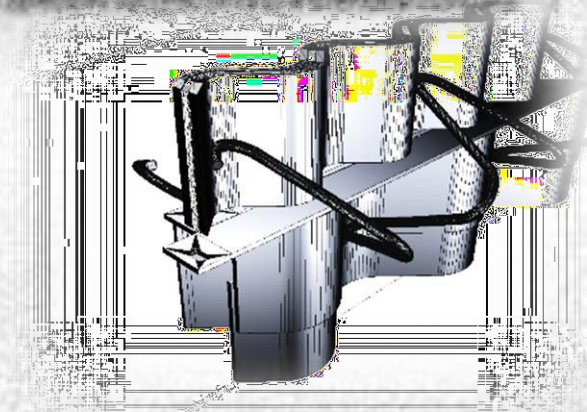


HCJ Evolution and products



HENGELHOEF
CONCRETE JOINTS

Salvatore Leo



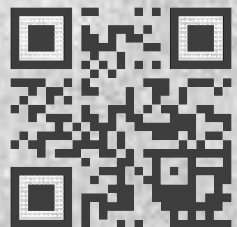
Hengelhoefstraat 158
B - 3600 Genk

T +32 (0)89 32 39 80

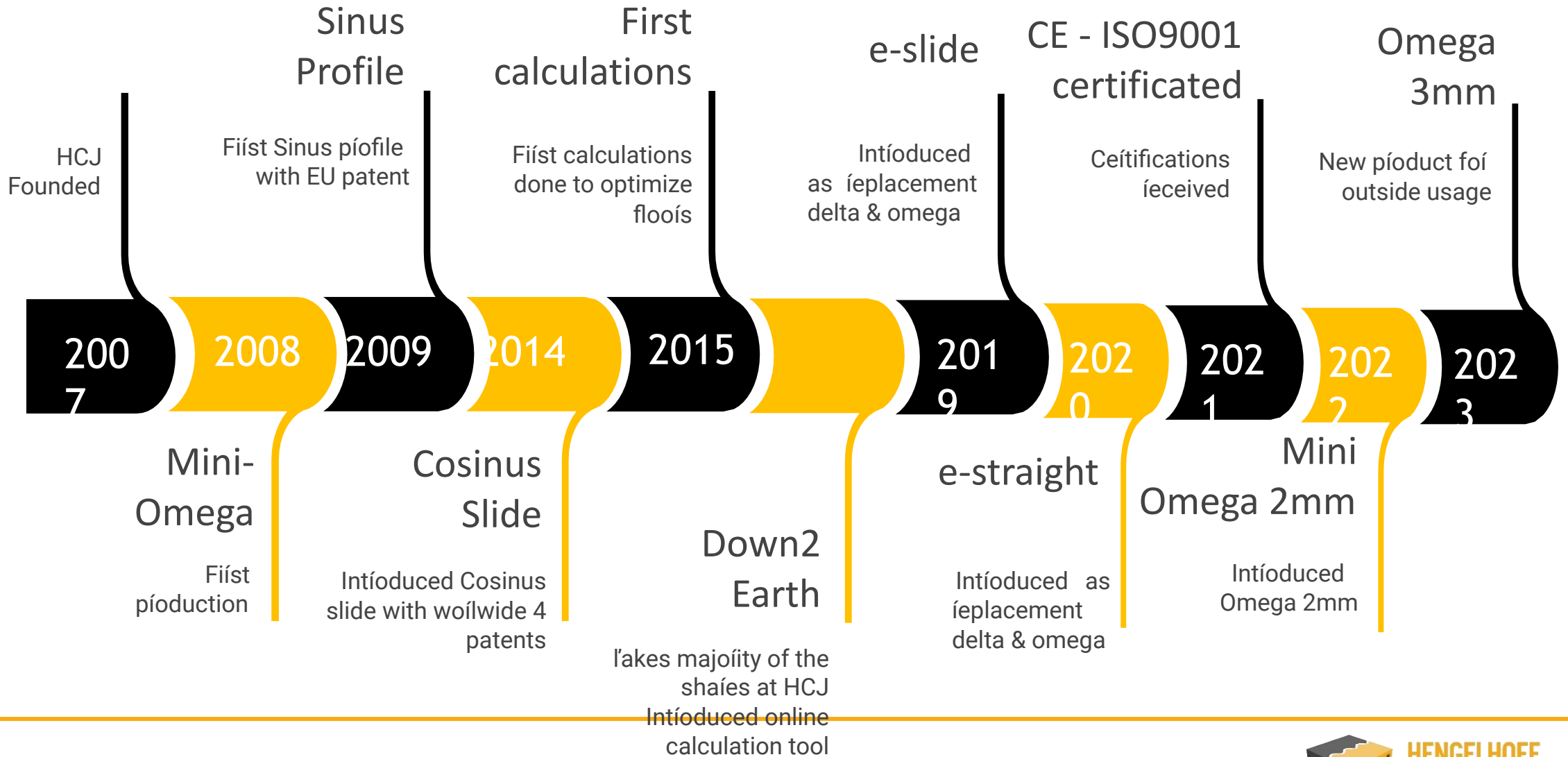
F +32 (0)89 32 39 88

E info@hcjoints.be


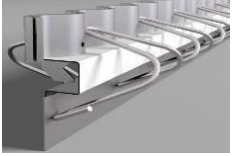


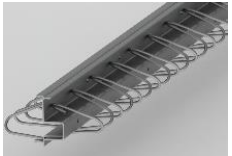

www.hcjoints.be



1) Company HCJ



2) Product Portfolio

Product picture	Product name	Standard heights
	Cosinus Slide®	90 – 500 mm
	e-slide	130 – 205 mm
	e-straight	130 – 205 mm
	HC-mini omega 2mm	60 – 100 mm
	HC-Omega 3mm Magnelis	100 – 180 mm
	HC-Omega 3mm Magnelis + rubber	100 – 180 mm

- **Corrosion free + Stainless Steel materials available**

2) Product portfolio

What are the functions of a joint?

Function joint

- To control the shrinkage of the concrete
- To use as day joint in function of concrete supply
- To control dynamic loads
- To control static loads
- To create comfort and save money



2) Product portfolio

Omega 3mm

- Specially designed for outside usage
- perfectly for pneumatic tires
- 3-D anchorage system
- Offered in Corrosion free material * and with or without rubber.
- Rubber -> keep dirt out
