

Building for multiple generations

with system solutions from Schlüter-Systems



Floor plan
designs as
recommended
by DIN 18040-2





Key



barrier-free according to DIN 18040



barrier-free and wheelchair-accessible according to DIN 18040



low-barrier solution (based on DIN 18040-2),
a pragmatic solution for small spaces

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Building for multiple generations

Multi-generational design means building for the long term while conserving resources to sustainably create safe living environments that enhance property real estate values. Schlüter-Systems offers solutions for designing a wide range of residential environments that are suitable for use in all phases of life.

Such a design approach means taking various aspects and requirements in bathrooms and residential areas into account. Apart from conventional “accessible construction,” numerous other technical requirements such as moisture protection and sound insulation need to be considered.

The concept of accessibility, which is codified in the German constitution as well as in the recommendations of standards and the specifications of construction laws, keeps increasing in relevance, both for residential spaces and public areas.

Barrier-free bathrooms no longer come in the “care style” design of the 1980s. Rather, user-friendly bathroom design that takes personal needs and limitations into account uses a modern style that supports everyday routines.

As demographic changes continue, self-determined living in old age and residential care models remain of great public interest. Accessible designs, whether implemented based on acute need or as a result of planning foresight, offer viable solutions for daily problems. Since it is difficult to predict the limitations of old age and their severity, proactive planning is a must.

How wide should a bathroom door be to enable comfortable use of a walker or wheelchair? How large is the movement area that will be needed in front of individual plumbing installations? What is the best shower design within the existing structural conditions? How can a barrier-free bathroom floor optimally accommodate larger water volumes? Which subsidy programmes are available?

Those are just a few of the questions that should be asked for sustainable bathroom design.



Demographic change

The proportion of elderly people in the population is increasing significantly. About 20% of German residents are at least 67 years old. That's approximately 16 million citizens. According to the German Statistical Office, an estimated 28% of the population will be 67 or older by 2060. That would be the equivalent of about 21 million people who are no longer of working age and require varying degrees of daily assistance as they age in their homes.

i

10 %

require full accessibility

30–40 %

need reduced barriers

100 %

appreciate the comfort of barrier-free design

When you consider your own bathroom, you may not find your current daily use a challenge. However, if you had to use a mobility aid such as a walker in your advanced age, reaching your toilet or shower could be more difficult. In that case, you would have to redesign the space to make it more user friendly and comfortable. Accessibility ensures a level of comfort that users of all ages can enjoy, even in their advanced years.



DIN 18040-2 Construction of accessible – dwellings

DIN 18040 Part 2 (Construction of accessible buildings – Design principles – Part 2: Dwellings) lists the essential requirements for barrier-free construction for all those who plan a renovation project, a new residential building for the elderly or structural adaptations due to a physical and/or sensory limitation.

The standard aims to design living spaces that can be used “by largely everyone in the common manner, without special difficulties and generally without external assistance”. As is customary, the standards for accessible construction represent guidelines and recommendations, which become binding

when they are incorporated in state building codes by way of technical building regulations.

The details of the respective state building codes may vary. In case of renovation projects, an alternative design that complies with the applicable regulations may be the most practical solution to meet the individual needs of the target group.

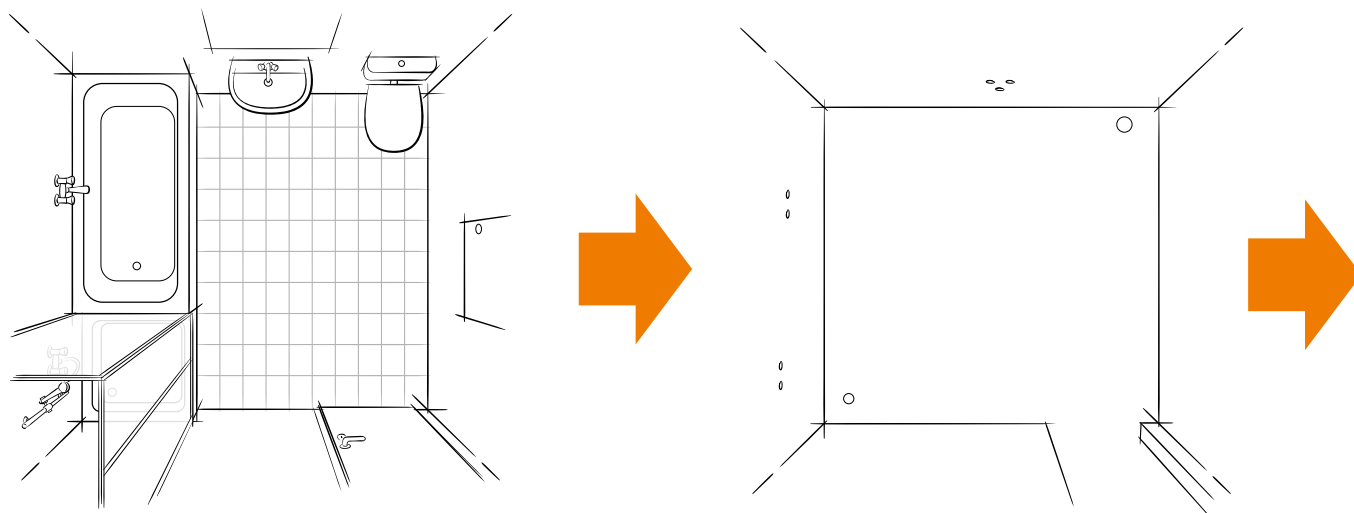
In those cases, the key “protection goals” of DIN 18040 are most relevant. They aim to create a pragmatic solution tailored to the needs of the respective user.



Barrier-free or low-barrier solutions?

A barrier-free solution presumes that the protection goals of DIN 18040-2 are met. However, the movement area in showers of 1.2 x 1.2 m as specified by the bf standard and 1.5 x 1.5 m as specified by the bfR standard presume a certain room size and geometry. These requirements are now reflected in new building designs.

However, what about designs for existing structures? What is the best way to apply accessibility requirements to tiny existing blueprints? Our supporting information offers assistance with the implementation of low-barrier (br) solutions in small bathrooms based on DIN 18040-2.



Subsidies and funding for age-appropriate and barrier-free construction

If you are (re)building a barrier-free structure either proactively or due to an illness or disability, you may be able to apply for funding from investment and development banks at the state or federal level or from insurances, municipalities or other bodies.

Compliance with subsidy guidelines for implementing barrier-free construction measures is a prerequisite for securing public subsidies.

Funding for improving residential conditions

Those requiring nursing care at levels 1 through 5 are eligible for a residential upgrade subsidy of up to EUR 4,000 (as of 2023) to make their own home suitable for use by the elderly. The corresponding measures facilitate in-home care, give patients a measure of independence and relieve family caregivers.

