



# **DS DRYBOX SYSTEM**



**DRYKOS**

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# ABOUT US

Drykos is a leader in the **production of crystalline waterproofing products** and in the supply and application of systems that waterproof and extend the lifespan of concrete structures.

We collaborate as partners with developers, design firms and national and international construction companies to improve **the quality and longevity of civil and public engineering projects.**

## MISSION

We design and create eco-sustainable products and systems to waterproof, protect, and extend the life of concrete structures.

## EXPERIENCE AND SERVICES

With over 10 years of expertise in waterproofing solutions and technologies, we provide customized solutions and support in the application of our products and systems.

# 10

**YEARS OF  
EXPERIENCE**

# 15 MLN

**SQUARE METERS OF  
WATERPROOFED SURFACES**

# 0

**OPEN CLAIMS**

**OPERATIONAL**

# 4

**CONTINENTS**

# 100%

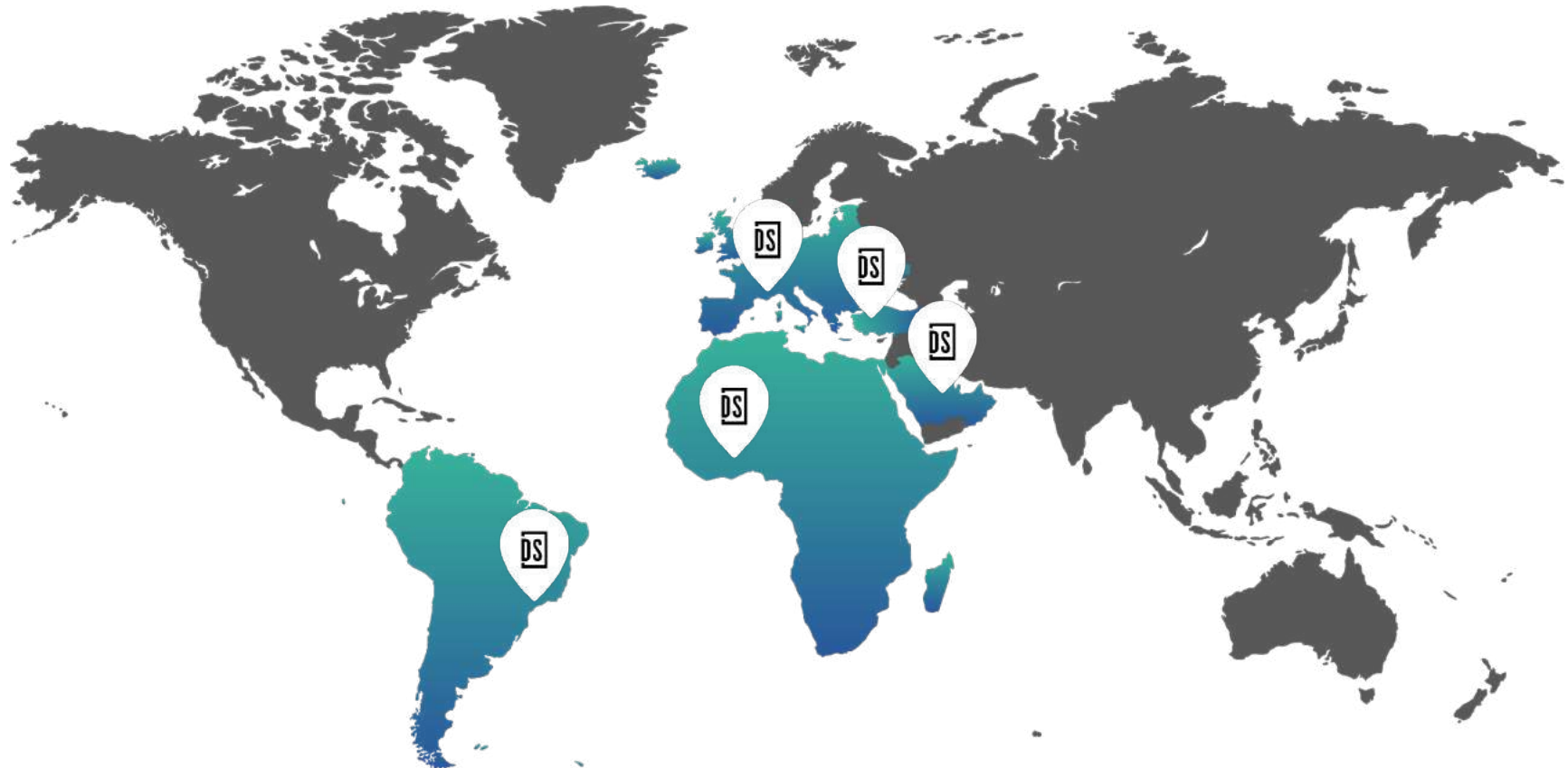
**RECYCLABLE SYSTEMS**

# 65%

**REDUCTION OF  
ECOLOGICAL FOOTPRINT**

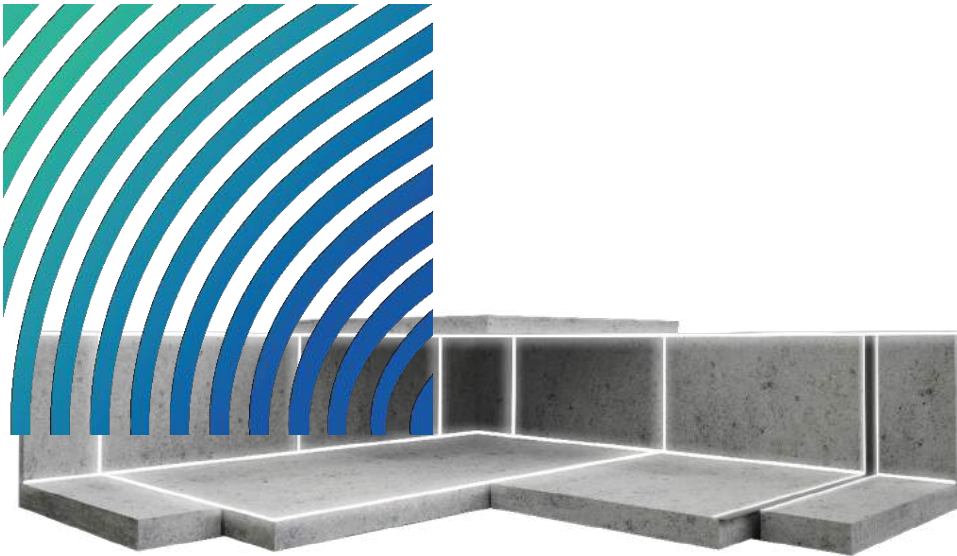
# OUR PRESENCE

Numerous projects worldwide (Europe, Gulf countries, West Africa, Brazil, Turkey) have benefited from DRYBOXSYSTEM™ and of our innovative liquid crystalline technology.





# DS DRYBOX SYSTEM



DRYBOX SYSTEM™ by DRYKOS is an integrated active waterproofing system with guaranteed protection specifically designed to extend the life of concrete structures, making them safe for people and the environment.

