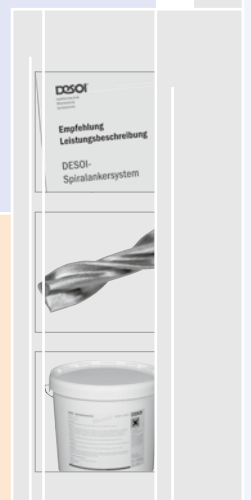
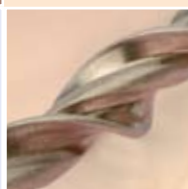




# Crack Repair with the DESOL Spiral Anchor System

Application

## DESOL Spiral Anchor System



# Spiral Anchor System

## Information

The information on the methods are recommendations and not binding.

If required, please, contact us for professional advice.

The rehabilitation of masonry requires comprehensive knowledge of the state of construction. The method of masonry consolidation is determined by the structural engineer on basis of stress analysis and suitable stress release models. If a frictional connection of the crack edges must be created the DESOI spiral anchor system is the ideal solution.

The DESOI spiral anchor system is a certified combined system of DESOI spiral anchor and DESOI spiral anchor mortar.

## Advantages

- Minimum penetration in the masonry
- Can be used for all types of masonry
- Absorption of tensile and shear forces
- Increase of carrying capacity
- Durable stabilisation
- Can be used for slight moist crack flanks
- Certified system

## Range of Application

- Cracks in façades
- Cracks in the area of openings
- Cracks in the area of lintels
- Cracks in the area of arched lintels
- Connection of wall shells

## Examples of Application

- Crack repair in masonry
- Anchoring and nailing of parts of masonry
- Crack repair of rendered façades
- Preservation of monuments and historic buildings

## General Recommendations on Installation

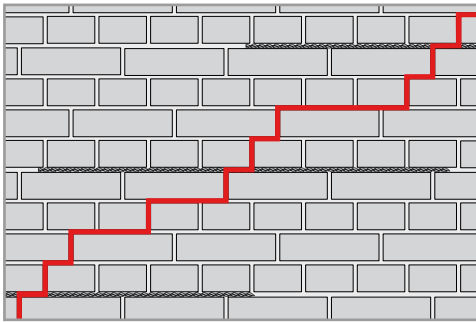
- Produce a horizontal joint, depth about 4 – 6 cm, e.g. with a wall chaser.
- The joint must be wide enough so that the DESOI spiral anchor will be completely embedded in DESOI spiral anchor mortar, at least by 1 cm to all sides
- Use the pointing gun and fill the first layer of about 2 cm of DESOI spiral anchor mortar deep in the joint.
- Embed the DESOI spiral anchor in the DESOI spiral anchor mortar.
- Fill the joint but stop about 2 cm before the outside of the masonry, however, the DESOI spiral anchor must be covered completely.
- For exposed masonry use mortar matching the colour and material to fill the remaining 2 cm of the joint.
- If the masonry will be plastered the DESOI spiral anchor mortar can be used to fill the joint completely.

## Information on Installation

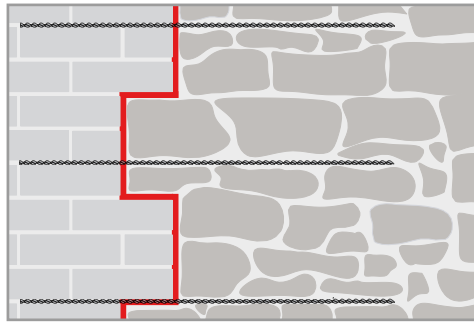
- The DESOI spiral anchor should be installed so that about 50 cm to each side of the crack is embedded in the masonry.
- The distance between two DESOI spiral anchors should be maximum 30-times of the nominal diameter of the DESOI spiral anchor.
- For cracks running vertically straight the DESOI spiral anchors should be arranged a little offset.
- The spiral anchors in the boreholes should be covered by at least 1 cm of spiral anchor mortar to all sides.



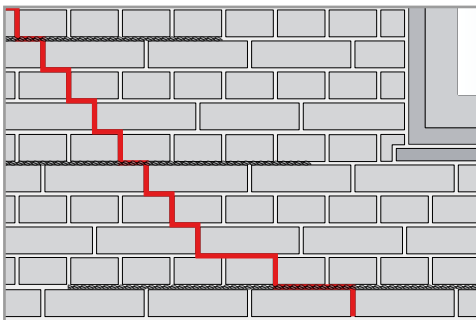
# Examples of Application



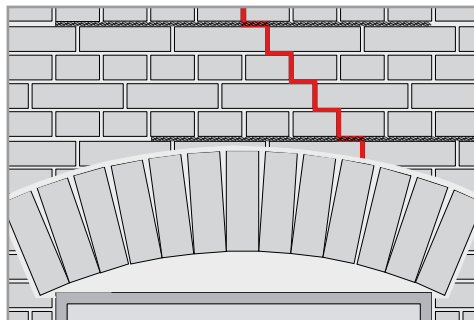
Cracks in masonry



Anchoring e.g. of natural stone facing



Cracks in the area of openings



Cracks in the area of lintels and arches

## DESOI Spiral Anchor

**Certified System**

iBMB-MPA-TU Braunschweig – test number: 1065 / 7363 a  
MFPA Leipzig – inspection report: U 2.1 / 06-351



- The DESOI spiral anchor is available in three nominal diameters: 6 mm, 8 mm and 10 mm. It is made of austenitic steel (material 1.4301). Within a linear area it is effective like a vigorous wound spring durably connecting different parts of masonry. During the production process the tensile strength is more than doubled.
- The twist of the DESOI spiral anchor increases the adhesion between special mortar and anchor. For installation of the DESOI spiral anchor in horizontal mortar joints, for anchoring, and nailing (e.g. connection of wall shells) the DESOI spiral anchor mortar must be used.



### DESOI spiral anchor

Material: stainless steel (INOX)

Material number: 1.4301

Ø 6 mm x 1 m long

Ø 6 mm x 10 m long

Ø 8 mm x 1 m long

Ø 8 mm x 10 m long

Ø 10 mm x 1 m long

Ø 10 mm x 10 m long

Order number

20695

20697

20700

20702

20705

20707

# Accessories – DESOI Spiral Anchor

Order number

53030

## Spiral anchor mortar

Trading unit: 15 kg container

### Technical data

Basis	cements, selected fillers and additives
Colour	red brown
Grain size	0 – 0.5 mm
Water demand	about 2.25 litres per 15 kg container
Consumption	about 1.8 – 2 kg running meter
Compressive strength (DIN 1164)	after 1 day > 19 N/mm <sup>2</sup> after 3 day > 35 N/mm <sup>2</sup> after 7 day > 44 N/mm <sup>2</sup> after 28 days > 51 N/mm <sup>2</sup>
Working time	about 60 minutes (20°C)

### Features

- Resistant to shrinkage
- High sulphate resistant
- Special additives grant a high adhesive strength
- For inside and outside use
- Easily workable



25420

25421

25422

## Screwing-in device

to screw in the DESOI spiral anchor  
(anchoring, nailing)

Ø 6 mm

Ø 8 mm

Ø 10 mm



## Pointing Technique

13659

## Manual pointing gun

### Technical data

Transmission ratio	12 : 1
Weight	1.4 kg
Height / width / length	(cm) 21 / 8 / 60

### Delivery range

Pointing gun (without nozzle)



13668

## Pneumatic pointing gun

### Technical Data

Working pressure - infinitely variable	0 – 8 bar
Weight	2.6 kg
Height / width / length	(cm) 25 / 9 / 92

### Delivery range

Pointing gun: with air plug (without nozzle)



# Pointing technique – accessories

Order number



**Spare material tube**  
for pointing gun

13658



**Slip-on flat nozzle - small**  
for widths of joint from 5 mm

13999



**Slip-on flat nozzle - wide**  
for widths of joint from 10 mm

13998



**Slip-on adaptor**  
with internal thread R 3/4",  
for plastic and metal nozzles

13997



**Metal nozzle**  
with external thread R 3/4"  
Ø 8 mm  
Ø 11 mm  
Ø 14 mm

13994

13995

13996



**Plastic nozzle**  
with external thread R 3/4"  
Ø 6 mm - white  
Ø 9 mm - blue  
Ø 13 mm - red

13990

13991

13992



**Threaded lance**  
with external thread R 3/4"  
Ø 12 x 200 mm, inside-Ø 10 mm  
Ø 12 x 500 mm, inside-Ø 10 mm  
Ø 12 x 1000 mm, inside-Ø 10 mm  
Ø 14 x 200 mm, inside-Ø 12 mm  
Ø 14 x 500 mm, inside-Ø 12 mm  
Ø 14 x 1000 mm, inside-Ø 12 mm  
Ø 18 x 200 mm, inside-Ø 16 mm  
Ø 18 x 600 mm, inside-Ø 16 mm  
Ø 18 x 1000 mm, inside-Ø 16 mm

13976

13981

13983

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13980

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13759

13761

## Accessories – Pointing Technique

Order number

25215 **Filling unit**  
for filling the material tube



25200 **Material tube holder**  
for 1 material tube

**Information**

The material tube holder is hooked on the material container.



25210 **Material tube stand**  
for 6 material tubes with frame for appropriate ground clearance

**Advantage**

The material tubes can be equipped with different nozzles for different joint widths.



## Accessories – Spiral Pump

13810 **Pointing head GK**  
ball valve R 3/4" with plastic nozzle, electric delivery control, 17 m extension cord, Geka coupling

**Information**

The joint mortar doesn't get under pressure when the delivery control is adjusted to "0".



13626 **15 m material hose Ø 25 mm**  
with detachable Geka coupling on both sides



13654 **Lubricant**  
for material hoses, 250 g

13652 **Cleaning balls Ø 25 mm**  
10 pcs. / package

13560 **Silicone spray**  
400 ml





Delivery control



Operational control

## Spiral Pump SP-Y

Order number: 13563

Spiral pump SP-Y is of multiple use and features high power combined with compact design. With the delivery control the pump can be controlled continuously from standstill to maximum speed. As an option the delivery control can be fixed with an extension cord directly at the end of the material hose so that the operator can react immediately to avoid that the material gets under pressure.

### Technical data

Supply	230 V
Motor power	1.8 kW
Working pressure	max. 15 bar
Delivery - infinitely variable	0 - 13.5 l/min
Grain size - material	max. 3 mm
Filling height	95 cm
Weight	22 kg
Height / width / length - working position	(cm) 95 / 45 / 90
Height / width / length - transport	(cm) 55 / 40 / 70

### Delivery range

SP-Y: moving device, 30 litre plastic material container, splash guard, rotor\*, stator\*, infinitely variable delivery control, Geka coupling

\* Ersatzteile: Rotor (13563-011), Stator (13563-012)

### Advantages

- Big material passages - high flow rate
- Cone-shaped material container - self-emptying
- Delivery control directly at the end of the material hose possible
- Lightweight

### Einsatzmaterialien

- Machine usable jointing mortar
- Spiral anchor mortar
- Sealing slurries
- Fine filler
- Thick coating - bitumen
- Injection mortar - grain size  $\leq 3$  mm
- Cement paste
- Cement suspension
- Aqueous solution, e. g. micro emulsion



Injection technique  
Mixing technique  
Spraying technique

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# DESOI Spiral Anchor System

Made in Germany

