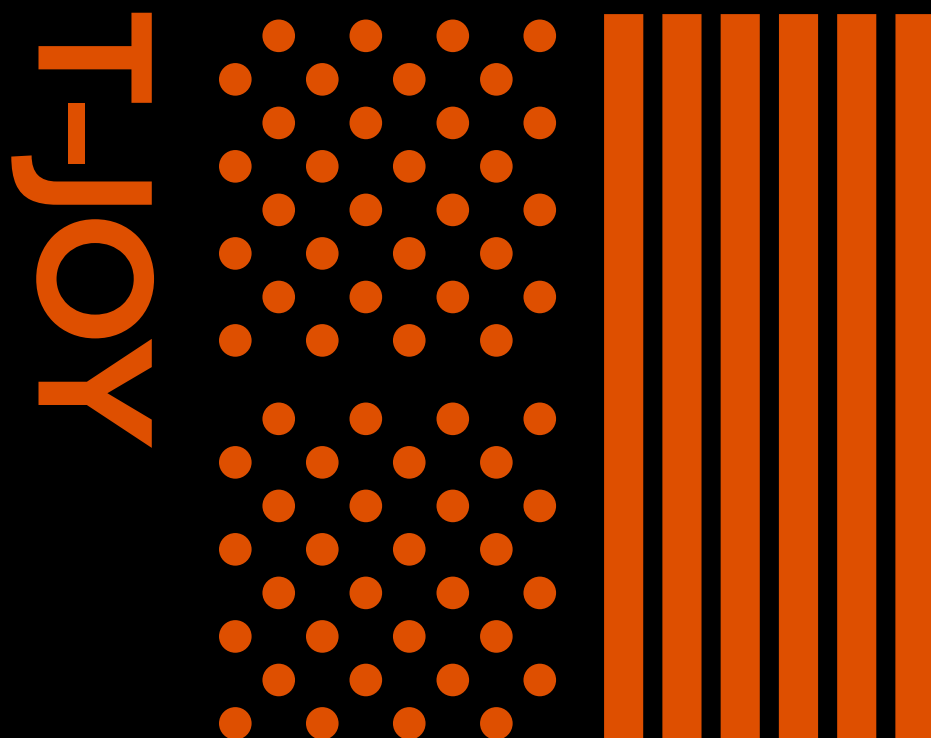


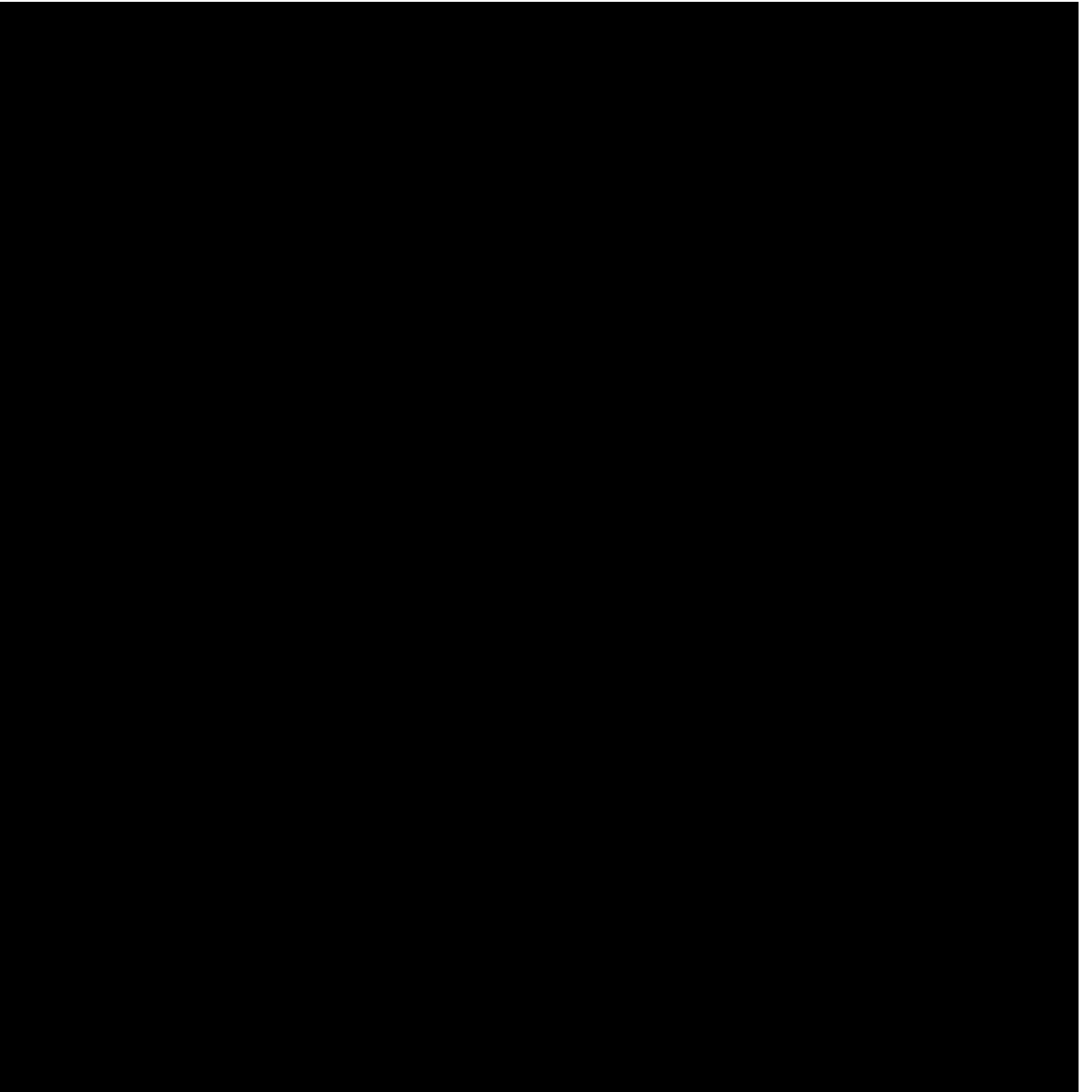
Your **safe** and
independent journey.

ENG



In accordance with CEN/TS 15209





Your **safe** and
independent journey.

ENG

T-JOY

Tactile Paving Tiles



In accordance with CEN/TS 15209

T-Joy Tactile Paving Tiles System

JKJ's tactile paving tiles T-Joy are designed according to the minimal parameters outlined in the **technical standard CEN/TS 15209**. The whole system represents a **primary aid** and allows for the adaptation and accessibility of places and areas of public use with a minimal architectural impact.

The key innovation of JKJ's tactile systems primarily consists in their material, a custom **M-PVC-P technopolymer** that makes the product resilient and elastic, perfect for both indoor and outdoor installations and with high performance characteristics. Unlike other TWSI built in cement or stone, M-PVC-P technopolymer tiles do not break under concentrated loads, as it frequently happens in highly walkable environments, providing both **sound and colour contrast feedback**, being it made of a different material from the floor underneath.

Recent studies show that **TWSI** are not only useful for blind and visually impaired people but also for all the users as they send **mechanical stimuli** inducing attention to the surrounding environment. The results of the study highlight that the presence of tactiles has a positive global effect also on the walking of **sighted people**.

JKJ Srl solutions can also provide blind and visually impaired users with both tactile and **vocal information**, where the paving has been equipped with **Radio Frequency Ground Tags**. Thanks to our proprietary **electronic T-Stick** that intercepts the tags, users can receive messages in any language and any duration just using JKJ's free **T-Go app**. A technology useful for ensuring autonomous and safe walking.



User

The **user** listens to messages via smartphone or using Bluetooth earphones.



Smartphone

Download T-Go app for free on your **smartphone** via App Store or Google Play

Electronic T-Stick

The **electronic T-Stick** reads RFG Tags grafted under the tactiles and communicates the data via Bluetooth to the smartphone.

Trasponder

The transponders are **passive RFG Tags** and do not require electricity.