## It involves:

Using concrete DRYMIX ULTRA admixture , which, thanks to our innovative crystallization technology, keeps it consistently waterproof and protected over time.

Ensuring the waterproofing of all joints to ensure proper hydraulic protection of the structure.

# APPLICATION AREAS

DRYBOXSYSTEM™ is used to waterproof concrete structures exposed to potential/continuous water contact or to chemical attacks that require permanent waterproofing and protection, **even under conditions of high hydrostatic pressure.**

[illegible]

# STRENGTHS



## ADAPTS TO DESIGN

Does not require changes to the structural design.



## IT'S GUARANTEED AND CERTIFIED

Covered by a ten-year warranty and ISO-9001 certified..



## EXPERIENCE AND SUPPORT BY YOUR SIDE

Drykos follows the waterproofing process from A to Z, from the design phase to technical instruction and support during system installation.



## REDUCES MAINTENANCE INTERVENTIONS AND THUS COSTS

Reduces maintenance and related costs up to 50%



## IT'S DURABLE AND SUSTAINABLE

Extends the useful life of concrete structures, protecting them from chemical aggressions.



## IT'S ECO-FRIENDLY

Its components do not contain VOCs and are recyclable at the end of the structure's life cycle, unlike other systems such as bituminous membranes and PVC sheets. DRYBOXSYSTEM™ contributes to achieve **LEED** points



## CERTIFIED FOR CONTACT WITH POTABLE WATER



## PROTECTION AGAINST CHEMICAL ATTACKS



## IT'S SMART

Thanks to our app, our Customer can track all stages of waterproofing work and will have the documentation of all the job.