- Floor thickness from 110-200mm

* (Zinc/Alu/Magnesium)



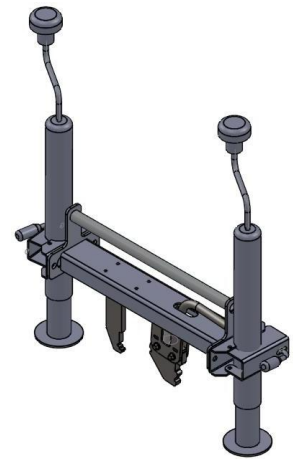
Why corrosion free Material used?

- The best corrosion resistance performance; up to 10 times better than galvanized steel
- The best-suited protection to withstand harsh environments
- The most cost-effective alternative to the post-galvanised process

2) Product portfolio

Cosinus

- Floor optimization (calculations)
 - reducing thickness of floor
 - free movements of racks
 - Co2 reduction
- Lowest TCO
- No dowels = continuous system
- No shock & vibration free
- High comfort for lift truck drivers
- Perfect edge protection “sinus shape “
- 3-D anchorage system
- Sustainable system
- No tolerance in both directions
- Double slide effect
- No deflection
- No curling
- Easy to install
- CE & ISO9001 certification
- Floor thickness from 90-500 mm



2) Product portfolio

Cosinus One Pager

HENGELHOEF CONCRETE JOINTS www.hcjoins.be

COSINUS SLIDE® JOINT

VERSUS TRADITIONAL STRAIGHT JOINTS

PERFECTION IN DYNAMIC & STATIC LOAD TRANSFER CONTROL

SAVE UP TO 20% TCO

SAVE UP TO* FOR A WAREHOUSE OF 20.000M ²	€ 170.320 CONCRETE FLOOR	400 M³ CONCRETE	84 TON CO ₂
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VALUE FOR THE CUSTOMER

