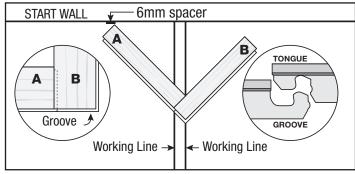


INSTALL THE CENTER COLUMNS

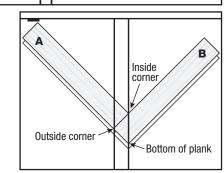
Position the long side of plank "B" over the short end of plank "A". Align the edge using the tongue of a spare plank. Tap the top of plank "B" using a soft-faced hammer to fully lock planks together. This is critical to a good installation.



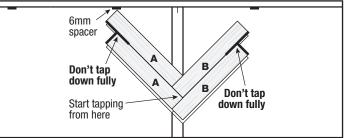
5 You have now created your starting V. Slide the starting V against the wall. The working lines should meet up with the plank as shown below. Plank "A" should be closest to the wall, touching the 6mm spacer. Plank "B" will be offset, this is normal. The proper alignment of the starting V is critical for installation.



Note: Top décor edges should be flush with no high spots (run your hands over the plank seam, tap down as necessary.)



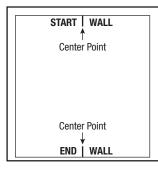
6 Continue to install column A1 and B1 as shown below. You should not tap down the last 51mm of the seam (in bold below). This space will be tapped and locked as the planks of the next column are added.



DETERMINE ROOM LAYOUT



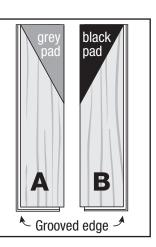
Measure across both ends of the room to find the center and mark.



2 Measure 4.1cm from the left and right of the center mark. Snap chalk lines down the entire length of the room.

START	WALL	
4.1cm	4.1cm	
Working Line>	Working ← Line	
END	WALL	

Separate "A" and "B" planks from the carton. If possible, install planks from 3 to 4 cartons at one time to ensure a mix of pattern and shade for best results. "A" planks have a pre-attached grey padding and "B" planks have a pre-attached black padding. Notice the groove edges are on the opposite long sides of the planks.



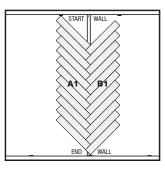


Grade Levels Above Grade / On Grade / Below Grade

INSTALLATION cont.

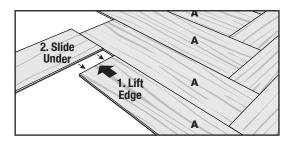
INSTALL THE CENTER COLUMNS cont.

6 Continue to ensure that your starting V is aligned properly (as described in Step 5) throughout the formation of column A1 and B1.

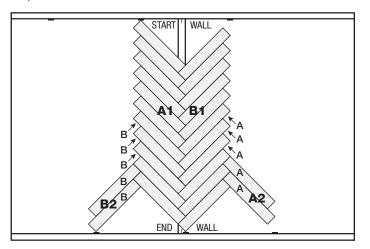


CONNECTING THE PLANKS TO THE LEFT AND RIGHT OF THE CENTER COLUMNS

7 Starting with the last full plank at the end wall, continue installing sequential columns (Column A2 and B2). Lift the untapped edge and slide the new plank under, as pictured below.



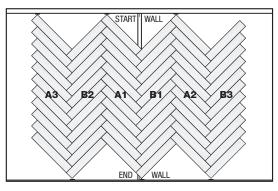
Position the tongue and groove of the first plank in column A2 into place with the last plank in column B1. Tap seams to completely lock planks.



CONNECTING THE PLANKS TO THE LEFT AND RIGHT OF THE CENTER COLUMNS cont.

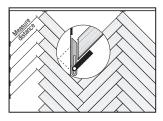
8 Continue forming columns until you have reached the opposite end of the room. Remember to not tap down the last 5cm of the seam. These will be tapped and locked as the planks of the next column are added.