# SYSTEM PHASES

**01**

**DETAILED  
TAILORED  
DESIGN**

**02**

**ADDING  
DRYMIX ULTRA  
TO CONCRETE MIX**

**03**

**CONSTRUCTION JOINTS  
WATERPROOFING**

**04**

**INSTRUCTION AND  
TECHNICAL SUPPORT  
DURING  
INSTALLATION**

**05**

**TEN-YEAR  
WARRANTY**



# PHASE 1: DETAILED AND TAILORED DESIGN

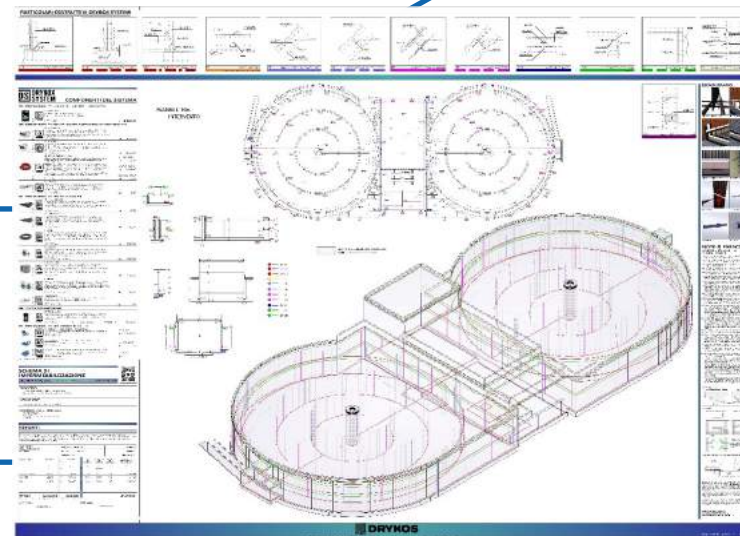
Our team understands the individual needs and requirements of each project and works alongside developers, architects, engineers and builders to ensure a complete waterproofing of the structure to be built. We fully understand the importance of accurately detailing the project's waterproofing and also provide the necessary support to designers for bids.

Components breakdown

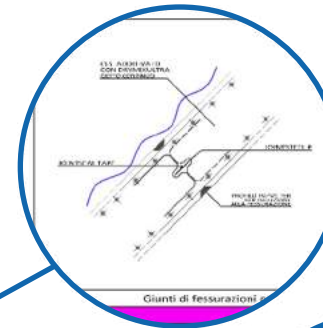


Calculation of volumes and surfaces m

STRUTTURA	SUPERFICIE
	m <sup>2</sup>
PLATEA DI FONDAZIONE	4.309,00
ELEVAZIONI	6.870,00
SOLAI	1.539,00



Construction system details



Notes and specifications

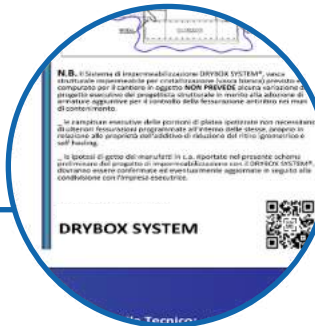
## NOTE & PRESENTAZIONE

### FASI PRE e POST GETTO PLATEE e PARETI

1. Utilizzare distaccatori in PVC o cemento aventi altezza da posarsi su strato regolare di magrone.
2. In platee, i cavalletti di separazione tra la maglia superiore e inferiore dovranno essere appoggiati direttamente sul magrone.
3. Per i corpi estranei, qualora inglobati nella vasca bianca, dovranno essere protetti con uno strato minimo di 30 cm di calce e magrone. (VEDERE PART. 1)
4. Per i corpi estranei, qualora attraversino la vasca bianca, dovranno essere protetti con uno strato minimo di 30 cm di calce e magrone. (VEDERE PART. 1)
5. Lo spessore minimo delle platee o delle pareti dovrà essere inferiore a 20 cm, prevedendo una doppia armatura.
6. Gli accessori di fissurazione del DRYBOX SYSTEM, in platee e pareti, dovranno essere adeguatamente ancorati e protetti con uno strato minimo di 30 cm di calce e magrone.
7. Per le eventuali riprese di getto dove si rende necessario, il tipo Subote, non potrà essere utilizzato in magrone di 30 cm.

Decisioni sperimentali delle riprese di getto dovranno essere programmate, in fase di progetto, dal progettista di riferimento.

