SikaFuko® Injection Hose Systems

Unique Waterproofing Solutions for Construction Joints

Innovation & Consistency | since 1910

SikaFuko® – Proven Injection Hose Systems
For Construction Joints, Connections, Back-Up Systems and other Special Applications

SikaFuko® Applications and Markets






Introduction

SikaFuko® is a range of specially designed solid core PVC Injection Hose Systems which can be installed in concrete construction joints to waterproof them and also to seal any cracks or voids in the joint areas. The **SikaFuko**® systems seal joints so that they are watertight and also they provide a complete maintenance solution if any leaks occur in the future. With some of the **Sika**® Injection products, the **SikaFuko**® systems can be used for multiple re-injection – a significant advantage over other injection hose systems. Developing the **SikaFuko**® Re-Injectable Hose System was a logical step forward in improving waterstopping technology and utilizing this state-of-the-art solution allows "zero leak tolerance' in important structures. The **SikaFuko**® range consists of three types of injection hose, with easy, safe and fast installation, simplifying the work on site and ensuring watertight joints. **SikaFuko**® injection hoses can be installed in very difficult working environments and normally without any additional works or changes in the reinforcement or formwork design and fixing. They provide a unique solution and can be used where other waterproofing systems can not even be installed.

Key Advantages:

- 20 years international references
- Includes re-injectable systems
- High performance waterproofing
- Very cost effective
- Can be used in complex and difficult situations
- No additional formwork or reinforcement work
- Ideal back-up in combination with water stops
- Provides solutions for critical applications

Basements

SikaFuko® provides easy and cost effective joint sealing for basement waterproofing. It seals difficult joints and complex details.

Infrastructure

For infrastructure projects, **SikaFuko**® systems are easy to install and cost effective for effective watertight joint sealing. They can also be used for back-up security in combination with water stops.

Water Tanks

SikaFuko® systems provide high security in water tanks and other water retaining structures. The possibilities with the different Sika Injection products ensures high performance even under difficult conditions with variable loading etc.

Industrial Buildings

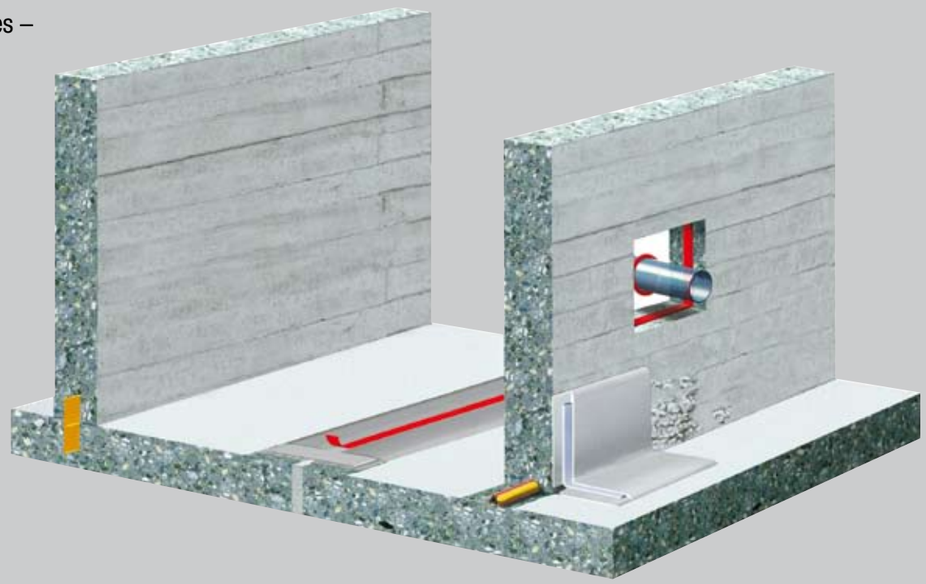
In combination with the range of chemically resistant Sika Injection resins, **SikaFuko**® systems provide high security waterproofing for all types of different industrial production and processing facilities.

Refurbishment

SikaFuko® systems can be installed on very uneven surfaces and therefore can be used to seal joints in damaged concrete structures. As a result **SikaFuko**® systems are ideal and widely used in refurbishment projects.