 OPTIMIZE FLOOR THICKNESS WITH A FREE DESIGN CHECK	 SHOCK AND VIBRATION FREE	 NO DEFLECTION AND NO CURLING
 PLACING RACKS NEAR OR ON THE JOINT	 HIGHEST LOAD TRANSFER IN THE MARKET	 3D ANCHORAGE SYSTEM
 CONTINUOUS LOAD TRANSFER SYSTEM (DOUBLE SLIDE EFFECT)	 NO DOWEL TECHNOLOGY	 INHOUSE CALCULATIONS
 POSSIBILITY FOR ON SITE SUPPORT	 QUICK DELIVERIES DUE TO HIGH INHOUSE STOCK LEVEL	 HIGH EFFICIENCY DUE TO INSTALLATION TOOL
 CO ₂ REDUCTION	 FUTURE PROOF BUILDING	 LESS REPAIR COSTS



Hengelhofstraat 158, 3600 Genk
Poort Genk - 0420 - Belgium
Tel +32 99 32 39 80 • info@hcjoins.be
www.hcjoins.be

COSINUS SLIDE® JOINT, A REVOLUTIONARY TECHNOLOGY
THE SPECIALIST IN EXPANSION JOINTS FOR THE CONCRETE INDUSTRIAL FLOORS



*Contact us for more information





2) Product portfolio

TCO Case Study



**HENGELHOEF
CONCRETE JOINTS**

		Straight joints slab layout 24x24	HCJ e-slide 155 slab layout 24x24	HCJ cosinus slide 160/215 slab layout 24x24	HCJ cosinus slide 115/160 slab layout 24x24
Joints: 1.000 lm	cost joint per lm	32,20 €	46,60 €	64,74 €	57,88 €
	Total cost	32.200 €	46.600 €	64.740 €	57.880 €
Concrete pricing C25/30 1 m³ = 130 € / m³	floor thickness	18 cm	18 cm	17 cm	16 cm
	Total cost	468.000 €	468.000 €	442.000 €	416.000 €
Flooring joint repairs	Total cost	50.000 €	-	-	-
Forklift repairs wheel replacement	Total cost	375.000 €	281.000 €	281.000	281.000 €
CO2 reduction -1 ton cement = 600 kg CO2 -1 m³ beton = 350 kg cement = 210kg CO2 -400m³ beton = 84.000kg of 84ton CO2 reduction				42 ton CO2 	84 ton CO2 
	Total cost	925.200 €	795.600 €	787.740 €	754.880 €