QR code access to technical documentation of the system



# PHASE 2:

## ADDITION OF DRYMIX ULTRA TO CONCRETE MIX

The fundamental element of DRYBOXSYSTEM™ is DRYMIX ULTRA, our water-based crystalline waterproofing admixture. DRYMIX ULTRA **is added to the concrete mix in the batching plant using normal additive dispensers, thus it integrates in the plant's automated cycle.** The exact quantity of product used will be indicated in the readymix concrete report.

### PROBLEM

One of the inherent and natural characteristics of concrete is the formation of porosity and capillary discontinuities in the mass during the hydration phase.

Pores and capillaries make concrete permeable, allowing water to pass through, carrying inside external aggressive chemicals responsible for its deterioration over time.

### SOLUTION

DRYKOS' research into concrete crystallisation technology led to the development of DRYMIX ULTRA, a water-based liquid additive that, when added to the concrete mix, **completely waterproofs its mass.**

The active ingredients in DRYMIX ULTRA react with the free lime, silicates, and aluminates present in the concrete pores, forming inside them an insoluble crystalline needle-like complex that stops the penetration of water, thus waterproofing the entire mass.

The chemical components **remain active over time** and can **reactivate in presence of moisture or water**, sealing micro-cracks up to 0.5 mm.



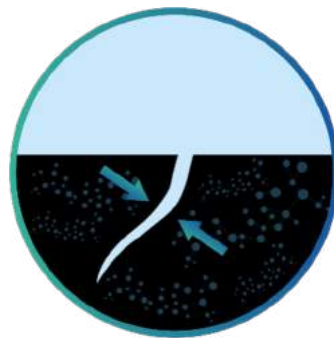
# HOW DOES CRYSTALLINE TECHNOLOGY WORK?

## SELF HEALING PROTECTION:

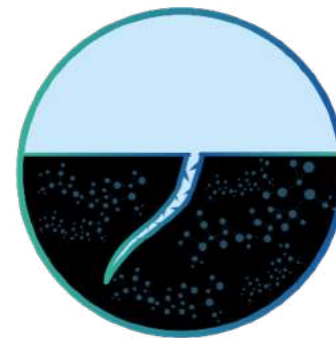
The crystalline technology protects concrete from chemical attacks, from seawater and wastewater. Concrete treated with DRYMIX ULTRA is also certified for structures containing potable water.



**MOISTURE ENTERS  
THROUGH  
CAPILLARIES  
AND CRACKS**



**CONTACT WITH  
WATER STARTS THE  
CRYSTALLIZATION  
PROCESS**



**CRYSTALLIZATION  
CONTINUES UNTIL CRACKS  
AND CAPILLARIES ARE  
COMPLETELY SEALED**



**CONCRETE IS AGAIN  
PERMANENTLY  
WATERPROOFED**



# BENEFITS OF CRYSTALLINE TECHNOLOGY



## **WATERPROOFS**

the concrete mass and seals its pores and capillaries, preventing the penetration of external chemical agents (CO<sub>2</sub>, chlorides, sulfates) that cause reinforcement corrosion.



## **IT'S PERMANENT,**

unlike membranes with limited lifespans.



## **IT'S SELF-SEALING,**

for cracks up to 0.5 mm even if they develop over time.



## **AVOIDS DELAYS IN THE CONSTRUCTION SCHEDULE**

concrete is already waterproofed as soon as it's casted, no need to wait for its maturation as for other waterproofing systems.



## **IT'S COST-EFFECTIVE**

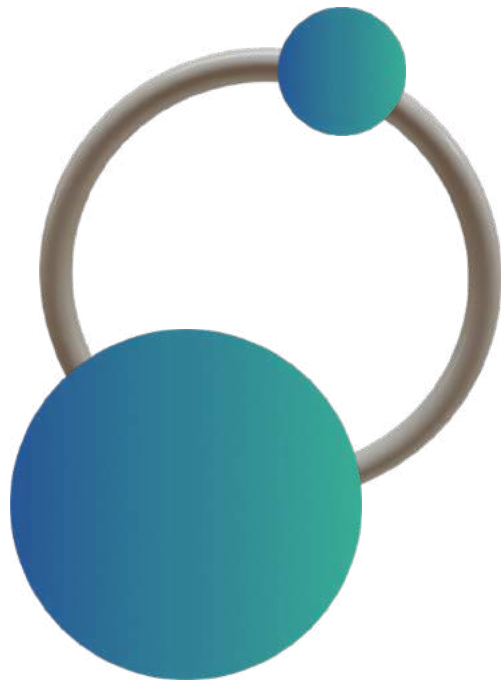
is less expensive than other waterproofing systems.



