# Schluter®-Shower System
## FOR TILED SHOWERS

**Watertight & maintenance-free**

## ANATOMY OF A SHOWER

Tiled showers have always represented a considerable challenge to installers. Typically, an installer must place a mortar bed, sloped to the weep holes in the sub-drain, prior to installing the pan liner. Once the "pre-slope" has cured to the point where it can be walked upon, the pan liner is installed, with its tenuous connections to the clamping ring in the sub-drain, seaming, and carefully fitted corners around the curb area, all of which must be bonded with the appropriate solvent-based bonding agent. Each of these steps must be completed, and the weep holes protected from being clogged with mortar, before the shower pan is ready to receive the setting bed for the floor tiles. This conventional methodology requires substantial time and labor.

Since shower pan liners are placed below the mortar setting bed in a conventional assembly, moisture is allowed to saturate the mortar bed. This can increase the risk of leakage, cause efflorescence, and foster bacteria and fungus growth. Bonded waterproof membranes, on the other hand, bond directly to the mortar bed and protect it from becoming saturated. The problem is that conventional two-piece floor drains are designed to connect to shower pan liners below the mortar bed and do not allow a secure, watertight connection to bonded waterproof membranes at the top of the drain assembly.
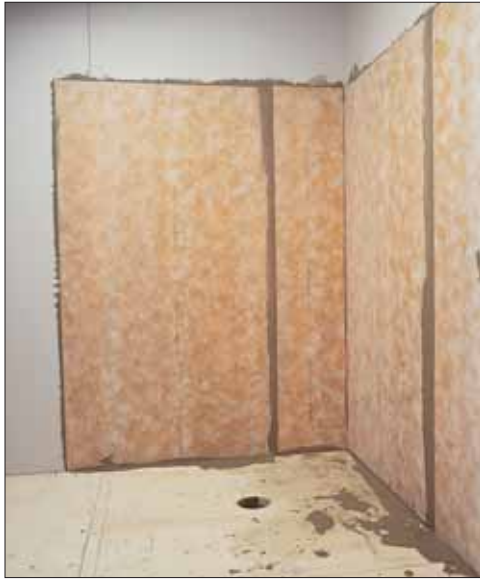
The objective, therefore, is to develop a system in which the individual components collectively form a bonded watertight assembly. The Schluter®-Systems Shower Assembly is an integrated family of products that achieves this objective.

The foundation of the system is the Schluter®-KERDI-DRAIN, which was designed specifically to ensure a simple and secure connection to bonded waterproof membranes, such as the Schluter®-KERDI waterproofing membrane, at the top of the assembly rather than below it, thereby reducing the risk of leakage, efflorescence, and fungus and bacteria growth. For shower floors constructed with mortar, KERDI-DRAIN eliminates the process of pre-sloping the floor. When used in conjunction with KERDI-SHOWER-ST and KERDI-SHOWER-SC, the mortar setting bed is eliminated altogether. The system is completed with Schluter®-RONDEC and DILEX profiles, which finish and protect outside corners and eliminate caulking.
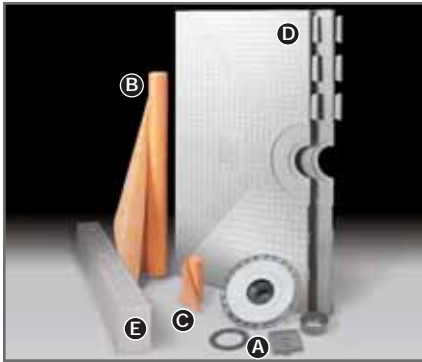
The Schluter®-Systems Shower Assembly eliminates the risk of failures due to both vapor and water penetration, is maintenance-free, and dramatically reduces total installation time. The integrated Schluter® Shower System ensures success and makes shower installation easier than ever.

**1** Schluter® materials required to complete the installation:
A) KERDI-DRAIN
   (includes KERDI-KERECK-F pre-formed corners)
B) KERDI (waterproofing membrane)
C) KERDI-BAND (waterproofing strip)
D) KERDI-SHOWER-ST (prefabricated tray)
E) KERDI-SHOWER-SC (prefabricated curb)



**2** After locating the correct position for the drain, cut a hole in the substrate using KERDI-SHOWER-ST tray as a template.



**3** Apply unmodified thin-set mortar to the substrate using a 1/4" x 3/8" square- or U-notched trowel. Note: The floor must be level. Any leveling must be done prior to placing the tray.