Check your working lines as you install additional planks to keep the pattern straight. Adjust if necessary.



NOTE: If you need to remove a plank for whatever reason, slowly push down on the plank with the groove while lifting the plank with the tongue. Be careful not to damage the tongue or groove. Tap down lightly on the plank with the groove if necessary.

9 Measure, mark, and cut planks that extend to the walls. Allow for 6mm spacers. A T-Bevel (angle finder) can be used to find the correct angle. Always measure twice before cutting.



This is the last column of your installation, so all seams can be tapped to fully lock together at this time.

NOTE: When cutting planks with a utility knife, use the edge of a table or counter for leverage to snap these smaller angled pieces off.

Do not discard planks cut on angles. Save all scrap pieces until the install is complete. They can be used in other areas of the installation if layout permits. Stack in accordance of A and B planks.

When finishing the floor with small triangular shaped pieces (see plank X), use a small bead of "instant glue"

(cyanoacrylate adhesive) in the groove before tapping in the plank. Remove any excess adhesive as soon as possible using mineral spirits.

Starting V

Stating

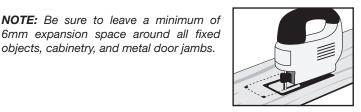
Grade Levels Above Grade / On Grade / Below Grade

INSTALLATION cont.

FITTING AROUND IRREGULARLY SHAPED OBJECTS

9 Make a template to fit around pipes or irregular shaped objects. Place the pattern upon the plank and trace. Cut along the trace lines using a utility knife or jig saw, and lay plank. Alternatively, a hole saw can be used when cutting planks that are to fit around pipes.

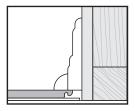
objects, cabinetry, and metal door jambs.



FINISHING THE JOB

10 Remove spacers. Cover expansion spaces with guarter round or other trim, being sure not to trap or pin down the floor. Nails should go into wall, not the floor.

any expansion spaces around Fill potentially wet areas (such as refrigerators, tubs, etc) with premium, waterproof 100% silicone caulk.



Save and protect any leftover planks. Do not discard, as they are color-matched (by dye-lot) to your floor. They can be used for replacement in the event you need to replace a plank in the future.

Remember, the use of coordinating T-Molds is required when installing LVT HERRINGBONE DL400 MULTILAYER FLOORING in a room or area that is larger than 30.5m in both directions, so that the floor is separated into sections that are no larger than 30.5m x 30.5m per section.

GENERAL CARE & MAINTENANCE

ROUTINE CARE & MAINTENANCE

- Sweep, dust mop or vacuum daily. Do not use vacuums with any type of beater bar assembly.
- Lightly damp mop with a neutral pH cleaner. Remove excess soil by carefully scrubbing with a soft nylon brush, micro fibre mop or sponge and a neutral pH cleaner.
- Remove scuffs using a neutral pH cleaner and a soft nylon brush or sponge.
- Heavily soiled floors may require an occasional deep cleaning using a neutral pH cleaner, spray bottle and a low-speed buffer not exceeding 300 RPM. Fit the buffer with a red or white scrubbing pad, spray the cleaner solution onto a manageable area of the floor and scrub. Remove the dirty residue by damp mopping with clear water. Caution: Do not flood the floor.
- Remove standing water, urine and other liquids promptly. Follow with a neutral pH cleaner.

PREVENTIVE CARE

- Use walk-off mats at all outside entrances.
- Use only flat felt or soft plastic glides at least 50 mm in diameter • under furniture legs or free standing displays and fixtures to prevent indentations and scratches.
- Use broad surface non-staining casters at least 50 mm in diameter on rolling fixtures or furniture.
- Do not use vinegar, polishes, waxes, oil soaps, abrasive cleaners, harsh detergents or solvents.
- Use non-staining mats.
- Do not expose to direct sunlight for prolonged periods.
- Do not use steam cleaners.
- Do not flood floor or subject to standing liquids including urine.