SikaFuko® Injection Hose Systems – Main Applications

Producing Watertight Structures – The Key Sika Technologies for Success



Construction Joints
SikaFuko® systems provide highly cost effective joint sealing for almost every type of concrete construction joint, including complex and difficult to access joints, where **SikaFuko**® hoses can often be the easiest and most secure method of joint sealing.

Backup Security for Water stop Systems
SikaFuko® systems are also important as back-up security for other sealing systems, particularly in combination with water stop systems. **SikaFuko**® Injection Hoses ensure that any inadequate concrete or other potential leaks can easily be sealed with Sika Injection products.

Connections to Existing Structures
If a new development is to be connected to an existing structure, then **SikaFuko**® systems provide the ideal solution for the construction joint, As the systems can be installed on rough and uneven surfaces, they can easily seal any inadequate concrete or other problems in these areas.

Special Applications
The **SikaFuko**® systems can also be used for many other sealing applications that can be designed for injection of the joints or even the whole area around the joints. They are extremely versatile and the systems can also be installed on many different construction substrates as well as concrete, including stone, metals, plastics etc..

SikaFuko® – A Full Range of Injection Sealing Systems

SikaFuko® VT-1

This unique valve technique has now been used for more then 20 years. Many important structures around the world have been sealed with this system and it is the leading re-injectable system for use in many difficult situations:

- Over 20 years experience
- Re-injectable
- Easy and fast to install

Technical Data
PVC based hose with four neoprene strips in lateral grooves over staggered openings to the central core, all in a webbed mesh. This creates the unique localised valve effect.
Shape: round
Internal Ø: 6 mm
External Ø: 13,5 mm

SikaFuko® Swell-1
(formerly Sika Injectoflex HPM)

Two systems in one – this is a combination of an injection hose with additional hydrophilic rubber strips as well as our unique valve system. An injection is then only necessary in any areas where the hydrophilic strips can not expand sufficiently to achieve watertightness:

- Injection is not always necessary
- Provides double the security

Technical Data
Rubber based hose with three swellable strips and three neoprene strips in lateral grooves over staggered openings to the central core.
Shape: triangular
Internal Ø: 8 mm
Height: 24 mm

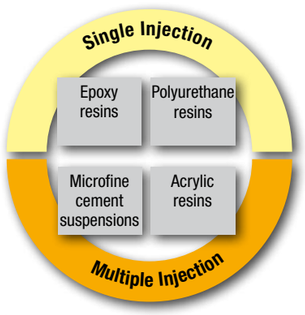
SikaFuko® Eco-1

This is the most economic version of the **SikaFuko**® injection hoses with a simple but reliable design. Its flexibility allows easy and rapid installation. It is often used as back-up security for other joint sealing systems such as water stops:

- Re-injectable
- Easy and rapid installation
- Ideal for back-up security

Technical Data
Spiral slot perforated PVC core hose covered in a foamed plastic layer with staggered perforations for the Sika Injection material to pass through.
Shape: round
Internal Ø: 6 mm
External Ø: 12,7 mm

Sika® Injection Materials



Sika® Injection System Selection Guide

	SikaFuko® VT-1	SikaFuko® Swell-1	SikaFuko® Eco-1
Sika® Injection-203	Single injection	Single injection	Single injection
Sika® Injection-201	Single injection	Single injection	Single injection
Sika® InjectoCem-190	Multiple injection	Multiple injection	Multiple injection
Sika® Injection-29, -306	Multiple injection	Multiple injection	Multiple injection

SikaFuko® Accessories and Equipments

Practical Proven Solutions

Around the **SikaFuko**® systems a full range of proven accessories has been developed. Without these alternative fixing options and the supporting injection materials and equipment for example, an injection hose system can not meet the practical challenges on site.

The fast, easy and safe handling and installation of the **SikaFuko**® injection hose systems is based on using these accessories.

- Vent-ends and connecting pieces for easy assembly
- Different fixings and fixing possibilities for different installation conditions.
- Alternative solutions for the installation and location of the vent-ends.
- Efficient injection equipment including connections, injection pumps, vacuum pumps (for multiple-injection work)
- **Sika**® Injection materials – an extensive range of injection products.


Easy connecting tool for the injection

Unique Multiple Injection / Re-Injection Technology

With water dispersed and cleanable injection materials such as acrylic resins or microfine cement suspensions the injection hoses can be cleaned after the injection and then used again immediately or reused at a later date. This provides **high security**.