## **IT'S ECO-FRIENDLY**

uses the inherent chemistry of concrete and does not harm the environment.

# PHASE 3: WATERPROOFING OF JOINTS



**CASTING  
RESUMPTION JOINT  
BETWEEN TWO RAFT  
SLABS**

**JOINT BETWEEN  
RAFT SLAB AND  
WALLS**

**CASTING  
RESUMPTION  
JOINT BETWEEN  
WALLS**

**PROGRAMMED  
CRACK INDUCED  
JOINT IN WALLS**

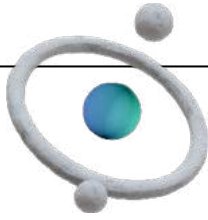
**CASTING RESUMPTION  
JOINT BETWEEN WALLS  
AND SLAB**

**EXPANSION  
JOINT**

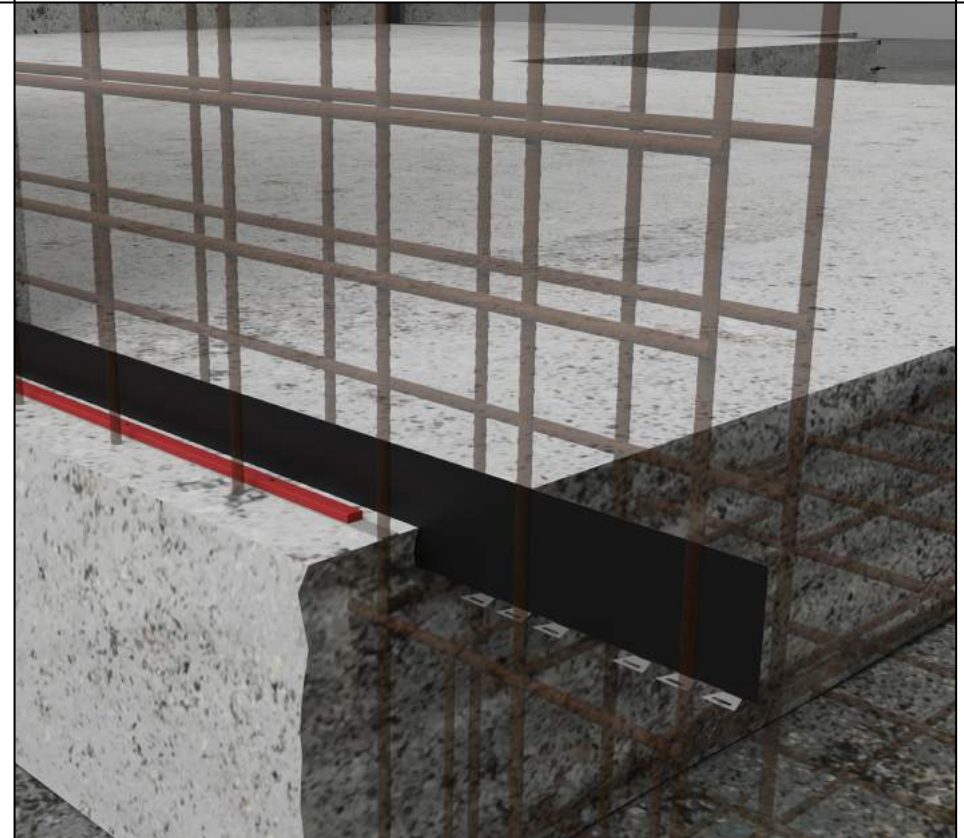
**FORMWORK SPACERS  
WATERPROOFING**

**PASSING PIPES  
WATERPROOFING**





**CASTING RESUMPTION JOINT  
BETWEEN TWO RAFT SLABS**



**JOINT BETWEEN RAFT  
SLAB AND WALLS**

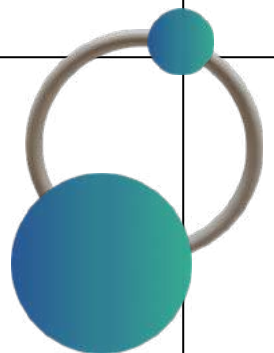


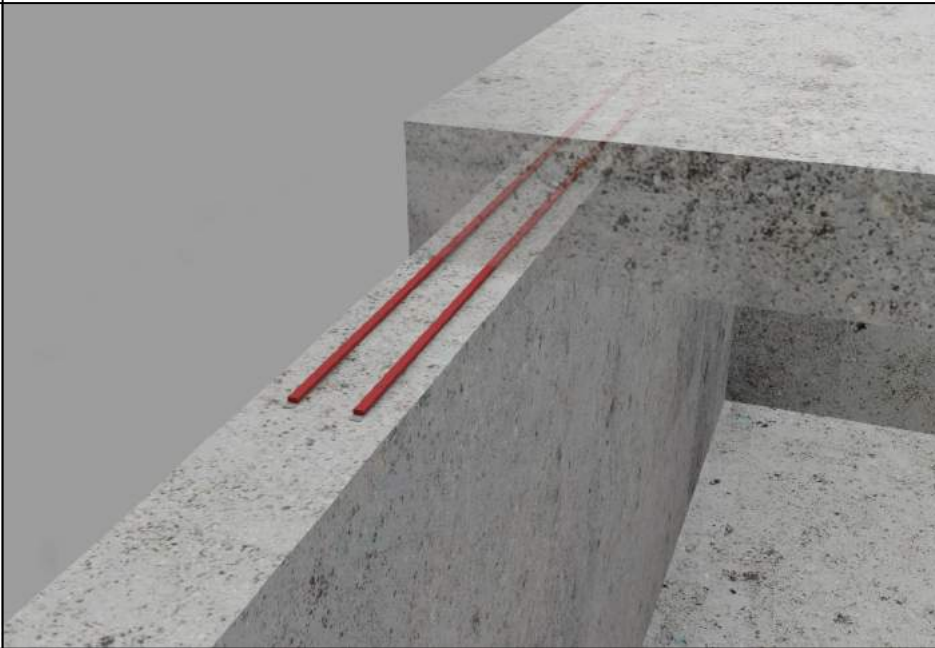


**CASTING RESUMPTION  
JOINT BETWEEN WALLS**



**PROGRAMMED CRACK  
INDUCED JOINT IN WALLS**





**CASTING RESUMPTION JOINT  
BETWEEN WALLS AND SLAB**



**EXPANSION JOINT**



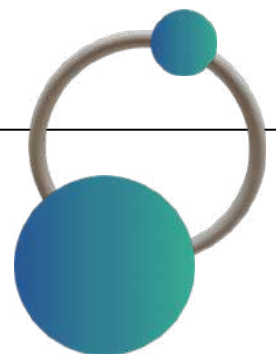




**FORMWORK SPACERS  
WATERPROOFING**