T-JOY



TACTILE PAVING TILES OPERATING SCHEME WITH RFG TAGS



Android



IoS

COMPONENTS

Tactile Paving Tiles



All tiles can be integrated with RFG tags 134.2 kHz



All tiles can be supplied with 3M double sided tape upon request.

 Description

 Indications

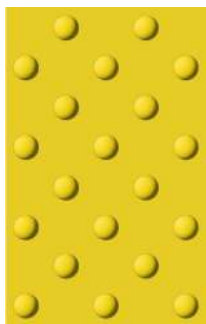
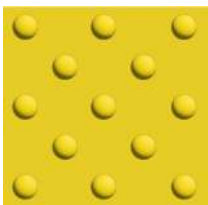
01 - STRAIGHT



 M-PVC-P technopolymer tile measuring **15x60** cm or **30x60** cm featuring parallel grooves facing towards the travel direction.

 They indicate a straight direction and a safe path to follow.

02 - WARNING



 M-PVC-P technopolymer tile measuring **30x30** or **30x60** cm featuring spherical studs arranged diagonally.

 They indicate to stop in front of a danger or require user's attention in front of specific areas, like an intersection.

Item tender specifications

JKJ's straight Tactile Walking Surface Indicators (TWSI) are primary aids made up of equidistant trapezoidal reliefs of not less than 3mm and width in accordance with Table 3 – WT3 and WT6 of CEN/TS 15209. The distance between the reliefs in accordance with Table 1 S9. The warning tiles display spherical studs arranged diago-

nally. The height of studs, as well as the distance between them, is compliant to CEN/TS 15209 regulations. Each one is superficially finished with a characteristic 2x1mm "small olives" design, a distinctive feature of JKJ Srl productions. Every tile is made of M-PVC-P Technopolymer with the following technical specifications:

DESCRIPTION	UM	VALUE	TESTING METHOD
Friction coefficient	μ	> 0,40	B.C.R.A. method
Residual Imprint	mm	> 0,1	EN433
Wheelchair	-	suitable	EN425
Electrical insulation	ohm	1010	DIN 51953
Resistance to chemical product	-	suitable	DIN 51958
Resistance to fire	-	B-fl/s1	UNI EN 13501-1
Hardness	Shore A	94 +/- 2	ISO 868
Xenon arc aging test (with anti-UV)	h	> 300	UNI EN ISO 4892-2
Heat insulation	W/mk	0,12	DIN 52612
Specific weight	gr/cm³	1,24+/- 0,02	ISO 1183
Failing load (after 168h at 100 °C)	N/mm²	19	CEI 20-34
Stretch (after 168h at 100 °C)	%	305	CEI 20-34
Thermal stability	min	35	CEI 20-34
Twisting stability	°C	-20	ASTM D 104
Anti-slip test	-	R 11	DIN 51130

According to European C. 202/95 (RoHS) CEI 20 - 52 '98, products formulated in compliance with the reach regulation 1907/2006 / EU.

COLORS



Yellow 3F9



Yellow 3FA



Charcoal 1B68



Gray 1B82



Red BC3



White 232B



Other colors on request



M-PVC-P Technopolymer tactile tiles features:



CAN BE OVERLAID ON EXISTING FLOORING



SUITABLE FOR INDOOR AND OUTDOOR INSTALLATION



B-FL/S1 FIRE REACTION CLASS



RESISTANT TO HIGH AND LOW TEMPERATURES



UV-RESISTANT



R11 ANTI-SLIP



ROHS COMPLIANT & LEAD-FREE



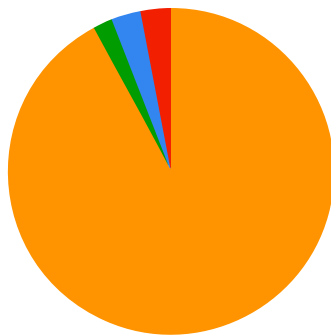
DOES NOT CRACK UNDER CONCENTRATED LOADS

What do users think about the innovation?

TWSI T-Joy is designed according to CEN/TS 15209 standard. It allows blind or visually impaired people to reach a destination thanks to the help of a tactile map, the feedback from the feet and the white cane. In addition to the sound contrast for blind users, it is also possible to use colour contrast for visually impaired ones.