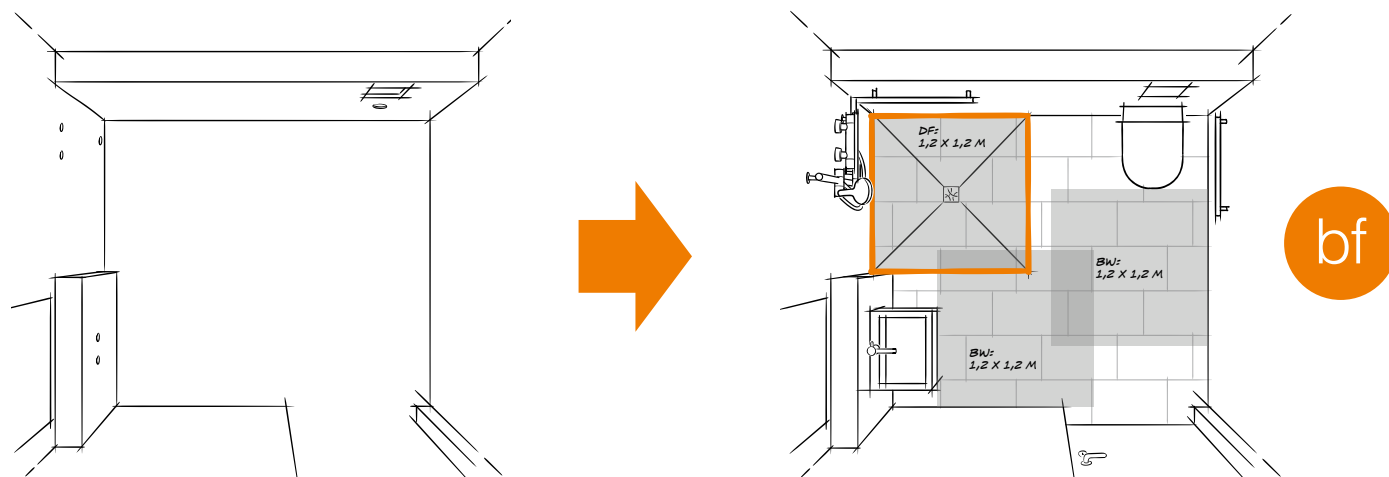
The most frequent measure to improve living spaces involves replacing a bathtub or high-edged shower tray with a floor level shower, since even a 5 mm height difference from a shower tray can be an obstacle for a user. Level entry is needed to enable the use of a walking aid up to the shower area. Such an extension of the ceramic floor covering in the shower area not only looks elegant, but can also be built entirely without an additional threshold.



Information

The following applies to all subsidy programs:

Never start the construction work before applying. The funding body must have approved the project in writing before the work can begin.





Building for the future

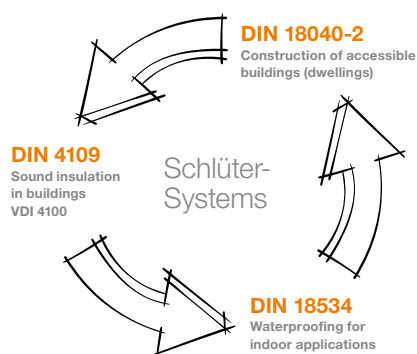
Schlüter system solutions

Few dwellings are suitable for a lifetime of living needs. The elderly rarely find homes that are adapted to their needs. Existing living spaces often have to be refurbished at great cost to accommodate seniors.

The products from Schlüter-Systems enable the design and construction of bathrooms that can be flexibly adapted to changing user needs. That requires proactive blueprint planning as well as understanding the structural implications of these designs.

That relates, for example, to the waterproofing areas in and around the shower – experts speak of “overlapping movement areas” – as well as intelligently positioned shelves for improved user friendliness, which don’t interfere with the movement area. The system solutions from Schlüter help implement DIN-based designs, especially on small blueprints.

Our explanations and illustrations are based on DIN 18040-2.

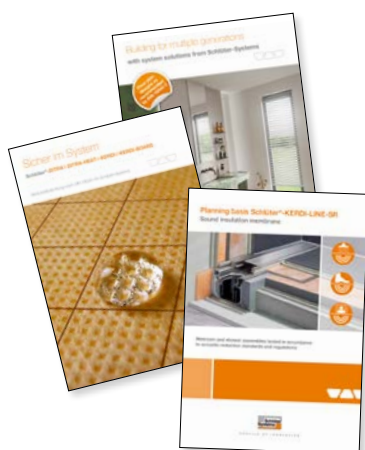


Accessible design does not begin with installing visible accessories such as support Standard 18040-2 is only one of a number of requirements that must be met in bathroom design. Specifications for accessibility, sound insulation and waterproofing in bathrooms have to be considered in context. Most installers are familiar with the requirements of the waterproofing standard 18534. The brochure “Bonded waterproofing based on DIN 18534 with Schlüter-Systems” contains all the information you need to plan and implement a standard-compliant waterproofing solution.

Sound insulation keeps gaining importance, particularly in structural engineering. The brochure “Design principles for Schlüter-KERDI-LINE-SR” lists all relevant technical information for compliance with sound insulation requirements.

How far should a waterproofing membrane extend into the assembly if there is no solid shower structure for orientation? How exactly does one create a transition from the shower slope to the adjoining floor covering? Schlüter products have matching designs to comply with the requirements of interconnected standards. The interfaces of the individual products are clearly defined and have been tested in bonded assemblies.

This supporting information illustrates practical solutions in the smallest bathroom blueprints in both barrier-free and low-barrier versions to help designers, installers and advisers find and implement age-appropriate individual solutions.





Aesthetic and barrier-free?

The two concepts don't have to be a contradiction.

Showers have long become part of standard repertoire and form a harmonious part of bathroom design. The most challenging design aspect is to incorporate the shower area in the overall floor assembly with uniform tile materials. Overlapping movement areas in front of plumbing fixtures and in the shower area can be a key factor in small bathrooms. Barrier-free concepts that are intentional, pragmatic, well designed and integrated in the system are functional without being a dominant feature. This guaranteed safety in use can then be further enhanced with a comfort factor.

Individual requirements call for custom solutions. That's why Schlüter-Systems offers its customers numerous options to give projects a personal touch. From drainage channels with personal engravings to profiles and shelves with custom coatings and special product prints, many products can be precisely adapted to the needs of designers and home owners – not just in large volumes, but also in small quantities.



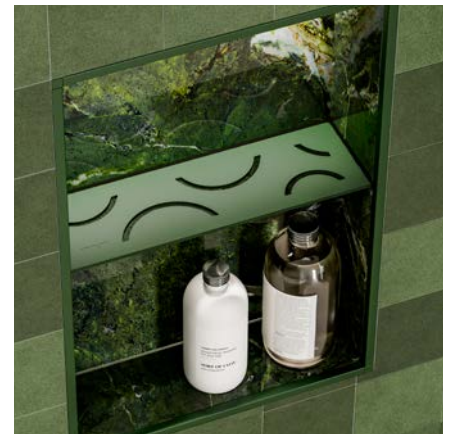
Stylish edge protection

To protect ceramic wall coverings, effective edge protection is necessary in spaces that are used with walkers and wheelchairs. The profiles of the Schlüter-TRENDLINE range combine this protection with elegant colours and enhanced haptic finishes.



Shelves as design elements

Niches create additional storage space without restricting movement areas. With finishing profiles and shelves in MyDesign options, they harmoniously match the appearance of the wall.



Elegant instead of clinical

Finishing profiles that protect the edges of high-quality vanities don't have to look clinically sterile. On the contrary: an individually printed tile design can turn them a seamless part of the cover design.



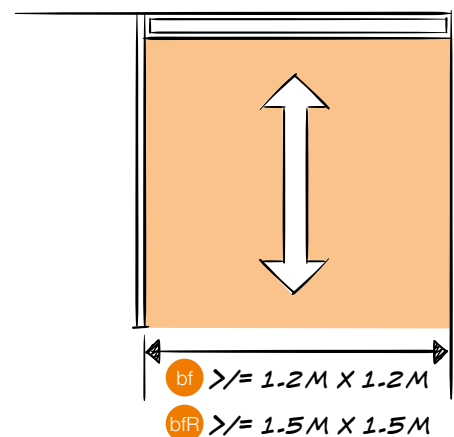


Linear or point drainage

Movement area in the shower

The selection of a drainage system is not only a question of visual design, but must also take the relevant movement areas into account. Simply put, the full movement potential of a shower can be utilised when there is sufficient space, preferably in the dimensions 1.2 x 1.2 m (bf).

