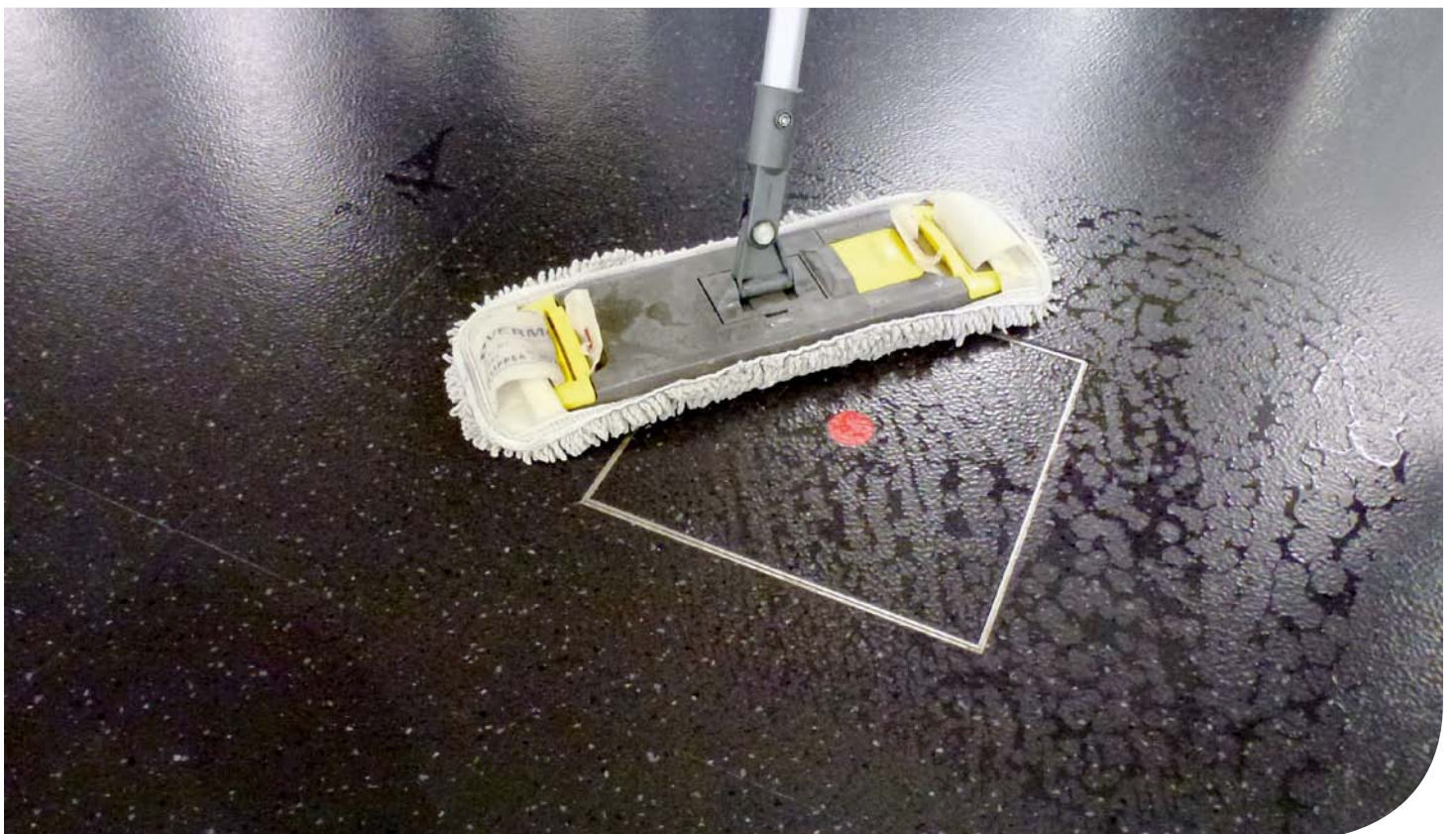




## **Types of protection and floor maintenance of installation units**

### Technical information



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## Technical information

### General Requirements

The testing of the type of protection for underfloor trunking systems and cable ducting systems is regulated by EN 60529, and the type of testing of floor maintenance by DIN EN 50085. In order to determine the optimum type of protection, the installation unit is tested in both, used and unused condition. The respective conditions are declared separately. All cable systems and installation units must fulfil at least protection type IP 20 in both conditions, used and unused. Additionally to the declaration of the protection type for wet maintenance it must be ensured that in working condition the cable exits are placed at least 10 mm above the floor surface.

### Technical exemplifications

#### Labelling

All PUK installation units are labelled according to DIN EN as follows:



#### Dry maintenance

The process of cleaning and / or maintenance of the floor, during which dry or low-moisture methods covers are used that do not cause a pool formation or soaking of the floor.