**4** Place the KERDI-SHOWER-ST tray in the mortar.



**5** Ensure that the tray is solidly embedded in the mortar.



**6** Check the underside of the tray to ensure that full coverage is achieved.

**Note:** The KERDI-SHOWER-ST tray can be cut to size to fit various applications. Ideally, the tray should be cut by equal amounts on all four sides to ensure a consistent height of the first course of wall tile. The shower base can also be extended past the perimeter of the shower tray using dry pack mortar.



**7** Construct floor/wall connections and seal vertical inside corners using the KERDI-BAND waterproofing strip or cut sections of KERDI waterproofing membrane. Apply the thin-set mortar using a 1/4" x 3/16" V-notched trowel.



**8** Protect walls from moisture and vapor penetration using KERDI. Seams are constructed by overlapping the edges of KERDI or KERDI-BAND by 2" *(50 mm)* using unmodified thin-set mortar. Apply the thin-set mortar using a 1/4" x 3/16" V-notched trowel.



**9** OPTION: Walls can be waterproofed with KERDI prior to the installation of the tray. Floor/wall connections are constructed with KERDI-BAND after installing the tray.
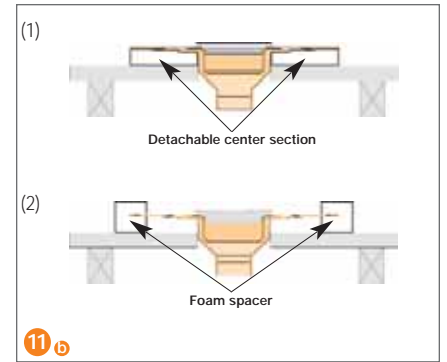
**Note:** The type of bonding mortar used to apply KERDI must be suitable for the substrate. Generally, an unmodified thin-set mortar is used (e.g., over gypsum board and cement backerboard). Unmodified thin-set mortar must be used to construct all KERDI seams and to apply tile over the KERDI membrane.

**10** If there is access to the plumbing from below and the waste line can be connected after installing the KERDI-DRAIN, apply unmodified thin-set mortar to the entire shower tray surface using a 1/4" x 3/16" V-notched trowel, making sure to completely fill the step in the shower tray.



**11** ⓐ



**11** ⓑ

Detachable center section

Foam spacer

ⓐ The KERDI-DRAIN is pressed firmly into the thin-set mortar, ensuring full support of the bonding flange. ⓑ When KERDI-DRAIN must be set by the plumber prior to the KERDI-SHOWER-ST tray (or when there is no access to the plumbing from below), install the KERDI-DRAIN to the appropriate height using the detachable center section (1) of the tray or the foam spacers (2) included with the drain. Before installing the KERDI-SHOWER-ST tray, apply thin-set mortar to the substrate and to the top and bottom of the detached center section. Slide the center section into place below the drain to ensure solid and uniform support of the bonding flange.*



**12** Apply additional unmodified thin-set mortar to the top of the fleece-laminated bonding flange.



**13** Embed the KERDI waterproofing membrane into the mortar and work the matting onto the entire surface of the tray to ensure proper adhesion and to remove air pockets. Be sure the connection between the KERDI and KERDI-DRAIN is secure and watertight.



**14** If necessary, cut the KERDI-SHOWER-SC curb to length using a handsaw.



**15** Apply unmodified thin-set mortar to the floor and to the edge of the shower tray using a 1/4" x 3/8" square- or U-notched trowel, and press the curb firmly into place.



**16** Seal the shower curb/wall junction using KERDI-KERECK inside and outside corners, and unmodified thin-set mortar.



**17** The entire shower assembly is now waterproof and ready for tile setting.

**The final result:** a fully waterproof shower installation that is both beautiful and maintenance-free.

**\*Note:** Schluter®-Systems recommends installing the KERDI-SHOWER-ST tray prior to setting KERDI-DRAIN whenever possible. This allows greater control over the final position of the drain and makes it easier to obtain full support under the bonding flange.

**1** Place a mortar screed around the base of the shower.  Schluter® materials required to complete the installation:
A) KERDI-DRAIN
B) KERDI waterproofing membrane
C) KERDI-BAND waterproofing strip
D) KERDI-KERECK-F pre-formed corners (included with KERDI-DRAIN)



**2** Place a ring of loose mortar around the inlet hole in the floor and firmly press the drain into the mortar (the drain casing and bonding flange must be fully supported). Fill the remainder of the shower base with mortar.



**3** Slope the mortar bed using the bonding flange and the perimeter screed as a screeding guide.



**4** Construct floor/wall connections using the KERDI-BAND waterproofing strip or cut sections of KERDI waterproofing membrane. Seams are easily constructed by overlapping the edges of KERDI or KERDI-BAND by 2" *(50 mm)* using an unmodified thin-set mortar.