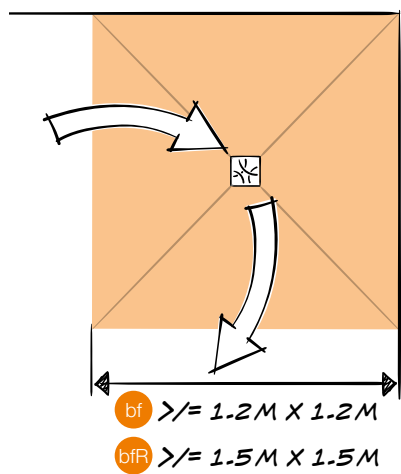
The dimension 1.5 x 1.5 m also opens up the option of wheelchair use (bfR). Drainage options include both elegant modern linear drainages and classic point drainage. The choice is yours.



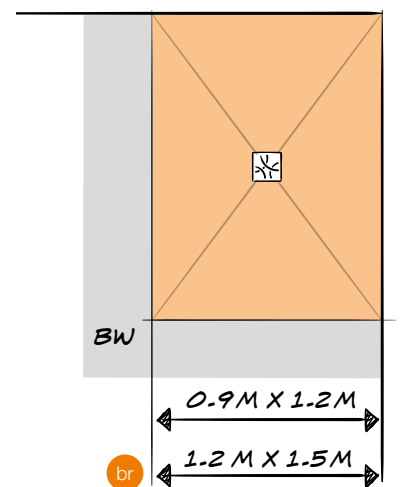
Linear drain



Point drainage offers ideal conditions for creating a multilateral floor level access to your shower. If the space is insufficient to meet the required movement areas in the shower, a “low-barrier” (br) design with overlapping movement areas is recommended. The blueprints shown here can help you implement your idea for a multi-generation bathroom.



Point drainage



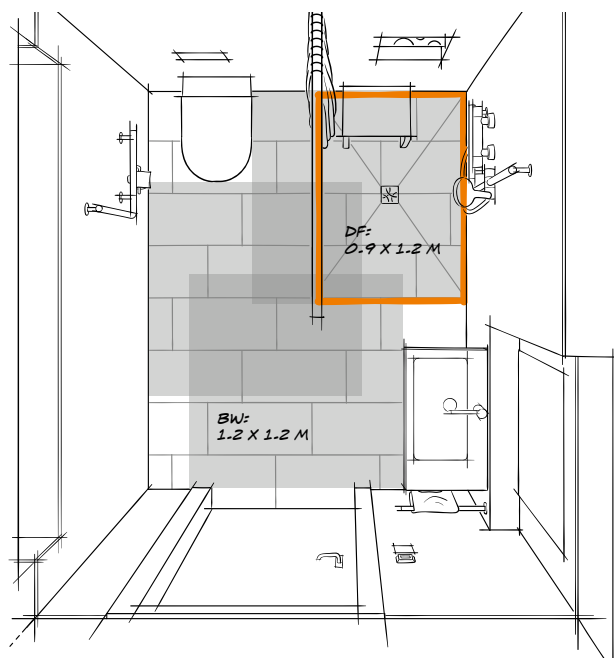
Point drainage



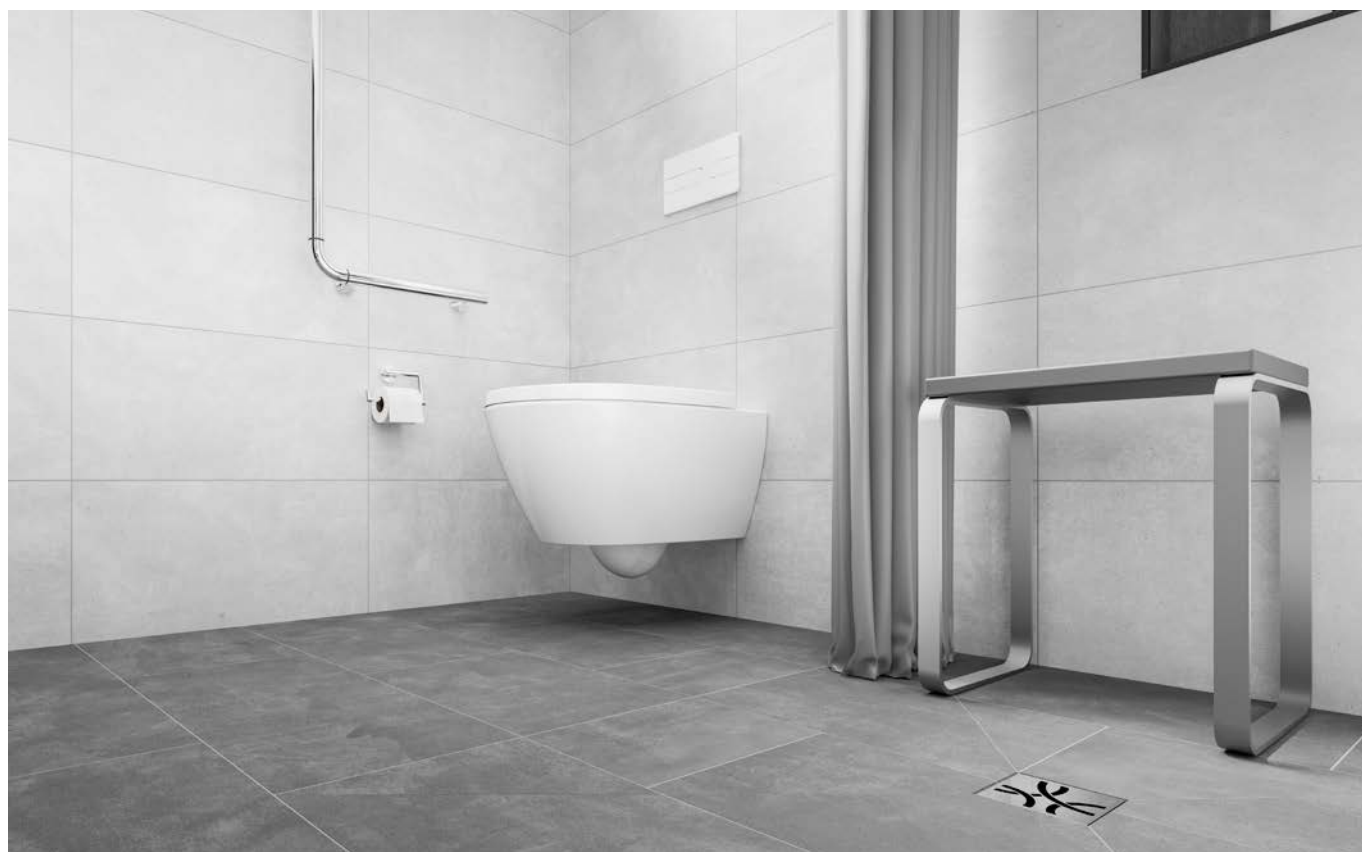
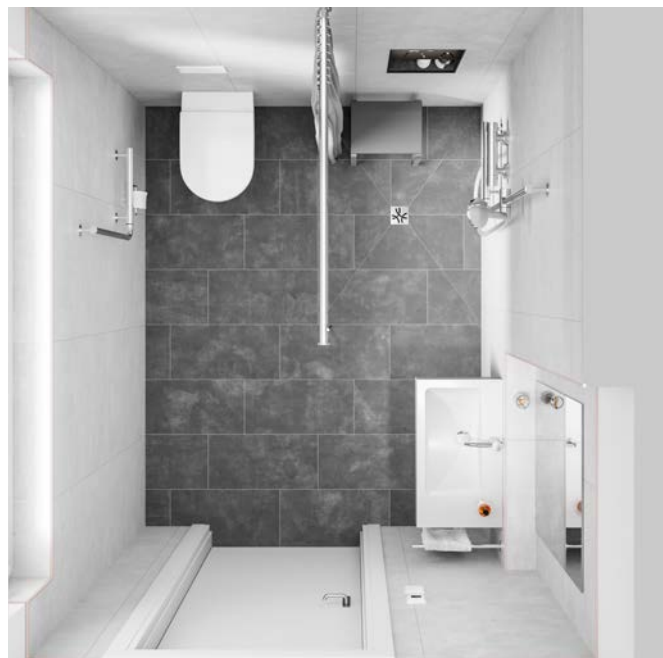
Low-barrier bathrooms

