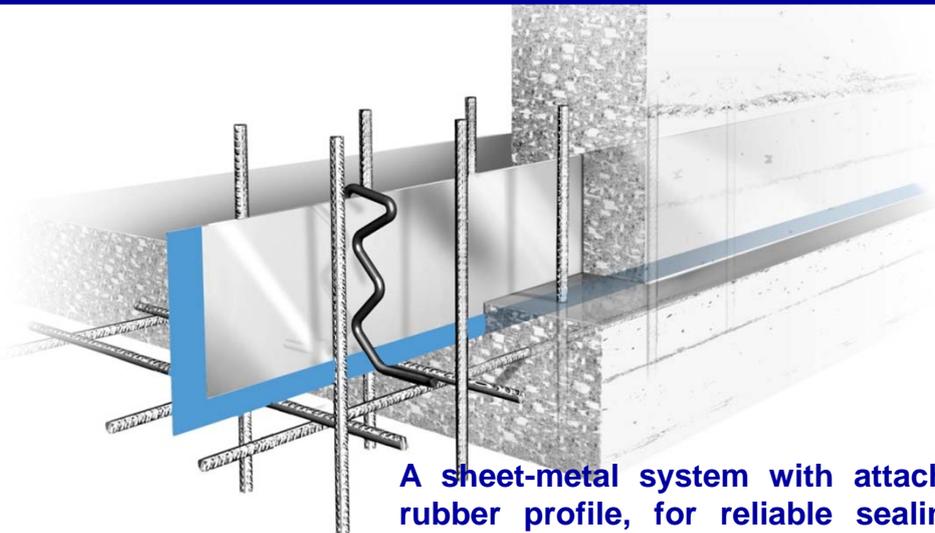




TENSA® FERROQUELL

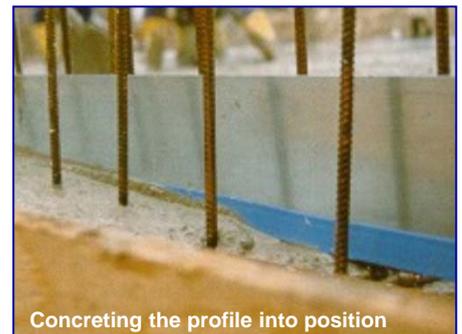


A sheet-metal system with attached expanding rubber profile, for reliable sealing of working joints.

The principle

TENSA® FERROQUELL is a sheet-metal joint system for sealing working joints. It consists of adjustable strips with expanding rubber profiles attached to them. These profiles are capable of expanding by up to 300%, and therefore function as an active sealing system. The reduced all-round distance compared with conventional systems is compensated for by the expanding action of the attached rubber.

This makes TENSA® FERROQUELL a low-cost, reliable method of sealing working joints.



Concreting the profile into position



Positioning with a retaining clip

Applications

TENSA® FERROQUELL is used to seal working joints. Since it is easy and convenient to install, it can also be used for single-sided formwork where other sealing systems are ineffective.

The complete sealing system is highly resistant to acids, bases, petrol and similar substances.

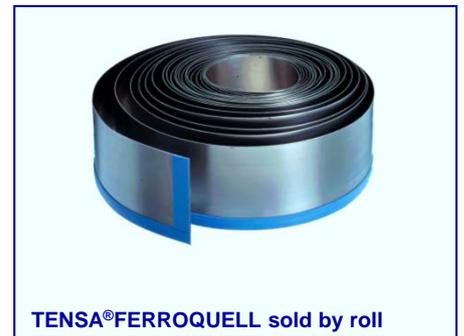
Types and dimensions

The following TENSA®FERROQUELL elements can be ordered from mageba:

Type	Pack	Dimensions			Pack contents
		Length	Height	Thickness	
Ferroquell strips	Sheet-metal strip	2,000mm	150mm	0.8mm	25
Ferroquell roll	Sheet-metal roll	20,000mm	150mm	0.8mm	1 roll
Ferroquell expansion element	Connecting element	180mm	150mm	1.0mm	4
Type BSS retaining clip	Steel clip	150mm	160mm	8.0mm dia.	1
Fix-O-Flex adhesive	Bag		600ml		1

Dimensions and delivery specification

Delivered as: Strip: 2m / roll: 20m
Dimensions: 2,000mm x 150mm x 0.8mm or
 20,000mm x 150mm x 0.8mm
Shelf life: unlimited (if stored in a dry place)
Expansion up to: 300 % by volume
Protective lacquer: applied



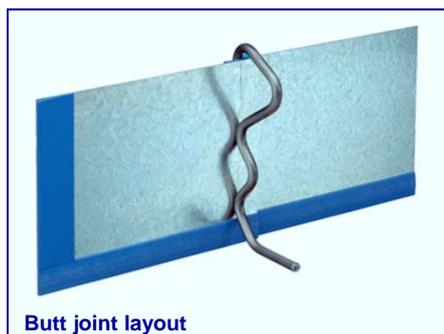
TENSA®FERROQUELL sold by roll

Connection to expansion-joint strips

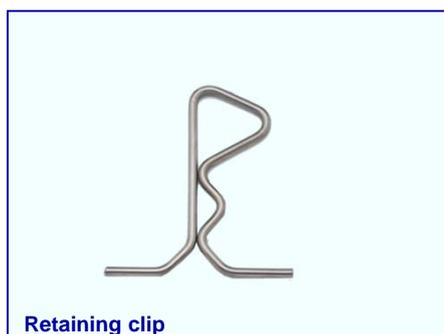
For joints between the TENSA®FERROQUELL sealing system and internal expansion-joint strips, use of the TENSA®FERRODEHN expansion joint connection is recommended. The two components are connected by a Type BSS retaining clip. Connection to the expansion-joint strip is by means of a flange that is secured to the strip by wing bolts without the use of tools. The flange is sealed on alternate sides by a rubber expansion strip.



