

Waterproofing of formwork tie points



Formwork tie points are essential in concrete construction. However, if they are not properly sealed, they are one of the most frequent causes of leakage in water-impermeable structures. The products described in this brochure provide a permanently pressure watertight solution for

- the transition from fibre cement and plastic distance tubes to the concrete
- and the inner sealing of all common tie point systems.



Sealing of transition from tie point to concrete

Article	ActiveRing	RONDO MINI
Ø 22 mm Fibre cement distance tubes	✓	✓
Ø 22 mm Plastic distance tubes	✓	✓
Ø 27 mm Fibre cement distance tubes	✓	✓
Ø 26 mm Plastic distance tubes	✓	✓



Inner seals for tie points

Article	STOPPER	STOPPER SCREW	PROTECT Easy 1K	PROTECT BK 2K
Ø 22 mm Fibre cement distance tubes	✓	✓	✓	✓
Ø 22 mm Plastic distance tubes	✓	✓		
Ø 27 mm Fibre cement distance tubes		✓	✓	✓
Ø 26 mm Plastic distance tubes	✓	✓		

ActiveRing



YouTube

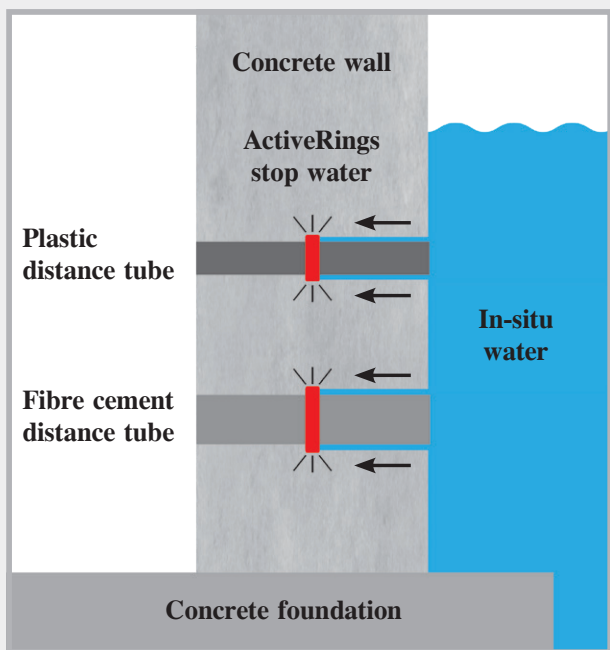
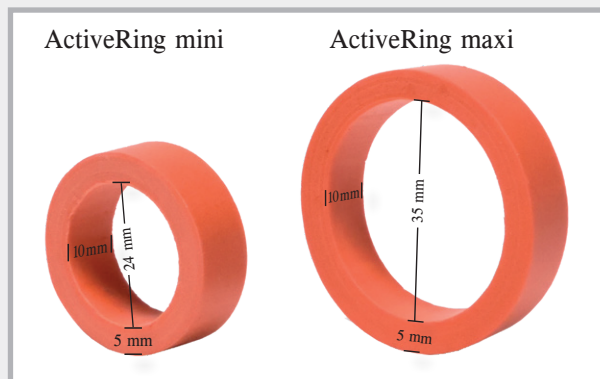


The swelling external high-pressure seal for plastic and fibre cement distance tubes

Product description

The ActiveRings mini and maxi are made of a highly swellable TPE mixture. When the rings come into contact with water, they activate, swell up and reliably stop the flow of water.

The waterproofing remains permanently active when in contact with water.



Technical data

Chemical basis:	Modified TPE
Colour:	Red
Finish:	Smooth
Dimensions:	Width 10 mm, thickness 5 mm
For outer pipe dia. 25–32:	mini version
For outer pipe dia. 38–42:	maxi version
Temperature range	-30°C to +60°C
Storage:	Dry and protected
Function:	Highly swellable