Practical means functional.

A user friendly bathroom in a small space can be created with low-barrier design (br) based on DIN 18040-2 by reducing the sloped area of the shower. Our example shows a low-barrier version with point drainage of a 0.9 x 1.2 m shower area. The remaining shower area, separated by a curtain, offers sufficient space for daily body care. The shaded overlapping movement areas (shower, toilet, wash basin) can be adapted to the existing spatial conditions.



Low-barrier blueprint design in small spaces



The seamless transition of the tiled shower floor area to the adjoining movement areas enables a uniform design for the entire floor area.

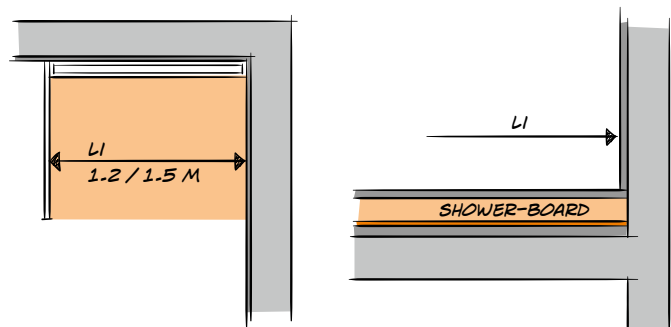


More space means greater comfort and greater design quality

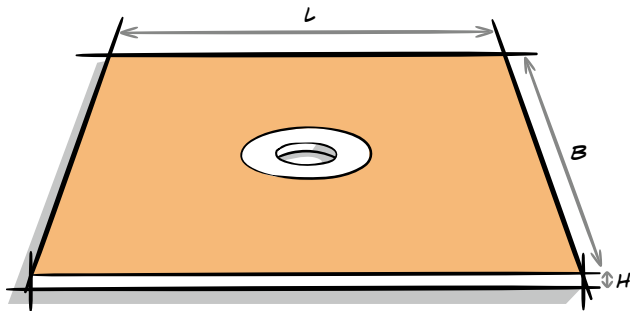
Schlüter sloped boards are available in the size of the required movement areas. They offer optimum bathroom comfort in accordance with the available space in the dimensions 1.2 x 1.2 (bf) and 1.5 x 1.5 m (bfR barrier-free design suited for wheelchair use based on DIN 18040), or larger if desired. A bilateral floor level access can assist a caregiver as needed and enhances the movement comfort. Of course, the specified inside clearance dimensions have to be observed and any resulting structural tolerances must be offset.

Overview of all dimensions

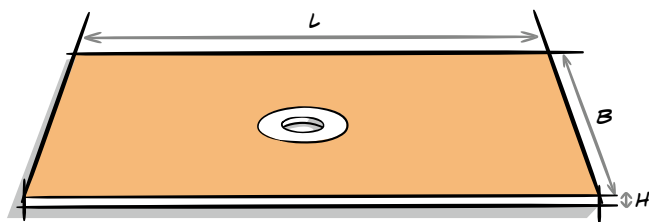
Shower areas featuring walls and/or glass partitions on two sides or being newly designed should comply with the specified movement areas in their minimum clearance dimensions. The material thickness of the wall coverings must be taken into account. The dimensions of KERDI-SHOWER boards enable standard-compliant waterproofing connections to wall and floor areas whilst offering the required movement areas.



Sloped trays for point drainage: Schlüter®-KERDI-SHOWER



Square version



Rectangular version

br

Schlüter®-KERDI-SHOWER-T / -TT

sloped tray for centre drainage

L x B (cm)	H (mm)	Art. No.
152 x 96	23	KST 965 / 1525
152 x 122	28	KST 1220 / 1525 BF
183 x 122	32	KST 1220 / 1830 BF
101 x 101	23	KST 1015 BF*
122 x 91	25	KST 915 / 1220 BF*

*KERDI-SHOWER-TT

bf

Schlüter®-KERDI-SHOWER-TT

sloped tray for centre drainage

L x B (cm)	H (mm)	Art. No.
122 x 122	25	KST 1220 BF

bfR

Schlüter®-KERDI-SHOWER-T

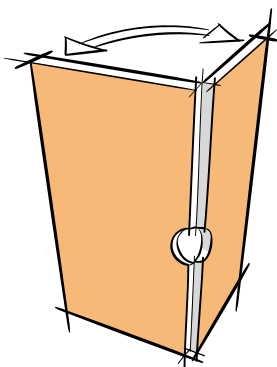
sloped tray for centre drainage

L x B (cm)	H (mm)	Art. No.
152 x 152	30	KST 1525
183 x 183	32	KST 1830

Overview of sloped tray advantages:

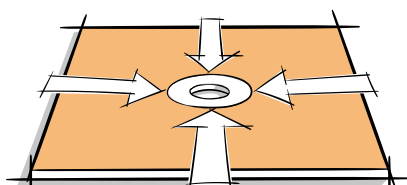
Large size in conveniently folded form

Schlüter sloped trays come in a conveniently folded form for space saving transport. The folding line is located in the centre of the tray.



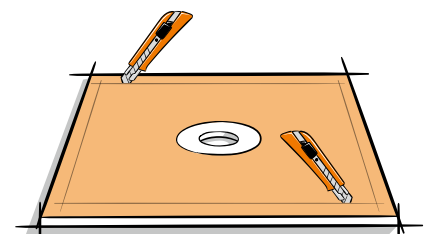
Prefabricated elements with waterproofing and slope for easy installation

Prefabricated elements made of rigid polystyrene foam with a pre-adhered Schlüter-KERDI waterproofing layer and a set slope guarantee easy installation.



Easy fitting

Where necessary the trays can be cut to size with a utility knife, using the pre-marked cutting grooves on the underside of the tray. Care must be taken to maintain a uniform gradient on all sides.





You can find all point drainage solutions in our "Profiles and Systems" price list under the keyword Schlüter-KERDI-DRAIN.

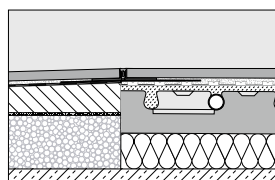
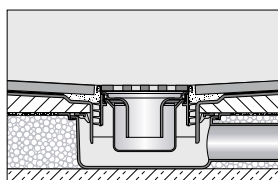
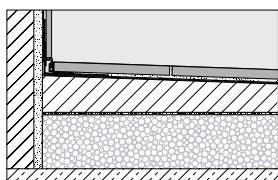
Drainage information summary

Schlüter®-KERDI-DRAIN

Schlüter-KERDI-DRAIN point drains, whether with horizontal or vertical outlets, channel wastewater to the building drainage system. In contemporary designs, the drainage point can be accentuated with stylish grates.