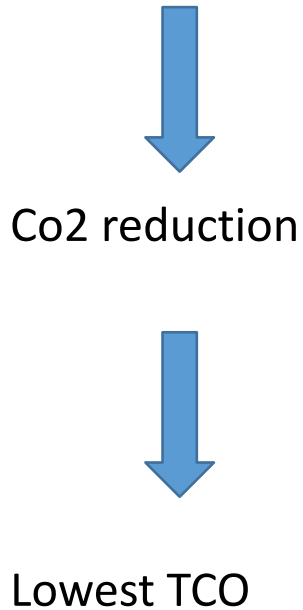


**HENGELHOEF
CONCRETE JOINTS**

2) Product portfolio

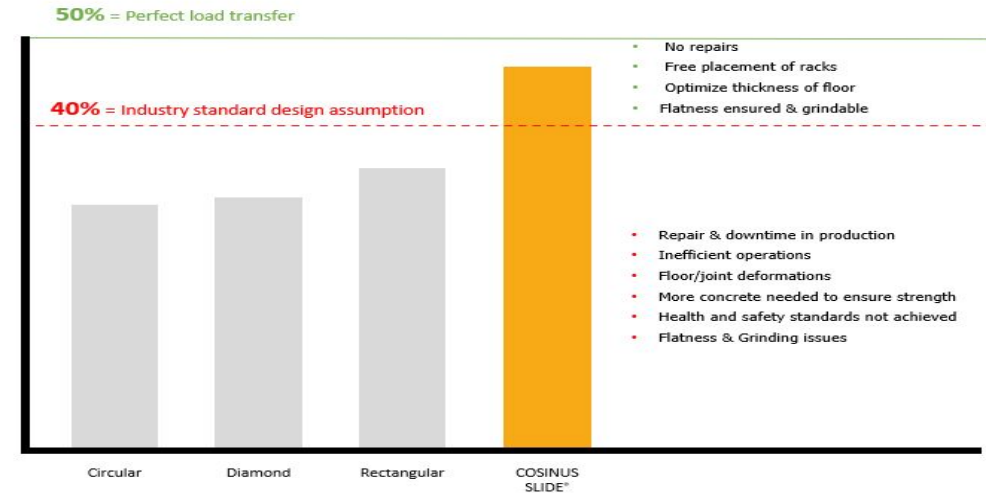
Floor optimization

- Floor optimization (calculations)
 - reducing thickness of floor
 - free movements of racks



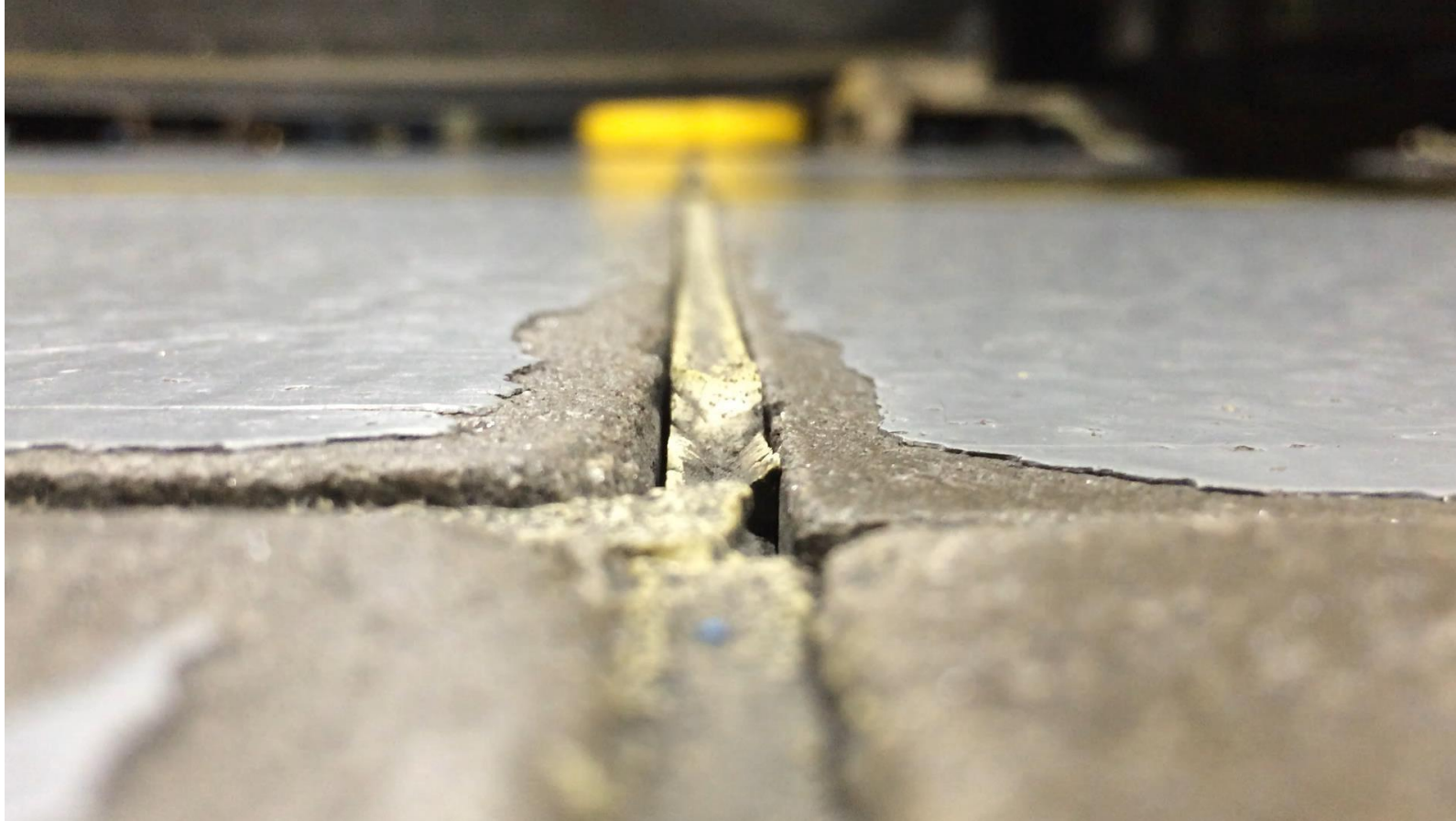
system	% load transfer	
		adjacent load
Cosinus Slide® Joint	max. load:	107.0 kN
	% load transfer:	44.6 %
slab thickness: h = 190 mm is ok / Thickness is ok		
E-slide	max. load:	80.2 kN
	% load transfer:	33.4 %
slab thickness: h = 190 mm not ok / Thickness to be increased by min. 1 cm		
Rectangular Plates	max. load:	75.6 kN
	% load transfer:	31.5 %
slab thickness: h = 190 mm not ok / Thickness to be increased by min. 1 cm		