**PASSING PIPES  
WATERPROOFING**



# PHASE 4: INSTRUCTION AND TECHNICAL SUPPORT DURING INSTALLATION

The DRYBOXSYSTEM™ team of experts supports designers, project managers and construction companies in the application of DRYBOXSYSTEM from the design to the completion of the of the structure, providing:

Support during the design phase

Analysis of concrete mixes incorporating DRYMIX ULTRA

Pre-qualifications to optimize mix design

Verification of correct dosage of DRYMIX ULTRA at the batching plant

Training and support for personnel involved in system installation

Random sampling to verify permeability parameters of the concrete during construction phases



## DRYKOS TECHNICAL SUPPORT

Constant on-site support during the installation of the components of DRYBOXSYSTEM.

## SMART

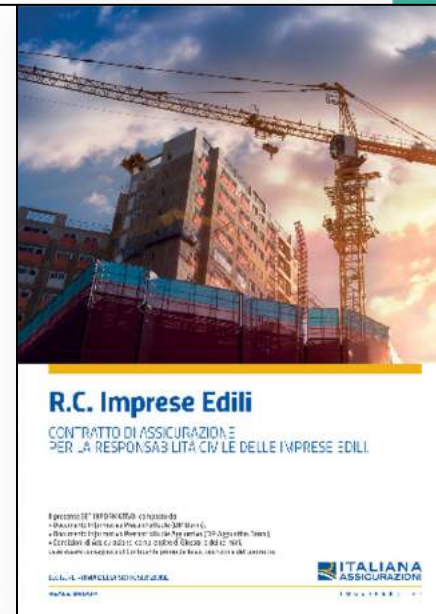
Web app that traces all phases of application, with site reports and pictures.

Designers and Project Managers can follow the stages of system application in real time.