Reliable function within the system!

Thanks to the wide range of the Schlüter product assortment, our system components are able to address virtually all sensitive areas of bathroom design for all building aspects. That provides the necessary certainty that interfaces, for example between the waterproofing assembly and the drainage, are fully functional and that potential sources of damage can be ruled out with professional installation.

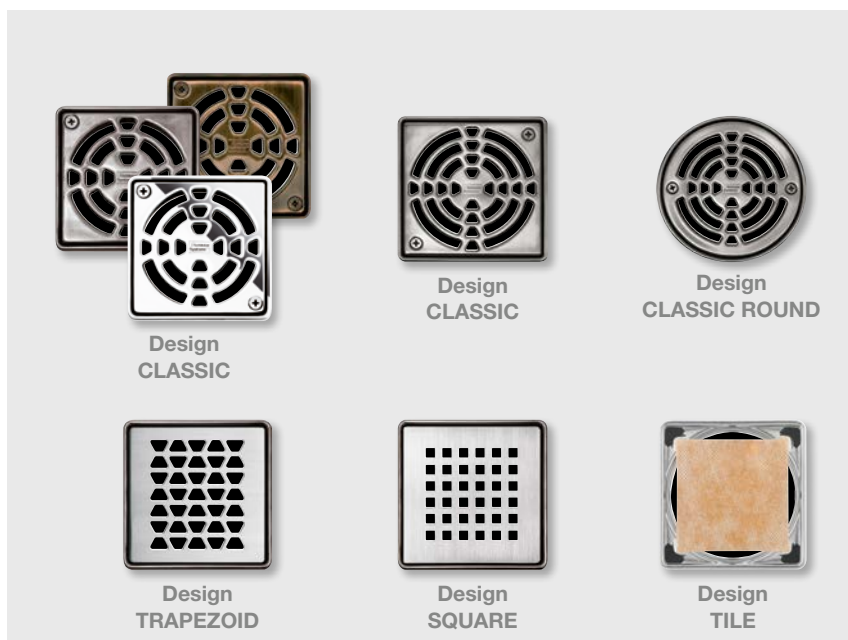


Horizontal drain

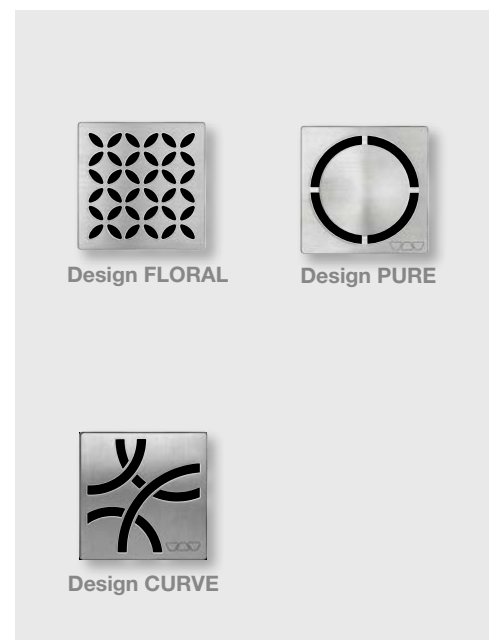
Point drainage was the preferred solution for wet rooms for many years and is therefore considered a proven and reliable solution. Schlüter-KERDI-DRAIN floor drains are available for horizontal and vertical (through a floor level) drainage. They come with pre-adhered waterproofing collars to integrate them reliably into the waterproofing assembly. The drainage points can be individually designed with our selection of grate and frame sets.



Schlüter®-KERDI-DRAIN: our classics



Schlüter®-KERDI-DRAIN-STYLE





Fully matched complete system

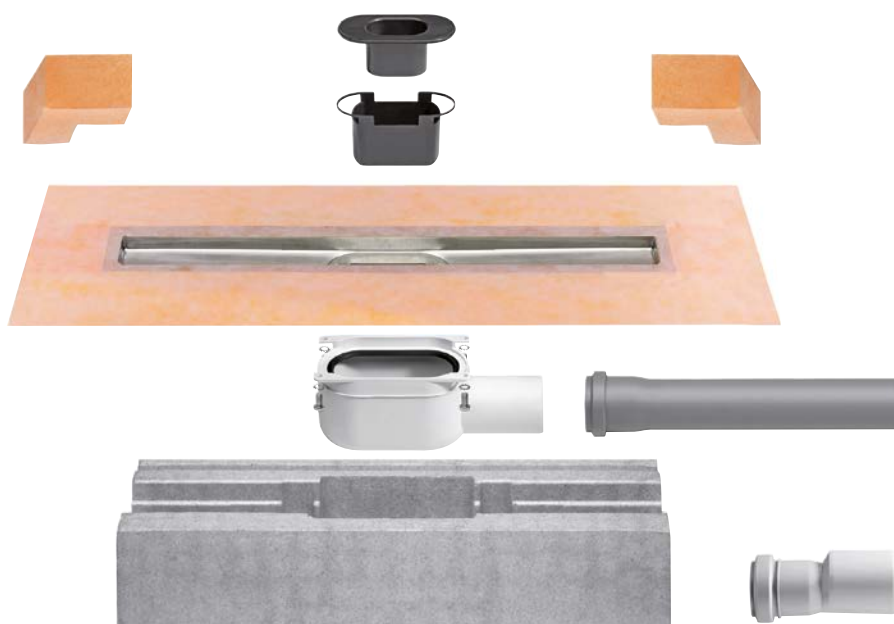
Schlüter®-KERDI-LINE

Linear drains bring elegance and functionality to showers. Schlüter-KERDI-LINE are complete systems that include all components you need for the drains used in showers.

Combine floor drains , whether with horizontal or vertical outlets, and with assembly heights as little as 65 mm with matching grates, grate and frame combinations or drainage profiles. That results in shower areas that meet the highest expectations in terms of user comfort and design.

Horizontal linear drainage

Building for multiple generations floor drain set Schlüter-KERDI-LINE-H is a multi-piece, linear drainage system for creating floor level showers with horizontal drains. It consists of a formed stainless steel channel body with a grate and frame structure, which can be seamlessly adjusted to the floor covering thickness and features an integrated odour trap and drain body. The frame structures are available in two versions. You can choose between a profile frame with a 10 mm wide visible surface in a brushed, polished or powder-coated finish or a contour frame.