■ **Phase 1: Concrete Pour**

When the concrete is placed around the **SikaFuko**® hose, the external pressure of the concrete closes the neoprene strips over the injection openings, sealing them off and the injection channel remains clear.

■ **Phase 2: Injection**

When the internal injection pressure is applied in the hose, it compresses the neoprene strips and allows the injection material to flow out from the recessed openings. This controlled action ensures a uniform discharge of the injection material as required over the full length of the hose.

■ **Phase 3: Cleaning the Hose**

When using a suitable **Sika**® Injection material, **SikaFuko**® hoses are easily flushed clean with water using vacuum pressure. This negative pressure also reseats the neoprene strips, preventing any injected material from being drawn back into the hose.

■ **Phase 4: Ready for Future Injection**

The **SikaFuko**® Hose injection system is ready for re-injection if and when it is needed.

SikaFuko® Systems – Site Installation and Injection

SikaFuko® systems are designed to be versatile, fast and easy to use on site in many different applications and environmental conditions. The complete range of practical accessories, tools and equipments ensures practical solutions and alternative injection possibilities to provide joint waterproofing solutions wherever they are needed

Fast and easy installation.

Mixing of an acrylic injection resin

Practical accessories and equipment

Simple injection process on site

Back-up security for a water stop system

Waterproof and sealed by injection

SikaFuko® – Case Studies

ROLEX SA
Rue Francois-Dussaud Les Acacias, Switzerland

Project Description:
Basement for this prestige watch manufacturer.
Construction period: 2004 – 2005.

Project Requirements:
Watertight concrete construction with double security in sealing the construction joints.

Sika Solution:
Sealing of 2´400 m of construction joints in the watertight concrete structure, using the **SikaFuko® Swell-1** Injection Hose system.

"Pasaz Grunwaldzki" Shopping Centre Breslau, Poland

Project Description:
A major regional mixed development around a modern retail development, which has greatly improved the area and made it attractive as a shopping destination.
Construction period: 2005 - 2006.

Project Requirements:
Effective watertight sealing of construction joints in the basement areas.

Sika Solution:
Approximately 5´000 m of construction joints have been sealed with the **SikaFuko® VT-1** Injection Hose system.

Railway Bridge Halberstadt, Germany

Project Description:
A major new railway bridge as part of infrastructure improvements in the region of Halberstadt.
Construction period: 2004.

Project Requirements:
A special application to meet the engineers requirements sealing between the steel structure and its concrete substructure.

Sika Solution:
Sealing of the transition from the steel to the concrete structure with the **SikaFuko® Eco-1** Injection Hose system and a special fixings to attach the hoses to the steelwork.

Sika Full Range Solutions for Construction

Concrete Production

Sika® ViscoCrete®
Sika® Retarder®
Sika® SikaAer®

Basement Waterproofing

Sikaplan®, Sikalastic®
Sika® & Tricosal® Water stops
Sika® Injection Systems

Flooring

Sikafloor®
SikaBond®

Corrosion and Fire Protection

SikaCor®
Sika® Unitherm®

Concrete Repair and Protection

Sika® MonoTop®
Sikagard®
Sikadur®

Structural Strengthening

Sika® CarboDur®
SikaWrap®
Sikadur®

Joint Sealing

Sikaflex®
Sikasil®

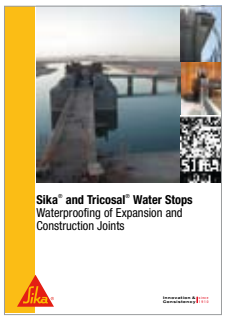
Grouting

Sikadur®
SikaGrout®
Sika AnchorFix®

Roofing

Sikaplan®
Sarnafil®
SikaRoof® MTC®

Also Available Sika Waterproofing Brochures:



Sika Services AG
Business Unit Contractors
Speckstrasse 22
CH-8330 Pfäffikon
Switzerland
Phone +41 58 436 23 80
Fax +41 58 436 23 77
www.sika.com

Our most current General Sales Conditions shall apply.
Please consult the Product Data Sheet prior to any use and processing.

Certified Quality System SQS ISO 9001/EN 29001 since 1986
Responsible Care
U.S. Green Building Council Member
Certified Management System SQS ISO 14001 since 1997

Innovation & Consistency | since 1910