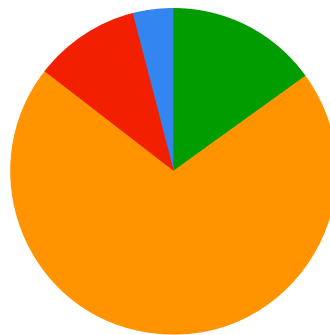
The orientation process that these tools can provide is divided into three different phases: map reading, information memorization, guided walking.

In the case of T-Joy system integrated with RFG Tags, the procedure of knowledge of the environment and orientation becomes precise and immediate as it provides vocal information at the exact point of contact of the electronic cane, thus providing not only directions but also information about the surrounding space, therefore accessibility becomes integration.



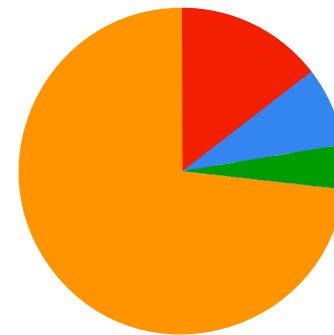
Do you think the vocalization of a tactile route is useful?

Yes
No
If no, why not
No answer



If you could choose would you like that the voice message was sent from the:

Headset
External mini speakers
Mobile phone hands free
No answer



Do you believe that the system meets the needs of blind and partially sighted most of the current systems?

Yes
No
If no, why not
No answer

JKJ's tactile paving tiles in M-PVC-P technopolymer are produced to be **high-performance** and resilient, nevertheless **installation** is a fundamental aspect of their resistance. JKJ guarantees the maximum **durability** when the installation is carried out according to the rules which are here only summarized.

Installation with bicomponent glue

Outdoor and indoor use

To obtain the expected outcome, the installation surface must be dry and mechanically resistant. On fresh asphalt please be sure there is no humidity. Before laying the tiles, please fill every hole or groove with a first layer of bicomponent glue. **JKJ Srl has tested and improved the installation of tactile tiles in M-PVC-P technopolymer with specific products** to achieve the highest standards of grip and resistance over time.

Before the installation, please make a path using adhesive tape. Use an even spatula to fill the holes if needed to make a uniformly even first layer, let it rest/catalyse for a few minutes and then use the rest of the glue with a 0,3 or 0,5mm teeth spatula on the screed or under the tiles. The glue must be carefully massaged from the centre outwards, paying attention to the edges to be sealed, to prevent water from entering and to allow total contact. Remember to remove the tape before the glue fully catalyses. The tiles tend to slightly shrink or expand according to temperature, even when they are installed, as **M-PVC-P technopolymer is elastic**. So does the

glue with the tiles allowing the passage of rainwater between them.

JKJ's tactile paving tiles are very quick and clean to be installed to **avoid closures for construction sites in areas with very high pedestrian traffic such as stations and subways**.

Installation with double-sided tape

Indoor use only

Before the installation, please be sure the surface is absolutely dry and there are no traces of wax.

Once the path has been marked, remove the double-sided tape from the back of the tiles and proceed with installation by applying light pressure. **JKJ's tactile paving tiles can be walked on immediately**.

Cleaning information

JKJ's tactile paving tiles can be cleaned with a common acetone-free detergent or degreaser normally used for floor cleaning. It is also possible to use common **equipment like electric brooms or brushing machines** that are not going to ruin the surface of the tiles.

To clean the floor before installation we warmly suggest the use of specific detergents to be sure there is no wax. When cleaning is done regularly, we advise the use of specific products for plastic surfaces. In cases of extraordinary cleaning and more decisive maintenance, it is possible to use a more aggressive cleaner as long as there is no acetone.

All those indicated for installation and cleaning are products for professional use.

Our commitment goes beyond simple numbers and technical solutions. We believe that every project is a story to be told, every product a hand extended toward a more accessible future. With passion and expertise, we design tactile paving tiles that improve mobility for everyone in the world, making the urban environment truly accessible.



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