**5** As soon as the mortar bed can be walked upon, waterproofing with the KERDI membrane can begin.  Apply unmodified thin-set mortar to the shower base and fleece-laminated bonding flange using a 1/4" x 3/16" V-notched trowel.



**6** Embed the KERDI water-proofing membrane into the mortar and work the matting onto the entire surface to ensure proper adhesion and to remove air pockets.  Be sure the connection between the KERDI and KERDI-DRAIN is secure and watertight.



**7** Seal the shower curb/wall junction using KERDI-KERECK inside and outside corners, and unmodified thin-set mortar.



**8** Protect walls from moisture and vapor penetration using KERDI.  Seams are constructed by overlapping the edges of KERDI or KERDI-BAND by 2" *(50 mm)* using unmodified thin-set mortar.  Apply the thin-set mortar using a 1/4" x 3/16" V-notched trowel.



**9** The entire shower assembly is now water-proof and ready for tile setting.

**The final result:** a fully waterproof shower installation that is both beautiful and maintenance-free.

**Note:** The type of bonding mortar used to apply KERDI must be suitable for the substrate.  Generally, an unmodified thin-set mortar is used (e.g., over gypsum board and cement backerboard).  Unmodified thin-set mortar must be used to construct all KERDI seams and to apply tile over the KERDI membrane.

**1** **Schluter®-KERDI-SHOWER-ST/-SC**
Prefabricated tray and curb

**2** **Schluter®-KERDI-DRAIN**
Floor drain with a sloped, integrated
bonding flange

**3** **Schluter®-KERDI**
Waterproofing membrane

**4** **Schluter®-KERDI-BAND**
Waterproofing strip

**5** **Schluter®-DILEX-EHK/-HKW/-AHK**
Cove-base profile (optional)

## 1. Schluter®-KERDI-SHOWER-ST/-SC/-SR



**Schluter®-KERDI-SHOWER-ST**
**Schluter®-KERDI-SHOWER-SC**



**Schluter®-KERDI-SHOWER-SR**

Schluter®-Systems' prefabricated shower substrates provide an alternative to bases constructed of mortar. The KERDI-SHOWER-ST tray is sloped and specifically designed to accept the KERDI-DRAIN. The KERDI-SHOWER-SC curb can be used with KERDI-SHOWER-ST tray or mortar applications. The KERDI-SHOWER-SR ramp is designed to facilitate the construction of access ramps for tiled showers.

**Note:** Prefabricated shower substrates can be cut to size to fit various applications. Ideally, the tray should be cut by equal amounts on all four sides to ensure a consistent height of the first course of wall tile. The shower base can also be extended past the perimeter of the shower tray using dry pack mortar.

### Unique Features and Benefits:

- Made of lightweight expanded polystyrene (PS 40).
- Tray is sloped and designed to accept the KERDI-DRAIN bonding flange.

### Dimensions:
**Tray:**
❶ 48" x 48" *(122 cm x 122 cm)*; height at perimeter: 1-1/2" *(3.8 cm)*
❷ 72" x 72" *(183 cm x 183 cm)*; height at perimeter: 1-1/2" *(3.8 cm)*
❸ 32" x 60" *(81 cm x 152 cm)*; height at perimeter: 1-3/4" *(4.4 cm)*
❹ 32" x 60" *(81 cm x 152 cm)*; height at perimeter: 1-1/2" *(3.8 cm)*



❶ 48" x 48"   ❷ 72" x 72"   ❸ 32" x 60"   ❹ 32" x 60"

**Note:** Tray 4 features off-center drain placement: 10" *(25.4 cm)* o.c. from end of tray.

**Curb:** 48" x 6" x 4-1/2" *(122 cm x 15 cm x 11.5 cm)*.

**Ramp:** 48" x 15-7/8" *(122 cm x 40 cm)* perimeter height slopes from 1-1/2" (*3.8 cm*) to 1/4" *(0.6 cm)*

## 2. Schluter®-KERDI-DRAIN



**Schluter®-KERDI-DRAIN** floor drain assembly is designed with a sloped, integrated bonding flange to provide a secure connection to KERDI and other bonded waterproof membranes.

### Unique Features and Benefits:

- Appropriate for both mortar bed and KERDI-SHOWER-ST tray installations.
- Features a fully adjustable square grate and accommodates a wide range of tile thicknesses 1/4" to 1-1/4" *(6 mm to 31 mm)*. Grate is available in stainless steel (E), brushed brass anodized aluminum (AMGB), brushed copper/bronze anodized aluminum (AKGB), and brushed nickel anodized aluminum (ANIGB).
- Ideal for new construction and renovation work.
- Saves installation time and labor, as it eliminates the prep work required for a traditional two-step mortar pan.