# PHASE 5:

## TEN-YEAR WARRANTY



A ten-year waterproofing warranty by a leading insurance company can be issued when DRYBOXSYSTEM™ has been correctly applied and certified under the supervision of DRYKOS technicians.



Available in Europe and GCC countries. Kindly contact us to learn more about the warranty and insurance availability in your country.

# CERTIFICATIONS



# CONCERN FOR THE ENVIRONMENT AND SUSTAINABILITY



At DRYKOS respect for the environment is an essential part of doing business.

**Our Research & Development department designs and develops only products with minimal or no environmental impact.**

In addition, DRYKOS solutions **increase the durability** of concrete constructions: by reducing maintenance and repair work, we reduce the environmental impact of constructions.

Data from ICRI Committee 160 report that the most effective sustainability strategy for concrete structures **is to avoid the need for repairs**. DRYKOS products and systems, by eliminating high-emission coatings and membranes, by extending the service life of concrete, avoiding costly repairs and using non-toxic products **contribute to more sustainable construction projects**.

## LEED

Our waterproofing system can increase LEED points for projects

## ZERO VOC

DRYKOS range of crystalline products, free of VOC, guarantees the health and safety of both people and applicators.

## RECYCLABLE

Concrete admixed with DRYMIX ULTRA and almost all of our waterproofing accessories can be recycled, unlike other systems based on petroleum derivatives or polymers.

## LESS CO2

The use of crystalline technology, that waterproofs concrete and makes it self-healing, **can reduce the carbon footprint of a structure by 65% or more, significantly extending its useful life.**

The use of a permanent waterproofing solution such as DRYBOXSYSTEM reduces the need for maintenance and drastically decreases the carbon footprint.

## REACH COMPLIANT

Our system components contain no toxic or carcinogenic substances.

# WE WORK WITH





# REFERENCES



## NUOVO POLICLINICO

MILANO, ITALY

Project implemented in  
collaboration with the SIS  
consortium





# REFERENCES



## NEW UNIVERSITY RESIDENCE, BUILDING U 10

MILANO BICOCCA,  
ITALY

Project implemented in  
collaboration with CMC -  
Consorzio Integra



Client

S.A.C. construction  
contracting company

Developer

CMC - CONSORZIO  
INTEGRA

# REFERENCES



**BOLOGNA  
BUSINESS  
SCHOOL**

BOLOGNA, ITALY

Project implemented in  
collaboration with Mario  
Cucinella's architecture studio

mario cucinella architects  
**MC A**

# REFERENCES



**VIA MONTELLO 6  
VIA JENNER CENTRO TOG  
VIA ARRIVABENE  
VIA CEFALONIA 18**

MILANO, ITALY

Project implemented in  
collaboration with Borio  
Mangiarotti S.p.a.