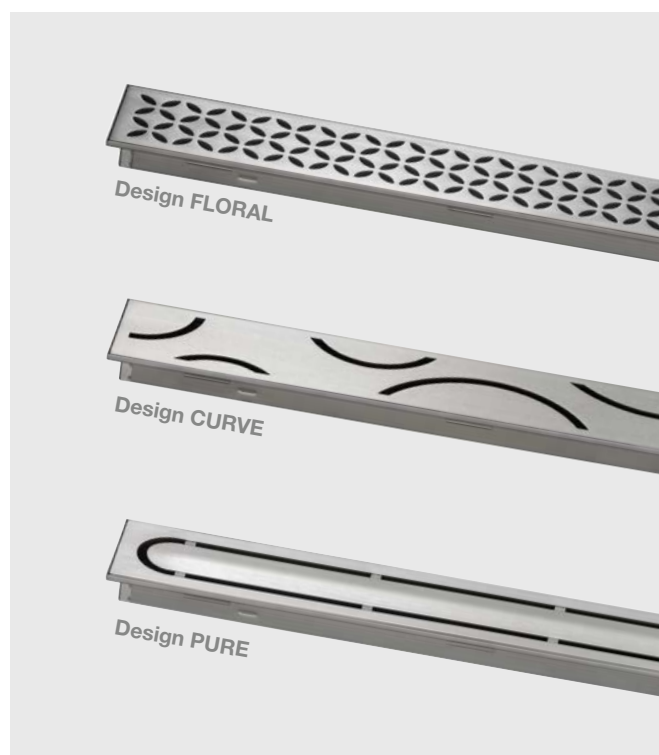


floor drain set

Schlüter®-KERDI-LINE: the classics in a profile frame

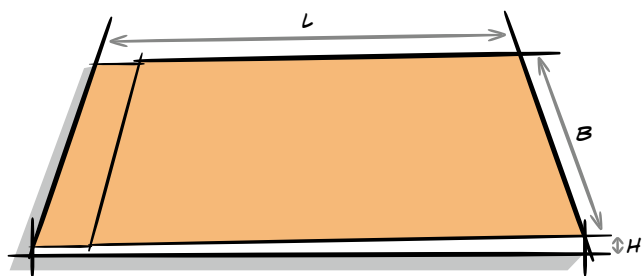


Schlüter®-KERDI-LINE-STYLE: elegant design grates with contour frame

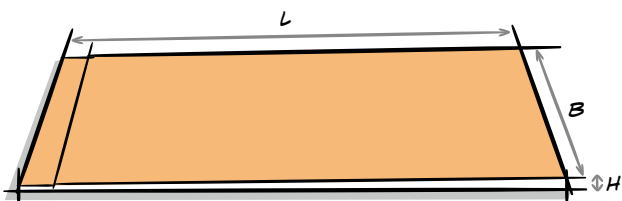




Sloped trays for linear drainage: Schlüter®-KERDI-SHOWER



Square version



Rectangular version

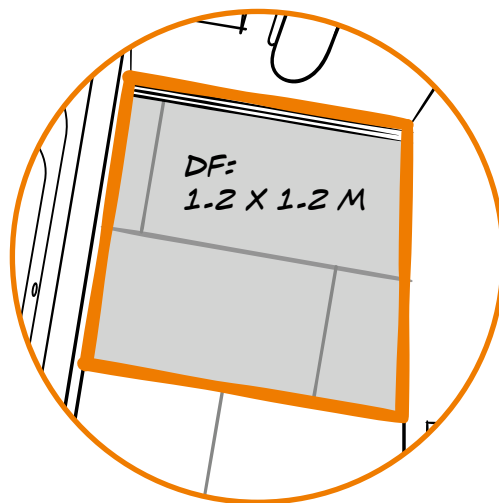
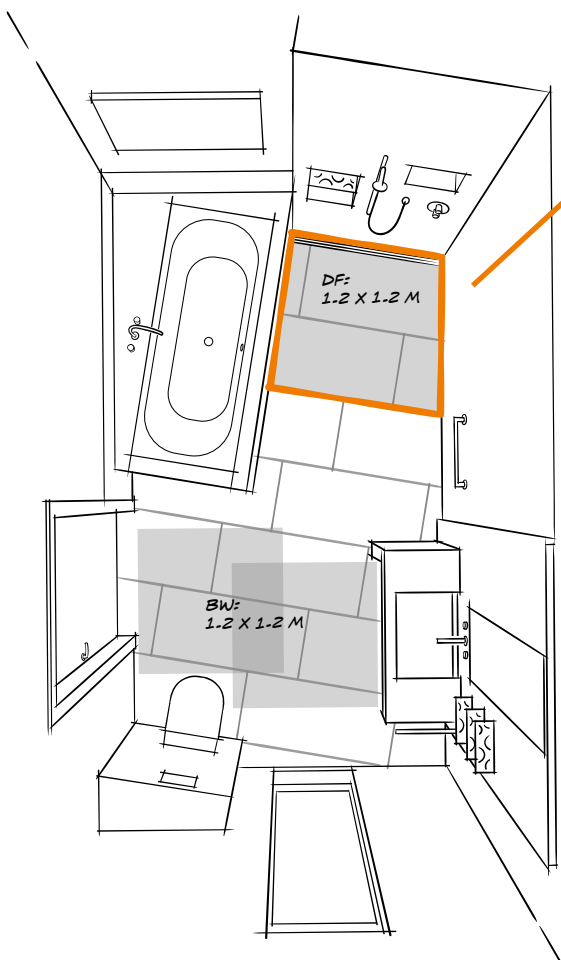
bf

Schlüter®-KERDI-SHOWER-LTS

sloped tray for linear drainage, for installation in wall transition areas, square

L x B (cm)	H (mm)	Art. No.
122 x 122	46	KSLT 1220 S
139.5 x 139.5	50	KSLT 1395 S
200 x 136	39	KSLT 1365 / 2000S

A connection via a sloped screed is recommended for sloped installations of KERDI-LINE-VARIO.









Drainage in style

Schlüter®-KERDI-LINE-VARIO

The latest drainage innovation from Schlüter-Systems involves a combination of slim drainage profiles with flat, wave shaped floor drains that can be individually cut to size.

The product effectively combines award-winning design with innovative drainage technology. The Schlüter-KERDI-LINE-VARIO drain profile directs the wastewater into the ultra-slim, two-piece drain body. The combined drain adapter with integrated elasticated waterproofing collar and wave shaped drain, channels the waste water horizontally into the on-site drainage system. A sloped screed (2% gradient) enables sufficient water drainage.

Schlüter-KERDI and -DITRA ensure waterproofing in the wall and floor area. Abutting joints are sealed with Schlüter-KERDI-KEBA sealing bands, using Schlüter-KERDI-COLL-L.

You can find further linear drainage solutions in our “Profiles and Systems” price list under the keyword Schlüter-KERDI-LINE.