STATIC Load transfer



2) Product portfolio

No deflection



2) Product portfolio

Shock & vibration free



3) References & testimonials

References with pictures

Project: IKEA distribution center – Dubai UAE
Product: 4392 m Cosinus Slide® joints



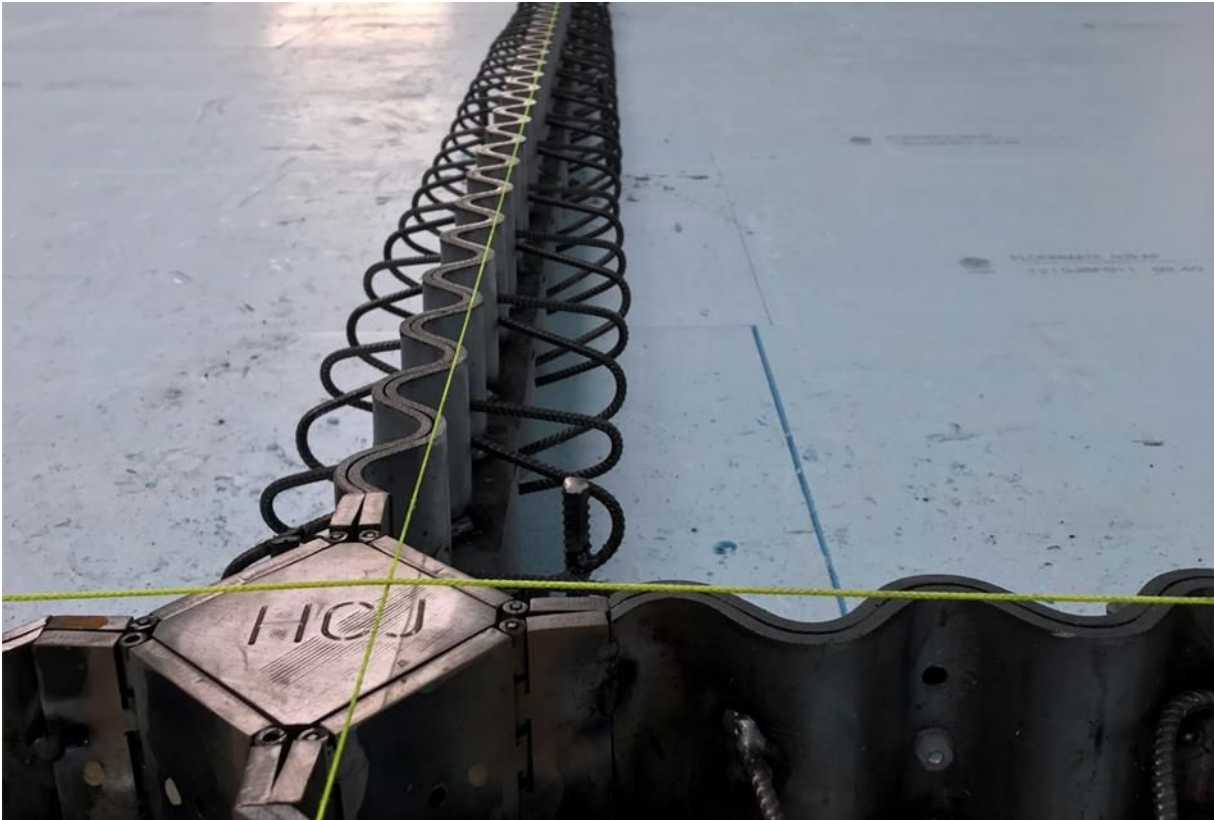
Project: Shoprite Checkers distribution center – Cape Town, RSA
Product: 5164 m Cosinus Slide® joints