Product range

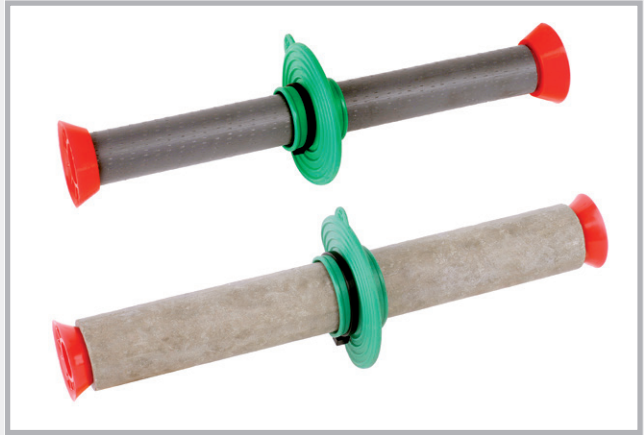
Art. no.	Description	PU	Weight
047200	ActiveRing mini for outer pipe diameters 25-32 mm e.g. plastic distance tubes 22/26 26/31 26/32	Bag of 250 pcs.	1.70 kg per bag
047250	ActiveRing maxi for outer pipe diameters 38-42 mm e.g. fibre cement distance tubes	Bag of 250 pcs.	2.40 kg per bag



RONDO MINI sealing collars



for waterproofing of plastic or fibre cement distance tubes



RONDO MINI sealing collars can be mounted onto plastic or fibre cement distance tubes quickly and easily at the construction site.

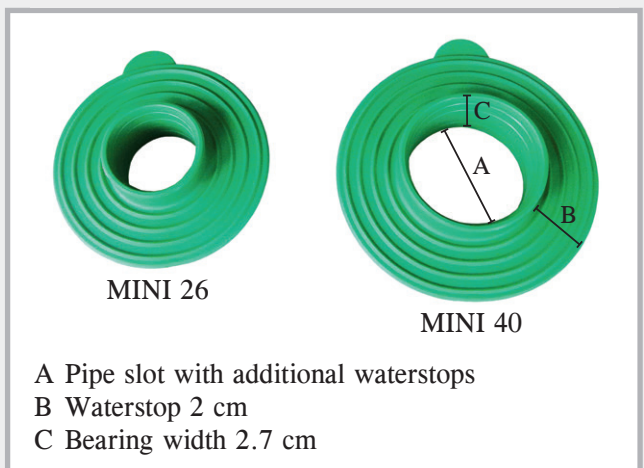
Product description

Material: TPE polymer compound

Installation: Temperature range
-35°C to +70°C

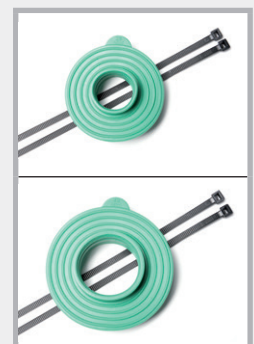
Resistance

- Diluted acids + alkalis
- Liquid manure + slurry
- Fermentation mash
- Oils and bitumen
- Radon + methane gas



Product range

Art. no.	Type	Description	PU	Weight
090870	RONDO MINI 26 Suitable for outer dia. 25-27 mm	for plastic distance tubes 22/26 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. incl. plastic fastening straps	0.030 kg
090873	RONDO MINI 40 Suitable for outer dia. 38-42 mm	for fibre cement distance tubes 22/40 mm Waterstop 2 cm Bearing width 2.7 cm	Bag of 50 pcs. incl. plastic fastening straps	0.040 kg



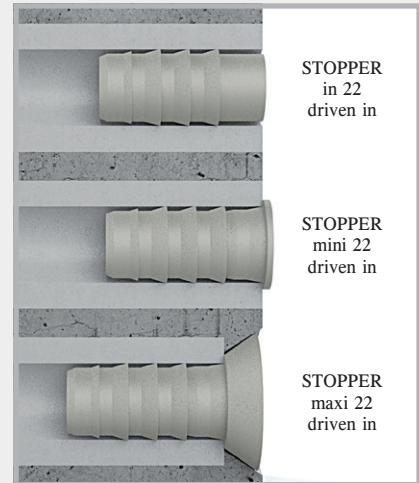
STOPPER



Pressure-tight sealing plugs for plastic and fibre cement distance tubes

Product description

- STOPPERS are plugs which were developed for pressure-tight sealing of fibre cement and plastic distance tubes.
- Highly resistant plastic specially developed for this application
- Temperature range -35°C to $+70^{\circ}\text{C}$
If the plugs are installed at ambient temperatures below 0°C , they have to be stored above freezing point for a better installation.
- All-weather installation
- Just drive them in and they are tight
- Little storage space required