red**dot** winner 2021

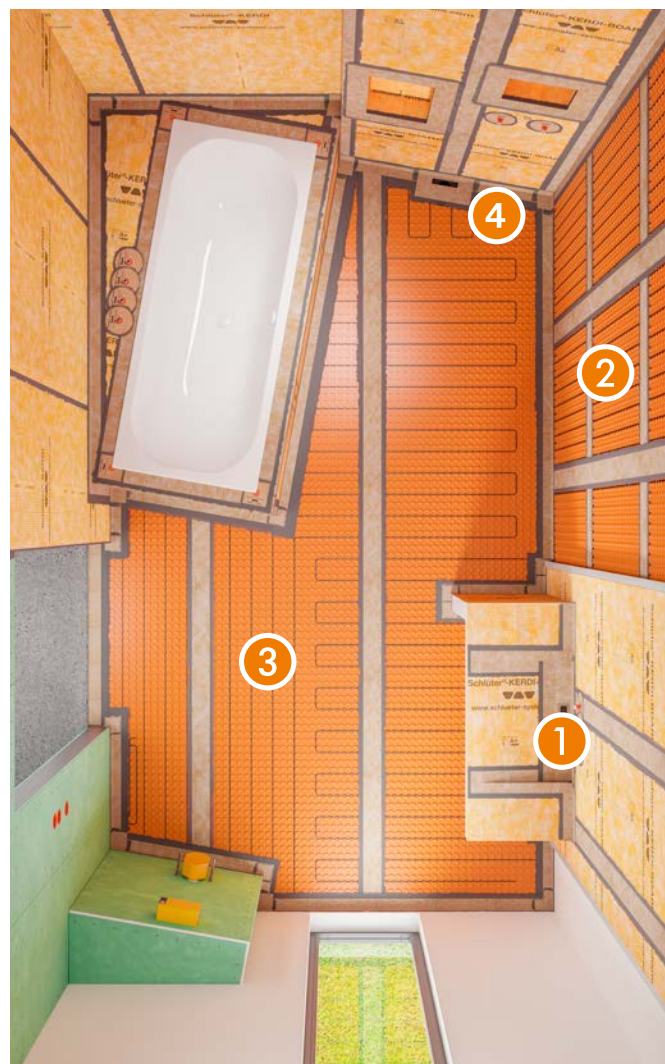
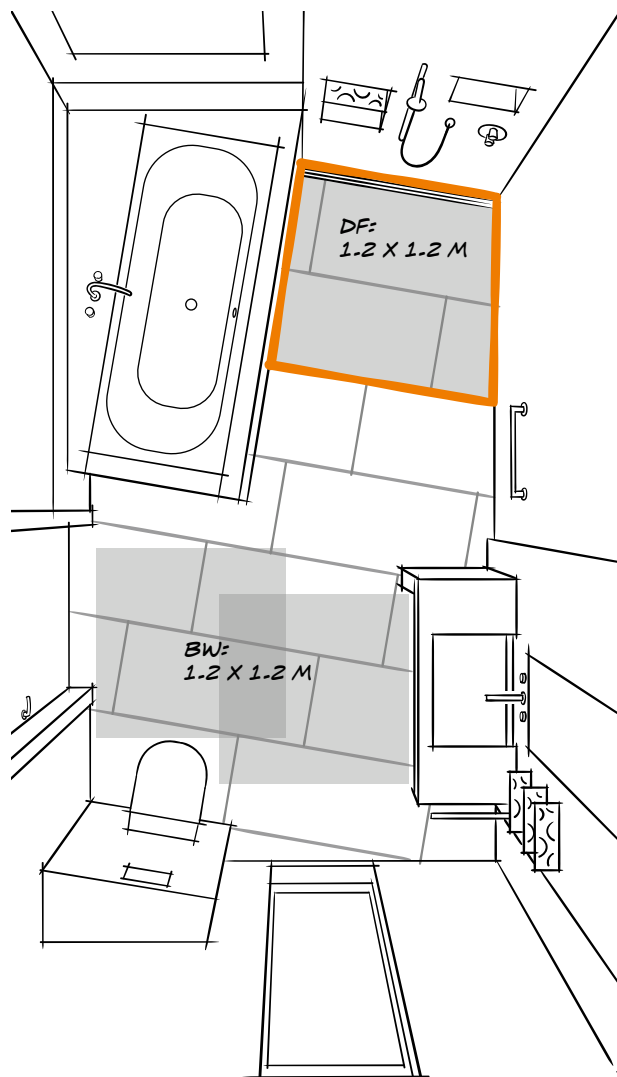




Waterproofing, uncoupling, heating

System solutions by Schlüter®-Systems

Dependable waterproofing is an important factor in wetroom design. It is good to know that Schlüter-Systems offers interconnected systems that guarantee this function, along with stylish interior design, using modern drainage solutions. The company likewise supplies electric systems for heating floor and walls, which are suitable for high-moisture areas such as showers.



- 1 Bonded waterproofing and tile substrates:**
Schlüter®-KERDI and -KERDI-BOARD solutions
- 2 Bonded uncoupling and waterproofing:**
Wall heating
Schlüter®-DITRA-HEAT-E-SET
- 3 Floor heating**
Schlüter®-DITRA-HEAT-E
- 4 Linear drainage:**
Schlüter®-KERDI-LINE-VARIO



You can find detailed product specifications in our price list or online at **[schluter.de](https://www.schluter.de)**



Capillary break in door threshold areas

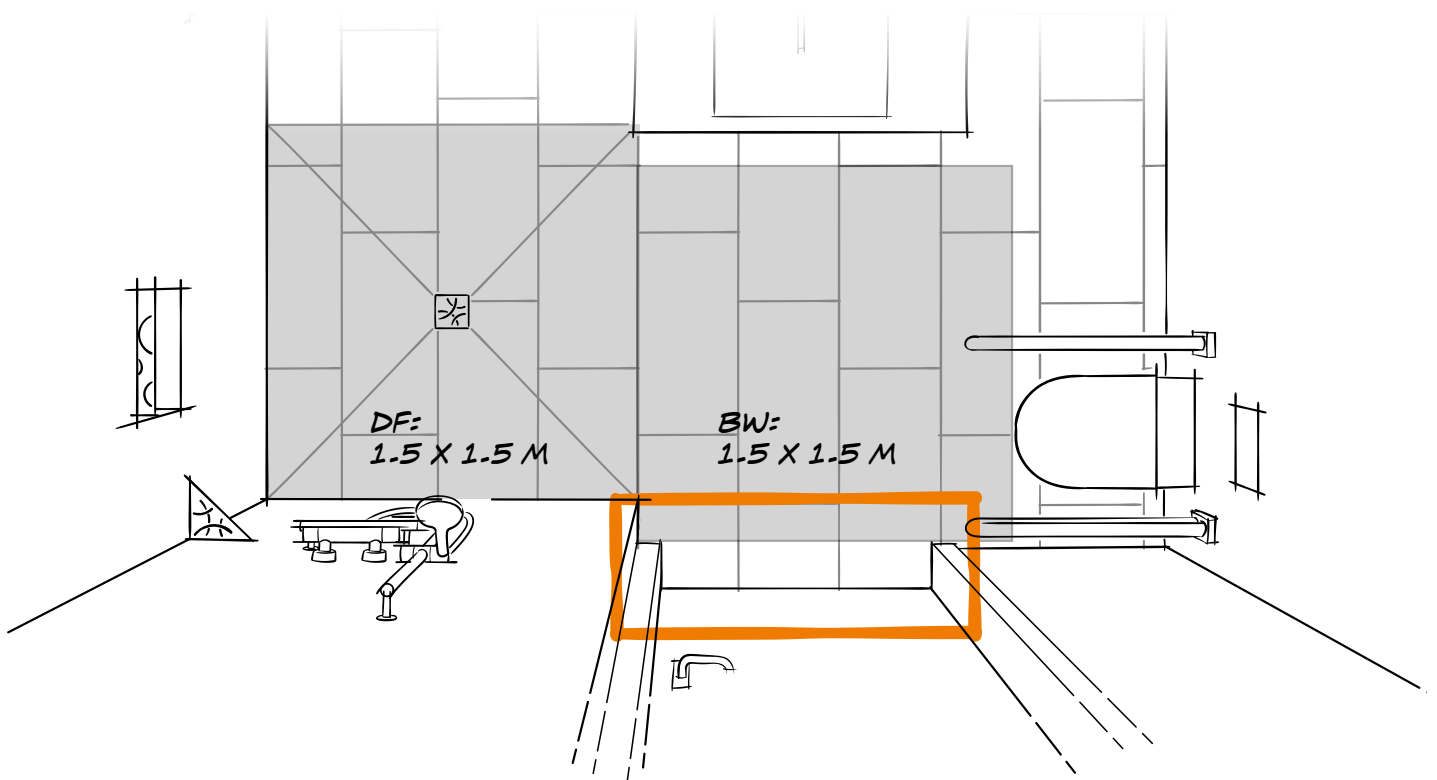
Schlüter®-KERDI-CID

The standard DIN 18534 calls for a capillary break in the floor below door threshold areas to keep water from spreading below tile coverings. Our Schlüter-KERDI-CID waterproofing sets create this type of break. They are available in versions that accommodate door opening directions.