Project: El SHAYA – Cairo, Egypt
Product: 900 m Sinus Slide® joints



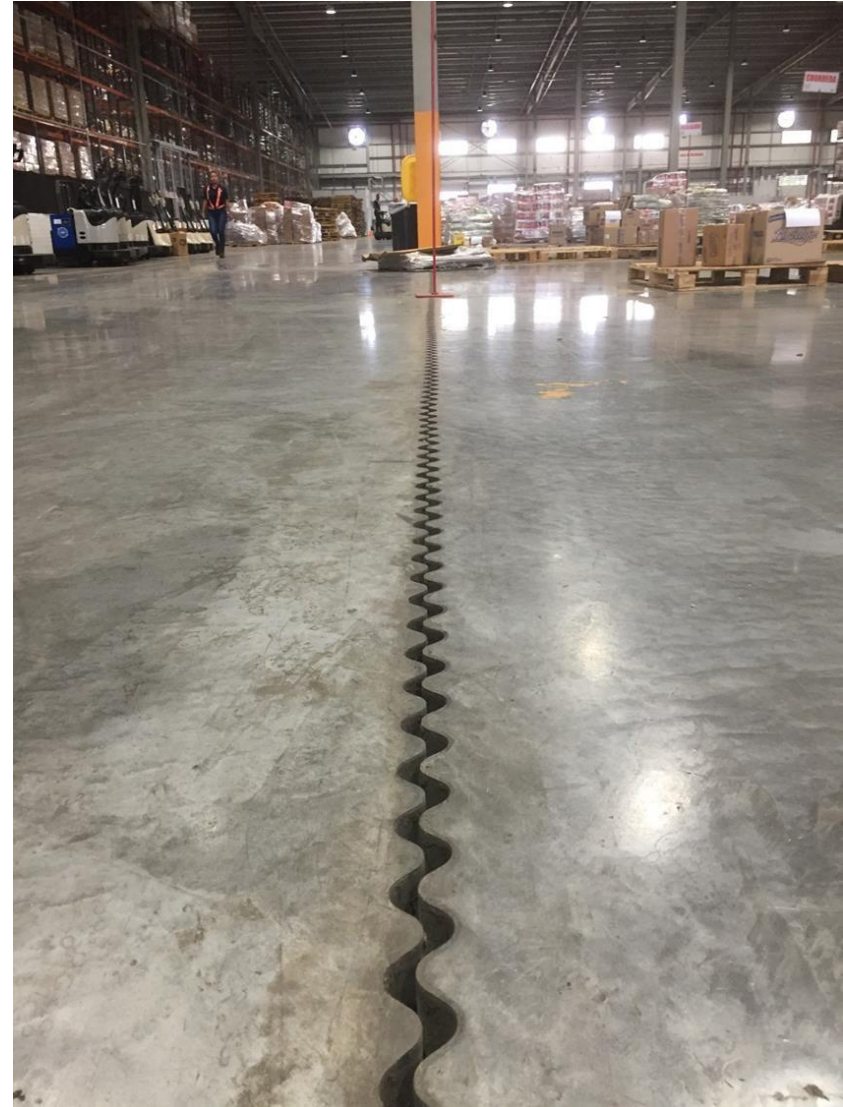
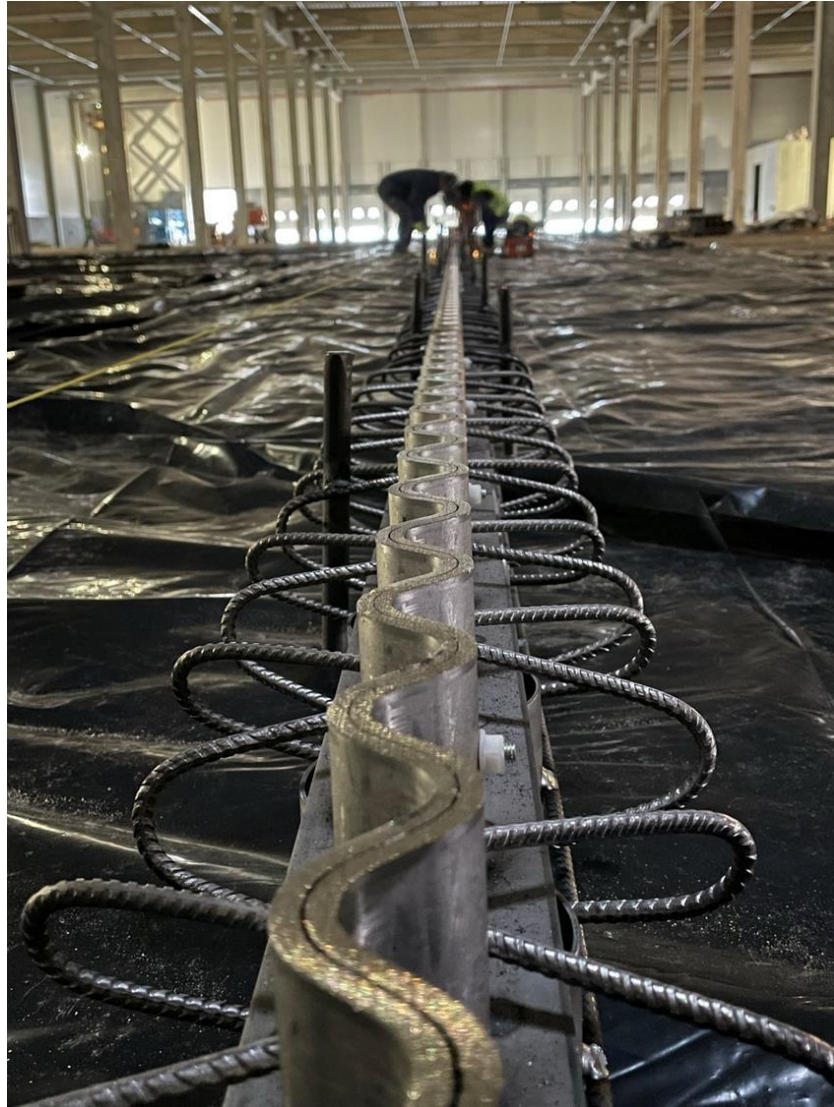
3) Referenties & testimonials