*Schluter®-KERDI-DRAIN is listed by* UPC®, CSA, and NSF.



Brass
Nickel
Copper/bronze
Stainless steel



1. Grate

2. Height adjustment collar

3. Lateral adjustment collar

4. Fleece-laminated bonding flange
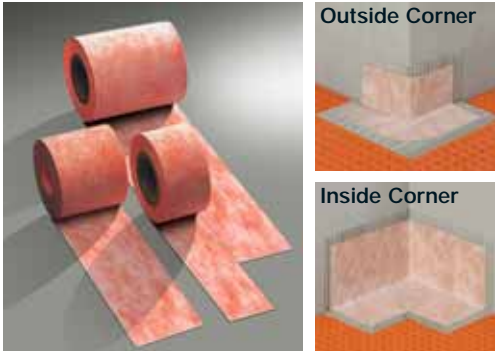
## 3. Schluter®-KERDI

**Schluter®-KERDI** is a pliable sheet-applied polyethylene waterproofing membrane and vapor retarder that guarantees uniform thickness. It is covered on both sides with a fleece webbing to anchor the membrane in thin-set mortar.

**Unique Features and Benefits:**
- Easy to install; hangs as effortlessly as wallpaper.
- Provides a simple connection to Schluter®-KERDI-DRAIN.
- Ideal for waterproofing floors and walls, including steam showers.

*Schluter®-KERDI is listed by* cUPC®.

## 4. Schluter®-KERDI-BAND and Schluter®-KERDI-KERECK-F
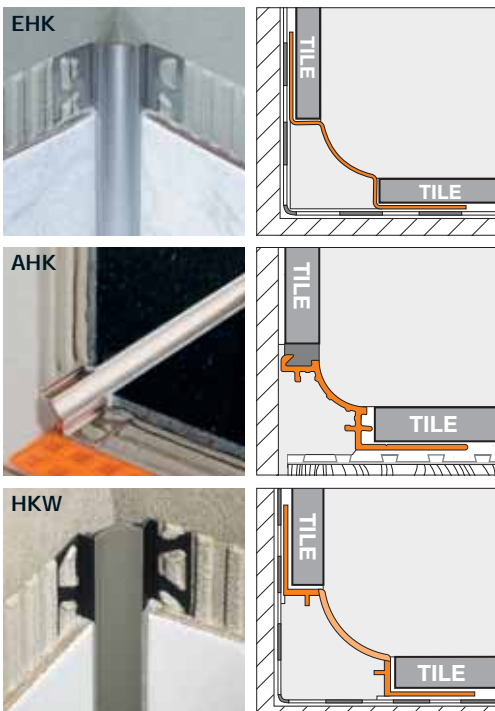
**Outside Corner**

**Inside Corner**

Use **Schluter®-KERDI-BAND** waterproofing strip to seal butt joints and floor/wall connections to the KERDI matting.

**Schluter®-KERDI-KERECK-F** are pre-formed, seamless, inside and outside corners.

**Unique Features and Benefits:**
- Half the thickness of KERDI (4 mil), to limit buildup at seamed connections.
- Seals inside/outside corner connections to the KERDI membrane.

## 5. Schluter®-DILEX-EHK/-AHK/-HKW
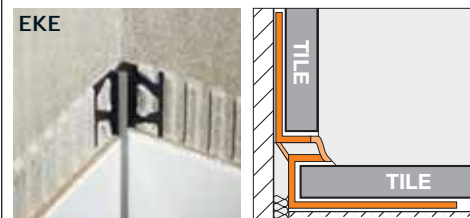
**EHK**

**AHK**

**HKW**

The **Schluter®-DILEX** family of movement joints includes inside corner solutions for shower applications. Cove-based profiles DILEX-EHK in stainless steel, DILEX-AHK in anodized aluminum, and DILEX-HKW in colored PVC are for inside corners within tiled surfaces and for floor/wall transitions.