#### Wet maintenance

The process of cleaning and / or maintenance of the floor during which wet cleaning or maintenance items are used, that may cause a short-term pool formation or soaking of the floor covers.

#### Data sheets

The data sheets obtain the protection type for all PUK system installation units in unused / used condition as well as the application area of floor maintenance based on classified tests according to DIN EN 50085.

The specifications differentiate between rooms with dry, moist and wet maintenance floors.

The application areas of floor maintenance are in accordance with the definitions of the commercial cleaning trade, and the specification of protection type is based on classification.

### Application recommendations

According to DIN EN 50085 the underfloor system is not suitable for outdoor use!

#### Wet maintenance

Based on the IP-protection levels listed in the data sheets, the stainless steel installation units guarantee protection against contact and against water according to the requirements of DIN EN 50085. A passing over with simultaneous cleaning of the installation units is not a part of this norm specification. The VDE views the examination of load capacity and of protection type separately. A combination of both is not intended.

Consequentially, a double pressure caused by a heavy, unilateral weight and by power water is not provided in the regulations. Overly high water- and loading pressure can result in dust particles and cleaning liquids entering the inside of the installation unit. Above mentioned floor maintenance may cause damage and impairment of the rubber seals. In order to ensure the safety level, we recommend that all sealed components of the installation units are cleaned and maintained on a regular base.

#### Dry maintenance

Based on the IP protection levels stated in the data sheets, the plastic material installation units guarantee protection against contact and against water according to the regulations by DIN EN 50085. The DIN EN 50085 requires a minimum standard of IP 20.

Plastic installation units are therefore suitable for carpet floors and offer no protection against water ingress.

Improper floor maintenance may cause damage to the installation unit and to the electric installation. In order to maintain visual attractiveness and functionality, regular cleaning is recommended.

If the stated instructions are adhered to, it can be ensured that the underfloor electric installation is protected from harmful effects during standard use.

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### Type of protection according to classification

The types of casting protection are specified in the regulations IEC 60529, respectively DIN EN 60529, both containing a classification according to different types of protection. The below illustration shows an overview of the protection types.

















Code Letter: International Protection (IP)		First Index Number: Protection against solid foreign particles	Second Index Number: Protection against water		
Scope of protection		Scope of protection			
0		no protection against contact, no protection against solid foreign particles	0		no protection against water
1		protection against large area contact with the hand, protection against foreign particles of $\varnothing \geq 50$ mm	1		protection against dripping water, vertically falling water drops
2		protection against contact with fingers, protection against foreign particles of $\varnothing \geq 12,5$ mm	2		protection against dripping water from any angle up to $15^\circ$ from a vertical position
3		protection against contact with tools, wires, etc. of $\varnothing \geq 2,5$ mm, protection against foreign particles of $\varnothing \geq 2,5$ mm	3		protection against spraying water from any angle up to $60^\circ$ from a vertical position
4		protection against contact with tools, wires, etc. of $\varnothing \geq 1$ mm, protection against foreign particles of $\varnothing \geq 1$ mm	4		protection against splashing water from any direction
5		protection against touch, protection against dust accumulation on the inside	5		protection against water jet from any angle
6		complete protection against touch, protection against ingress of dust	6		protection against heavy water jet from any angle
			7		protection against water intrusion with a temporary submerge
			8		protection against water intrusion with lasting submerge

Illustration based on DIN EN 60529, IEC 60529  
visual material of [www.solamagic.com](http://www.solamagic.com)

### Types of cleaning according to the commercial cleaning definitions\*

#### Damp wiping

**Definition:** Dust-mopping on a stage work level with damp or prepared cleaning textiles for the removal of loose surface dust and to a lesser degree also for the removal of persistent surface dirt.

**Goal / Result:** The surface is clean of persistent dirt and of surface dust.

**Remarks / Notes:** Voraussetzungen zur Anwendung der Feuchtwischmethode sind glatte Bodenbeläge.

#### Wet wiping

**Definition:** Manual wet mopping with cleaning textiles for the removal of adhesive dirt.

**Goal / Result:** The surface is clear of dust, persistent dirt, and adhesive dirt.

#### Wet wiping, single stage

**Definition:** The cover is cleaned in one work step with more or less strongly drained cleaning textiles.

The liquid remaining after this work step is left to dry.

#### Wet wiping, two-stage

**Definition:** The two-stage method represents the conventional wet wiping method. In the first work step, a considerable amount of cleaning liquid is applied to the floor cover using a cleaning textile, in order to soak, respectively dissolve, persistent and water-bound dirt.

In the second work step, the remaining soiled liquids are absorbed and wiped off with the cleaning textile.

\*Excerpt from the cleaning methods based on the definitions of commercial cleaning.



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