3) Referenties & testimonials




3) Referenties & testimonials



4) Summary products

Summary

DYNAMIC load




e-slide
Best in class sinus joint

e-straight
Best in class straight joint

Trend: Increasing traffic & smaller wheels

Trend: Higher racks, closer together








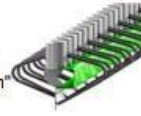

STATIC load



Cosinus Slide®
Strongest joint in the industry

Your current & future requirements

Compare the technologies

	Cosinus Slide®	e-slide	e-straight
Edge protection system	Sinus 	Sinus 	Straight 
Anchorage system	Continuous 3D 	Continuous 3D 	Continuous 3D 
Load transfer system	Continuous "double slide" 	Continuous "omega system" 	Continuous "omega system" 
Vertical displacement at 50 kN*	±0,15mm	±0,15mm	±0,15mm
Maximum transferable load**	135kN	113kN	113kN
Weight	15kg/m	9kg/m	8kg/m
Dynamic load transfer	●●●●	●●	●
Static load transfer	●●●●	●●	●●

4) Summary products

Summary

HCJ puede ayudarte a optimizar el espacio realizando los cálculos adecuados. Te asesoramos para seleccionar la junta correcta.



Thanks for your
attention



HENGELHOEF
CONCRETE JOINTS