No matter which solution the designer favours, the Schlüter-KERDI-CID waterproofing system creates a capillary break in the floor area. For heavily used wet areas, it is also possible to create a height transition and to install tiles at a slope in doorway areas to prevent water from spreading on the top covering. This design option results in a manageable, “ramplike” height difference to adjoining coverings. The slope should not exceed 6%.

Supporting information for Schlüter-KERDI-CID is available in the Download section at [schluter.de](https://www.schluter.de).





Note: drawing is for illustration only. Door opening into the adjoining space



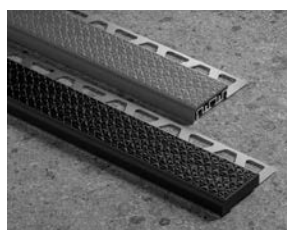
Reducing barriers – increasing comfort

What does “accessibility” mean? When do structures such as stairs become a barrier that turns into a minor or major challenge?

Daily limitations can be the result of a normal aging process, a sudden accident or a congenital disability. Impaired vision, combined with an additional physical limitation, can turn structures such as stairs into seemingly insurmountable obstacles. Easily recognisable stair edges with contrasting design can offer a solution that creates the foundation for consistently safe stair use.

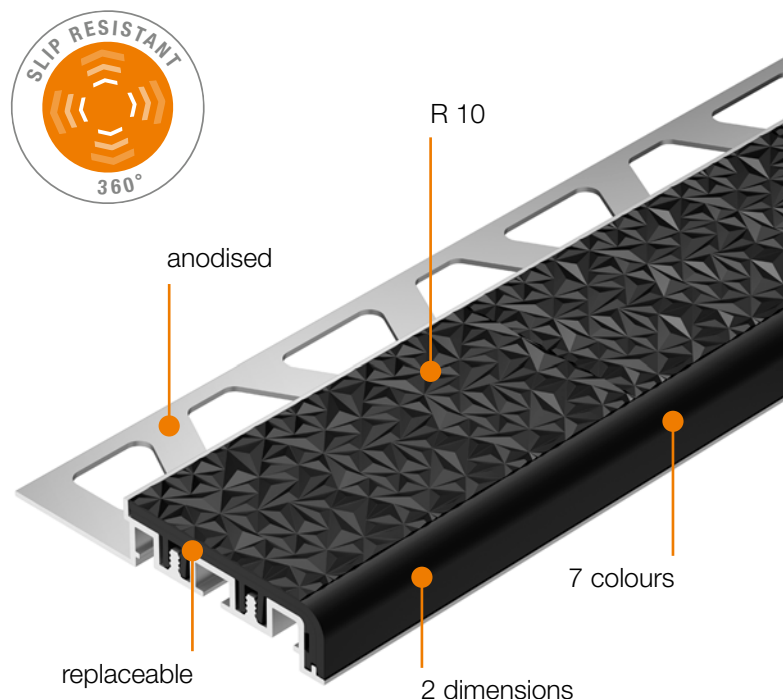


Schlüter®-TREP-V: beautifully safe

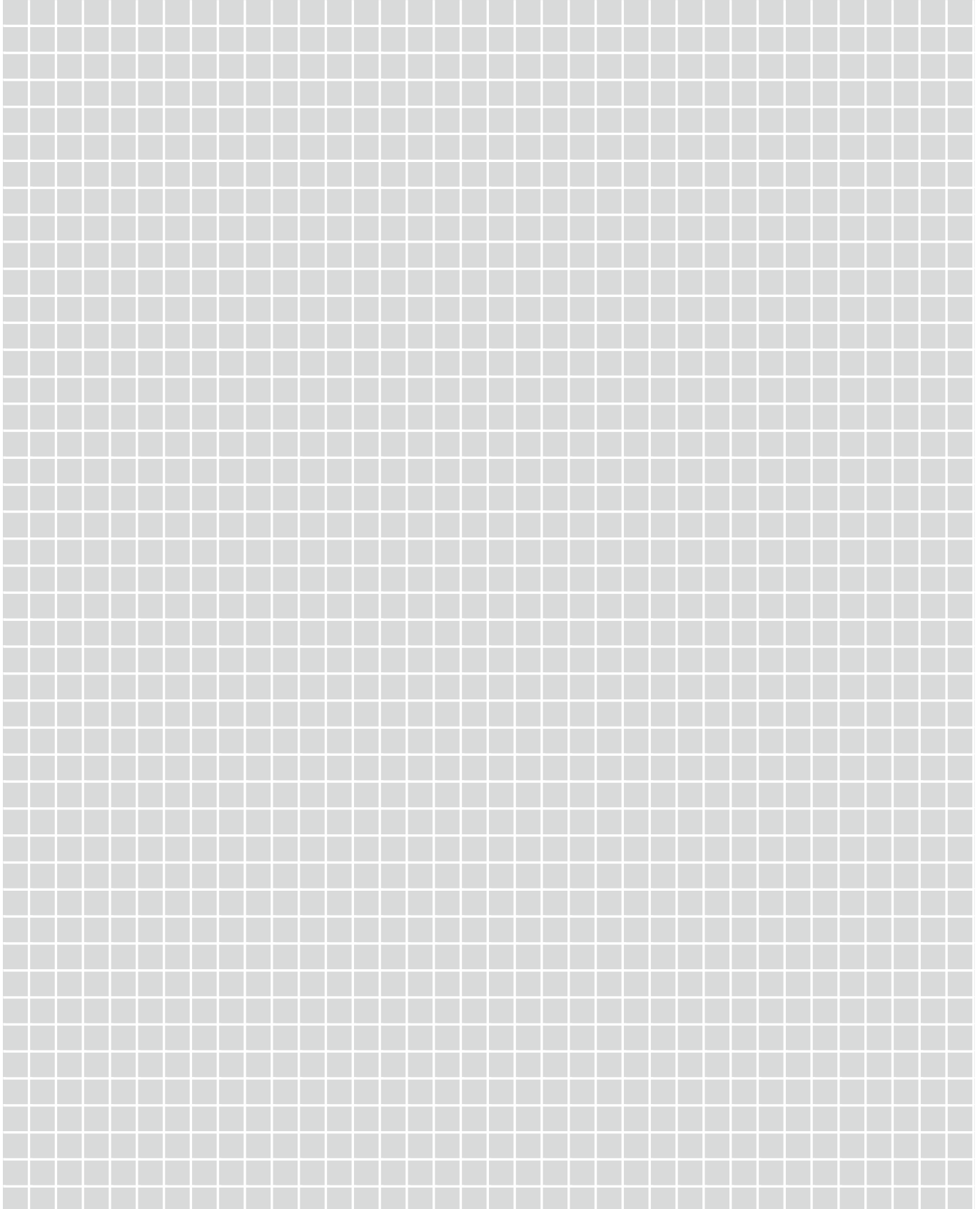


Schlüter-TREP-V combines the latest developments in slip resistant products with the recommendations of current guidelines. With a slip resistance class of R 10 according to DIN EN 16165, TREP-V enables safe use of staircases and can be installed in all dry, interior areas.

The colours and light refraction of the patented, replaceable treads are designed to create an optimum visual contrast to popular tile colours. Available in two convenient dimensions and a broad colour selection, TREP-V is an ideal solution for creating appealing and compliant staircases.



Notes:



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