TENSA®FERRODEHN element



Butt joint layout



Retaining clip

Forming butt joints and corners

The TENSA®FERROQUELL plates are overlapped by 50mm, so that the expanding rubber extension is fully covered by the adjacent plate in the butt joint area. The butt joints are then secured with retaining clips.

T-joints, intersections and sheet ends that are not provided with a vertical rubber expansion strip must be sealed on installation with Fix-O-Flex adhesive, and held in position by the retaining clip. The Ferroquell sheet should be secured to the upper reinforcement at one-metre intervals with Type BSS retaining clips. Corners and curves are formed by bending the sheet metal.

Tests

TENSA®FERROQUELL has been tested and certified by the following inspection authorities:

- General Construction Industry Test Certificate, FMFA Leipzig, 2002
- Resistance to chemicals acc. to DIN 4030 standard, MFPA Leipzig, 1999
- Resistance list and examination report No. UU/99-170

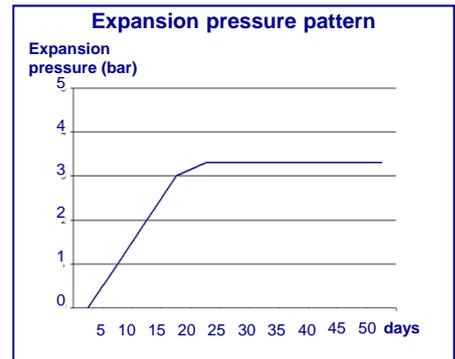
Properties

The rubber used for the TENSA®FERROQUELL sealing system has a maximum expansion of 300% by volume. The expanding action is retarded by a coating of protective lacquer applied by the manufacturer, so that the still-fresh concrete is not pressed away.

Maximum expansion pressure is reached 20 to 25 days after installation, and confirmed by a suitable pressure test on the rubber (the sheet metal consists of ST 37/ST 1203 steel).

In addition to its maximum expansion of 300% by volume, the use of this chloroprene-based rubber to coat the sheet-metal joints has other decisive advantages.

The entire sealing system is highly resistant to acids, bases, solvents, petrol and diesel oil, other mineral oils and similar substances. In addition, TENSA® FERROQUELL has been tested in accordance with DIN 4030 for its resistance to water with an aggressive effect on concrete.



Installation instructions

Laying out TENSA®FERROQUELL

The roll of TENSA®FERROQUELL is placed on the base slab so that the expansion rubber is on the water side at the bottom after installation. The roll is opened and the start of the roll drawn through the first reinforcements. To ensure its stability the TENSA®FERROQUELL is placed on the upper reinforcement in a slightly wavy rather than a straight line.

Aligning and fixing

Positioning will normally be centrally below the wall being constructed. The sheet metal is held stable at intervals of one metre by means of retaining clips. The clip is pressed over the sheet metal and secured to the upper reinforcement in the base area with binding wire.

Checking the installed height

When installing, it is essential to ensure that the TENSA®FERROQUELL is placed on the upper reinforcement in such a way that the expanding rubber coating can be concreted in to a depth of at least 30mm.

Forming corners

Its thickness of 0.8mm enables TENSA®FERROQUELL to be bent in any desired direction without difficulty, so that corners can easily be formed. However, it should not be bent more than once at the same point, in case the rubber separates from the sheet metal. Fastening clips should be inserted immediately to either side of the corner.

Sealing butt joints

T-joints, intersections and strip ends that are not provided with a vertical rubber sealing strip must be sealed with FIX-O-FLEX sealant during installation, then held together with retaining clips.

Concreting in

When concrete is poured, make sure that the sheet metal is covered to a depth of at least 30mm and that the rubber is sufficiently compressed. After concreting, the fresh concrete must achieve sufficient initial strength and be allowed to set without being disturbed.

Installation in fresh concrete

If 2m long sheet-metal strips are used, it is possible in certain cases to insert them subsequently into fresh concrete, provided that sufficient compaction is still achieved.

Text for tenders

Supply and installation of an active joint sealing system for working joints in accordance with the supplier's instructions.

Type: TENSA-FERROQUELL FQ I roll
 Sheet width: 150mm
 Sheet thickness: 0.8mm
 Length: 20m
 Supplier: mageba sa
 8180 Bülach, Switzerland
 Tel.: +41-44-872 40 50
 Fax: +41-44-872 40 59
 E-mail: hochbau@mageba.ch
 www.mageba.ch

Supply and installation of an active joint sealing system for working joints in accordance with the supplier's instructions.

Type: TENSA-FERROQUELL FQ I strip
 Sheet width: 150mm
 Sheet thickness: 0.8mm
 Length: 2m
 Supplier: mageba sa
 8180 Bülach, Switzerland
 Tel.: +41-44-872 40 50
 Fax: +41-44-872 40 59
 E-mail: hochbau@mageba.ch
 www.mageba.ch

References



Product Range



Bearings

- Slab bearings
- Wall bearings
- Separation bearings
- Sliding bearings and foils
- Deformation bearings
- Elastomeric bearings



Expansion joints

- Floor profiles for indoor and outdoor
- Facade profiles
- Wall and ceiling profiles
- Profiles for slabs and tiles



Special products

- Sealing membranes
- Hydrophilic rubber seals
- Adhesive and sealing compounds
- Shear connectors
- Insulated cantilever connectors



Vibration isolation

- Vibration isolation bearings
- Impact sound insulation
- Staircase bearings
- Pedestal bearings
- Vibration isolation connectors

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