STOPPER in 22 driven in

STOPPER mini 22 driven in

STOPPER maxi 22 driven in



Product range

Art. no.	Description	PU	Weight
046140	STOPPER in 22 for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	6.00 kg per bucket
046150	STOPPER mini 22 for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	6.00 kg per bucket
046160	STOPPER maxi 22 for distance tubes inner diameter 21.5-23 mm	Bucket of 250 pcs.	9.00 kg per bucket
046163	STOPPER in 26 for distance tubes Inner diameter 26 mm	Bucket of 250 pcs.	10.50 kg per bucket
046170	Cleaning brush for tube 21.5-26 mm	1 pc.	0.11 kg per pc.
046180	Drive-in aid for STOPPER 22 + 26 mm	1 pc.	0.10 kg per pc.



Installation

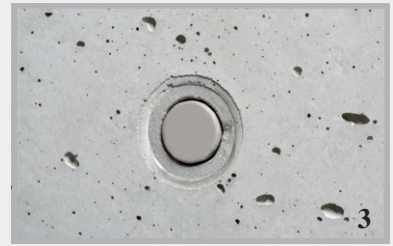
STOPPER in



The STOPPER in is pushed into the distance tube.



The STOPPER in is driven in with a 1500-2000 g hard rubber mallet.



Flush seal for distance tubes with lip.



Flush seal for distance tubes with cone.



The STOPPER in can be inserted to any depth.



After inserting the STOPPER in, a cone can be glued in.

STOPPER mini



Position and drive in the STOPPER mini



Sealing of distance tube with lip



Sealing of distance tube with cone

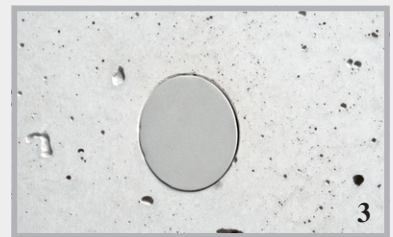
STOPPER maxi



Push the STOPPER maxi into the distance tube



Drive in with rubber mallet



Pressure-tight and flush seal

STOPPER SCREW

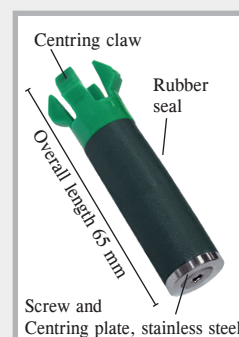


Screwed inner seals for pressure water and gas-tight sealing of formwork tie points

- Water pressure tight up to 50 m water column
- Radon-tight

Product range

Art. no.	Description	Tie point inner diameter	PU	Weight	Price
046230	STOPPER SCREW Type 3 in Overall length: 65 mm	17 to 19,5 mm	100 pcs. incl. 2 bits	2.60 kg per 100 pcs.	1.85 € per pc.
046240	STOPPER SCREW Type 4 in Overall length: 65 mm	19,5 to 22 mm	100 pcs. incl. 2 bits	3.10 kg per 100 pcs.	1.90 € per pc.
046210	STOPPER SCREW Type 1 in Overall length: 65 mm	21,5 to 23 mm	100 pcs. incl. 2 bits	3.55 kg per 100 pcs.	1.90 € per pc.
046220	STOPPER SCREW Type 2 in Overall length: 65 mm	22,3 to 25,4 mm	100 pcs. incl. 2 bits	3.80 kg per 100 pcs.	2.00 € per pc.
046250	STOPPER SCREW Type 5 in Overall length: 65 mm	25 to 28 mm	100 pcs. incl. 2 bits	4.55 kg per 100 pcs.	2.15 € per pc.
046330	STOPPER SCREW Type 3 covered Cover plate 28 mm Overall length: 65 mm	17 to 19,5 mm	100 pcs. incl. 2 bits	3.70 kg per 100 pcs.	2.05 € per pc.
046340	STOPPER SCREW Type 4 covered Cover plate 28 mm Overall length: 65 mm	19,5 to 22 mm	100 pcs. incl. 2 bits	4.60 kg per 100 pcs.	2.10 € per pc.
046310	STOPPER SCREW Type 1 covered Cover plate 28 mm Overall length: 65 mm	21,5 to 23 mm	100 pcs. incl. 2 bits	4.70 kg per 100 pcs.	2.10 € per pc.
046320	STOPPER SCREW Type 2 covered Cover plate 32 mm Overall length: 65 mm	22,3 to 25,4 mm	100 pcs. incl. 2 bits	4.95 kg per 100 pcs.	2.20 € per pc.
046350	STOPPER SCREW Type 5 covered Cover plate 32 mm Overall length: 65 mm	25 to 28 mm	100 pcs. incl. 2 bits	6.10 kg per 100 pcs.	2.35 € per pc.
046170	Cleaning brush for tube 21.5-26 mm		1 pc.	0.11 kg per pc.	10.60 € per pc.
046181	STOPPER SCREW positioning aid		1 pc.	0.27 kg per pc.	29.90 € per pc.