 Borio  
Mangiarotti



# REFERENCES



## **METRO STATION REBAUDENGO**

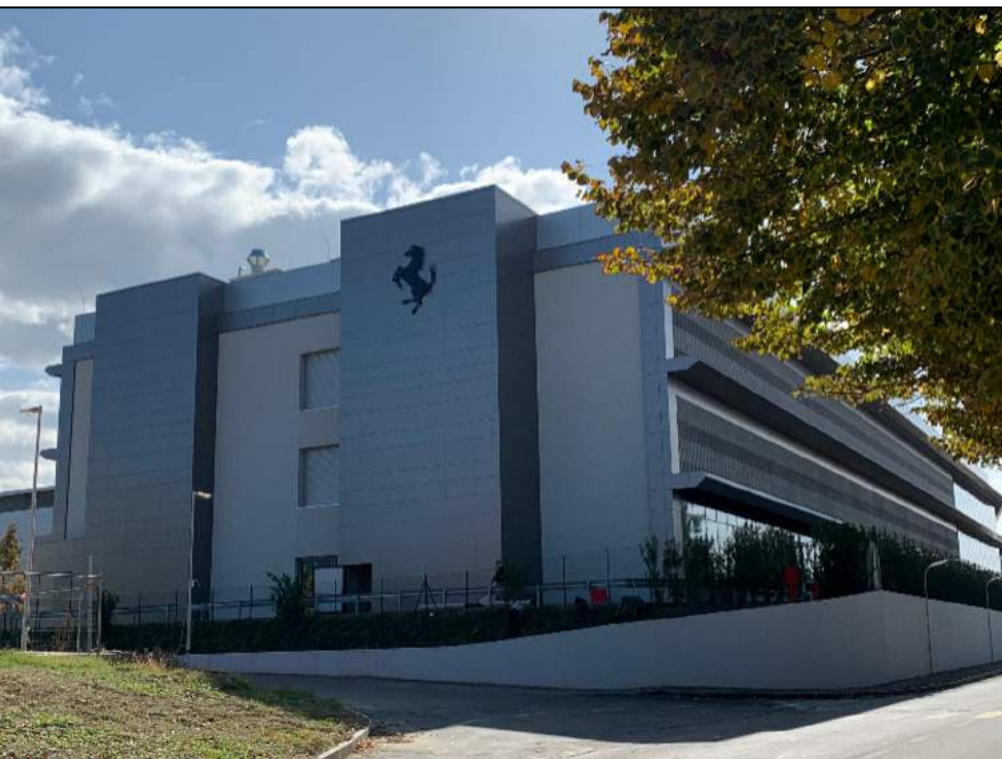
TORINO, ITALY

Project implemented in  
collaboration with Cervit  
Società Consortile A R.L.





# REFERENCES



**FERRARI S.P.A.**

MARANELLO, ITALY

Project implemented  
in collaboration with  
Ing. Ferrari S.p.a.





# REFERENCES



## NEW RESIDENCE AREA EX DE NORA

MILANO, ITALY

Project implemented in  
collaboration with SMV  
COSTRUZIONI SRL



# REFERENCES



## HIPPODRHOME

MILANO, ITALY

Project implemented in  
collaboration with  
Facchetti Costruzioni S.p.a.



# REFERENCES



## GYM AND HIGH SCHOOL DI SIGONIO

MODENA, ITALY

Project implemented in  
collaboration with  
Impresa CMB



# REFERENCES



## WINTER WONDERLAND AL MAHA ISLAND

QATAR

Client

ELEGANCIA GROUP,  
QATARI DIAR

Consultant

GULF CONSULTING  
GROUP

Developer

URBACON CONTRACTING  
COMPANY



# REFERENCES



## THE PEARL RESIDENTIAL TOWERS

QATAR

Client

SHEIKH MOHAMED ABDUL  
RAHMAN HAMAD AL THANI

Consultant

HTCO

Developer

SALTOS TRADING &  
CONTRACTING



# REFERENCES



## SKALA TOWER HOTEL & RESIDENTIAL

QATAR

Client

ARIANE

Developer

SIGMA CONTRACTING & TRADING



# REFERENCES



**KATIP CELEBI  
UNIVERSITY IZMIR**

TURKEY

Project implemented in  
collaboration with



# REFERENCES



**ISTANBUL  
RESIDENCE  
BUILDING**

TURKEY

# REFERENCES



## ÇAMSAN PARK AVYM

TURKEY

Project implemented in  
collaboration with  
Camsan Gayrimenkul





# REFERENCES



## **CONCESIO PURIFICATION PLANT**

BRESCIA, ITALY

Project implemented in  
collaboration with Azienda  
Servizi Valtrompia



# REFERENCES



## **PURIFICATION PLANT PAVIA ACQUE**

PAVIA, ITALY

Project implemented in  
collaboration with Pavia Acque

**PAVIA  
ACQUE**  
Servizio Idrico Integrato

# REFERENCES



## **MONTAGNANA STORAGE TANKS**

PADOVA, ITALY

Project implemented  
in collaboration with  
Acque Venete



# REFERENCES



## **WATER DRIVING SYSTEM STORAGE TANK**

MESTRE, ITALY

Project implemented in  
collaboration with  
Acque Venete





# REFERENCES



## **CASALABATE PURIFICATION PLANT**

LECCE, ITALY

Project implemented in  
collaboration with  
AQP - Acquedotto Pugliese



# REFERENCES



## **RIVER CONTAINMENT TANK SCAMA STRADE**

MILANO, ITALY

Project implemented  
in collaboration with  
CAP Holding



# REFERENCES



## PURIFICATION PLANT

ANDRIA, ITALY

Project implemented in  
collaboration with AQP -  
Acquedotto Pugliese



# REFERENCES



## **WATER TRANSFER TANKS IN MELEKK**

TURKEY

Project implemented in  
collaboration with  
Kalyon Construction





# REFERENCES



## **SAN MAURIZIO CANAVESE PURIFICATION PLANT**

TORINO, ITALY

Project implemented  
in collaboration with  
Smat Torino



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**DRYKOS**



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