**Unique Features and Benefits:**
- Eliminates caulking.
- Ideal for applications with strict hygienic requirements.

**Alternative**

Schluter®-**DILEX-EKE** creates a discreet, uniform joint, and effectively absorbs movement at inside wall corners and at floor/wall transitions.
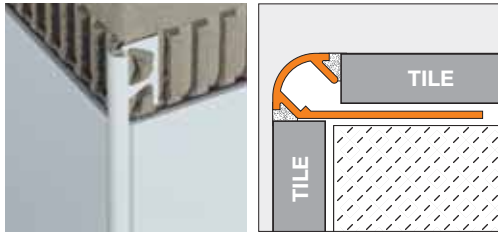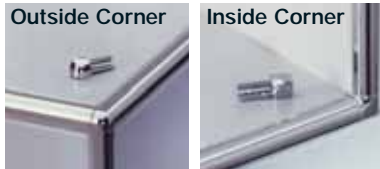
**EKE**

**Unique Features and Benefits:**
- Eliminates caulking.

## Schluter®-RONDEC (not shown in illustration on page 8)



**Outside Corner**   **Inside Corner**

**Schluter®-RONDEC** is a symmetrically rounded profile that protects and finishes outside wall corners and other tiled edges, such as baseboards and shower curbs.

### Unique Features and Benefits:

- Available in a large variety of materials and finishes, including colored PVC, stainless steel, chrome-plated brass, and anodized aluminum.
- Matching inside and outside corners.
- Integrated joint spacer creates a pre-defined, uniform grout joint. Stainless steel profiles are roll-formed and do not have an integrated joint spacer.
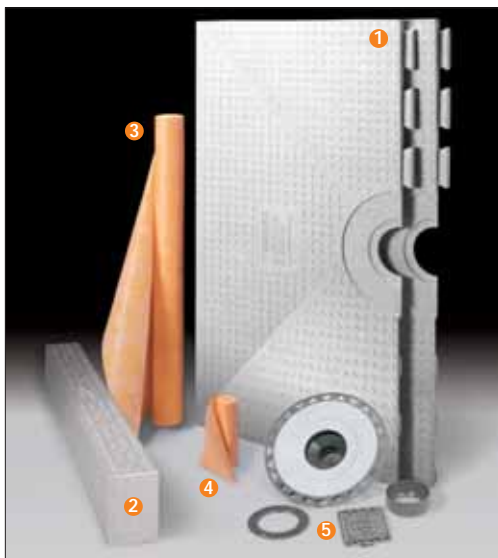
JOLLY
TILE
TILE

**Alternative 1**

**Schluter®-JOLLY** is a straight edge profile that finishes and protects outside wall corners and other tiled edges, e.g., tiled skirting, baseboards, and shower curbs.

QUADEC
TILE
TILE

**Alternative 2**

**Schluter®-QUADEC** is a square edge profile that finishes and protects outside wall corners and other tiled edges, e.g., tiled skirting, baseboards, and shower curbs.

## Schluter®-KERDI-SHOWER-KIT



**Schluter®-KERDI-SHOWER-KIT** is an all-inclusive package containing each of the components required to create a maintenance-free, watertight shower assembly without a mortar bed.

### Kit Includes:

1. **KERDI-SHOWER-ST**
   Shower tray, 48" x 48" *(122 cm x 122 cm)*, 32" x 60" *(81 cm x 152 cm)*, or 72" x 72" *(183 cm x 183 cm)*
2. **KERDI-SHOWER-SC**
   Shower curb, 48" x 6" x 4-1/2" *(122 cm x 115 cm x 11.5 cm)*
3. **KERDI 10M**
   Waterproofing membrane, 3' 3" x 33' = 108 ft$^2$ *(1 m x 10 m = 10 m$^2$)*
4. **KERDI-BAND**
   Waterproofing strip, 5" x 33' *(125 mm x 10 m)*
5. **KERDI-DRAIN**
   Drain, with integrated bonding flange (Includes KERDI-KERECK-F: 4 inside corners and 2 outside corners)

**Note:** All necessary components may be purchased separately or as a kit.

**For further information and technical product data, or to order an installation video, please refer to our website:**

# www.schluter.com

## Tools and materials required to complete the Schluter®-KERDI-SHOWER-KIT installation

1. Jigsaw or reciprocating saw, to cut a hole for the drain ☐

2. Unmodified thin-set mortar (no premixed mortar) ☐
   **Note:** Unmodified thin-set mortars do not contain latex/polymers. These mortars can be identified by conformance to the ANSI A118.1 specifications, which is designated on the packaging.

3. 5-gallon bucket ☐

4. Mixer ☐

5. 1/4" x 3/8" square- or U-notched trowel ☐

6. 1/4" x 3/16" V-notched trowel ☐

7. Margin trowel ☐

8. Utility knife (or scissors) ☐

9. PVC or ABS cement ☐
   (use appropriate type to connect drain to plumbing)

10. Level ☐

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