Installation

Installation tools

For installation you need:

- Cleaning brush
- Cordless screwdriver with a power of ≥ 14.7 V
- Bit holder for cordless screwdriver
- Hammer for driving in and positioning



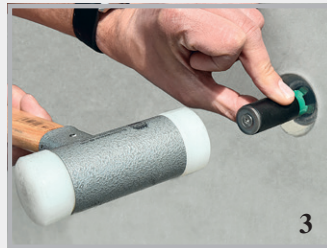
Preparation of tie point

Clean the inside of the tie point. Remove loose particles and dust before installation of STOPPER SCREW type in.



Insertion

Insert the STOPPER SCREW type in into the clean tie point to be sealed. To do this, position the claw of STOPPER SCREW type in in such a way that all 4 claw ends are inside the clearance of the tie point. With a hammer blow onto the pressure plate the claw of STOPPER SCREW type in slips into the tie point and centres itself.



Positioning

Push or drive the STOPPER SCREW type in into the desired position in the tie point. For a flush seal, after tightening, the untensioned STOPPER must protrude approx. 7 mm above the tie point.



Alternatively with STOPPER SCREW positioning aid

The use of the STOPPER SCREW positioning aid makes positioning much easier due to the recess on the front side.



Tightening

Tighten the screw of STOPPER SCREW type in with a cordless screwdriver. Use speed class 1. It cannot be overtightened due to the integrated tightening limit. A cordless screwdriver with a power class of 14.7 V will reach a torque of 4 Nm at maximum load. The pressure test was performed with this tightening torque.



YouTube



STOPPER SCREW in



Flush seal for distance tubes with lip.



Flush seal for distance tubes with cone.

STOPPER SCREW covered



Sealing of distance tube with lip.



Sealing of distance tube with cone.

Universal concrete adhesives

PROTECT Easy 1K

Single-component polymer-based concrete adhesive

For water-impermeable bonding
of fibre cement distance tubes.

Processing takes approx. 20 min. at +23°C;

Resistant to all normal uncontaminated groundwater.



Art. no.	Description	PU	Secondary packaging	Weight
040030	PROTECT Easy 1K in resealable aluminium bag	1 set: (3 x 800g aluminium bag + 1 x processing cup + 1 x fastening clip)	10 sets / carton 18 cartons per pallet	2.54 kg per set

Tested for impermeability up to 80 m water column.

Suitable for all fibre cement distance tubes.

PROTECT BK 2K

Solvent-free epoxy-based concrete adhesive

For water-impermeable bonding and non-positive connection
of concrete components.

Processing time approx. 60 min. at +20°C

Resistances of PROTECT BK once cured:

Diluted acids, mineral oil, lubricants and fuels, saltwater, wastewater, large
number of alkalis and solvents, test of suitability for contact with drinking water.



Art. no.	Description	PU	Secondary packaging	Weight
040100	PROTECT BK For pressure water-tight sealing of fibre cement distance tubes.	1 kg combination can: (0.5 kg component A + 0.5 kg component B)	10 cans per carton 28 cartons per pallet	1.20 kg per can

Tested for impermeability up to 70 m water column.

Suitable for all fibre cement distance tubes.

Your distributor: