



Specifications

Construction project:

Architect/client:

Preliminary remarks:

Work is carried out using products from the Minden-based company Triflex GmbH & Co. KG.

Compliance with all applicable guidelines is taken into account and required for the different recommended system build-ups using Triflex products.

For the waterproofing systems Triflex JWS, version 1 and Triflex JWS, version 2 a General Building Supervisory Authority Test Certificate (abP) is available according to Building Regulations List A, Part 2, No. 2.51 for liquid applied waterproofing of building structures, No. 1.4 issue 2014/2: "Normally flammable joint waterproofing for concrete components with high water-penetration resistance against pressurised and non-pressurised water and against ground moisture", the testing principles for joint waterproofing (PG-ÜBB): junctions of structural waterproofing on concrete components with high penetration resistance, issue July 2010, and the specification of the working group of recognised testing authorities according to BRL A, Part 2, No. 1.4 on the assessment of expansion joints in the draft version of PG FBB Part 2, issue June 2013. In addition, the waterproofing system is suitable for use in water-exchange zones in usage class A, load classes 1 and 2 according to the German Directive on Watertight Concrete Structures (WU Directive).

Before the contract is awarded, contractors must prove that they have been trained in the application of Triflex products. Otherwise, instruction by a trainer shall be provided on-site.

The quantities contained herein shall be checked on the building site.

Billing shall be based on measurements conducted jointly by the contractor and client.

The waterproofing system must be applied so as to prevent rainwater from penetrating the system structure in the event that work is interrupted.

For disposal of rubble, the cartage and landfill costs shall be included in the individual prices or itemised separately.

Concerns about prior work performed by other contractors shall be communicated to the client in writing immediately, ideally before work begins.

It is recommended that the bidder view the work site prior to submitting a tender.

If alterations or special work not included herein become necessary after work has commenced, detailed notification shall be given before going ahead with such alterations or special work, and the work shall subsequently be billed separately.

Unless explicitly stated otherwise, all work shall be regarded as a comprehensive turnkey service, including the supply of all required materials and ancillary services.

The contract comprises the following components:

- Specifications
- System description and manufacturer's product information
- German Directive on Watertight Concrete Structures
- DIN 18195, Parts 4, 5, 6 and 7
- DAfStb Directive "Protection and Repair of Concrete Components" (Repair Guideline)
- Building code regulations
- Accident prevention regulations
- German Construction Contract Procedures (VOB), Part B in the versions valid at the time of conclusion of the contract.

The system build-up must be adapted by the expert planner to meet the project-specific requirements. Detailed tender texts must be created by the planner on his or her own authority. There is no specific project consultation associated with the issue of these draft specifications. The preparation of drafts is a non-obligatory service provided by Triflex. Any legal claims from this service are excluded.



Specifications

Item no.	Quantity	Subject of service	Unit price EUR	Total price EUR
1		General		
1.1	Lump sum	Building site preparation	lump sum	_____
2		Structure and substrate inspections		
2.1	Lump sum	Cavities Checking for cavities by tapping the existing surfaces with a hammer, and marking any areas that sound hollow.	Lump sum	_____
2.2	Lump sum	Moisture content Determine and record the moisture content of the existing concrete substrate using a suitable gauge (e.g. a CM device, electronic moisture meter). Number of measurements:	Lump sum	_____
2.3	Lump sum	Adhesive tensile strength Determine and record the specified adhesive tensile strength of the existing substrate using a suitable gauge (e.g. Herion device). Number of measurements:	Lump sum	_____
2.4	Lump sum	Compressive strength Determining and recording the compressive strength of the existing concrete substrate using a Schmidt Hammer. Number of measurements:	Lump sum	_____
2.5	Lump sum	Core sample Determining the concrete quality and composition by taking a core sample. Number of core samples:	_____	Unit price
2.6	Lump sum	Site journal with continuous measuring Provision of suitable measuring devices for the continuous measuring of air humidity, ground temperature, air temperature and to determine the dew point throughout the building project, incl. a site journal with logging of measured values.	Lump sum	_____

Amount carried forward: _____



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			Amount carried forward:	_____
3		Substrate pre-treatment See Triflex JWS system description, Substrate pre-treatment table.		
3.1	_____ m	Grinding Substrate pre-treatment by grinding with suitable abrasive tools, incl. cleaning, acknowledgement of delivery, off-site transportation and proper disposal of any rubble. Width: cm	_____ /m	_____
3.2	_____ m	Milling Removal of any contaminated surfaces on the concrete using a suitable milling machine of approx. 5 mm in depth in order to ensure the adhesive property and soundness of the substrate incl. acknowledgement of delivery, off-site transportation and proper disposal of the milled material. Width: cm	_____ /m	Unit price
3.3	_____ m	Shot-blasting Cleaning of entire surface using a Blastrac shot-blasting method, incl. machine-sanding junctions, cleaning of areas, off-site transportation and proper disposal of any blasting material residue. Width: cm	_____ /m	Unit price
3.4	_____ m	Triflex Cleaner Preparation of the substrate by abrading with Triflex Cleaner in accordance with the system description and the substrate pre-treatment table. Width: cm	_____ /m	_____
3.5	_____ m	Joint milling machine/joint hook Removal of any joint sealant as required using joint milling machine or joint hook.	_____ /m	_____
4		Triflex Primer See Triflex JWS system description, Substrate pre-treatment table. The primer must be applied approximately 2 cm above each area being waterproofed in order to prevent moisture from running behind in the transition area.		

Amount carried forward: _____



Specifications

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			Amount carried forward:	_____
4.1	_____ m	Priming of concrete Priming for concrete. Priming of the surface with Triflex Cryl Primer 276. Application according to the material manufacturer's technical guidelines. Width: cm	_____ /m	_____
4.2	_____ m	Priming of resin-modified mortar Priming with resin-modified mortars. Priming of the surface with Triflex Pox R 100, incl. dressing with a surplus of quartz sand, size 0.2–0.6 mm. Application according to the material manufacturer's technical guidelines. Width: cm	_____ /m	Unit price
4.3	_____ m	Priming of plastic sheeting For plastic sheeting TPO, FPO, EPDM. Membrane-dependent priming of the surface with Triflex Primer 610. For advice on a case-by-case basis, please contact the Triflex Technical Advice Department. Application according to the material manufacturer's technical guidelines. Width: cm	_____ /m	Unit price
4.4	_____ m	Priming of glass Priming of the surface with Triflex Glass Primer, incl. pre-cleaning of the surface with Triflex Glass Cleaner. Application according to the material manufacturer's technical guidelines. Width: cm	_____ /m	Unit price
4.5	_____ m	Priming of metal e.g. stainless steel, steel and zinc. Priming of the surface with Triflex Metal Primer. Application according to the material manufacturer's technical guidelines. Width: cm	_____ /m	_____
5		Triflex repairs		
5.1	_____ m ²	Grouting For shrinkage cracks, small areas of damage and uneven areas. Grouting and filling in with Triflex Cryl Paste. Consumption: 1.40 kg/m ² per mm coat thickness. Application according to the material manufacturer's technical guidelines.	_____ /m ²	_____

Amount carried forward: _____



Specifications

Item no.	Quantity	Subject of service	Unit price EUR	Total price EUR
			Amount carried forward:	_____
5.2	_____ m ²	<p>Levelling out For larger areas of damage. Levelling out and filling in with Triflex Cryl RS 240. Consumption: 2.20 kg/m² per mm coat thickness. Application according to the material manufacturer's technical guidelines.</p>	_____ /m ²	_____
5.3	_____ m	<p>Levelling off the joint area Levelling off the joint sealant compound when construction joints are still functional by filling with Triflex Cryl Paste or Triflex Cryl RS 240 depending on requirement and/or use of a closed-cell PE round sealing band. Application according to the material manufacturer's technical guidelines.</p>	_____ /m	_____
6		<p>Triflex water impermeable concrete joint waterproofing Creation of joint waterproofing with Triflex ProDetail or Triflex ProTect incl. Triflex Special Fleece.</p> <p>The Triflex JWS, version 1 and Triflex JWS, version 2 waterproofing systems have a General Building Supervisory Authority Test Certificate in accordance with the Building Regulations List A, Part 2, No. 1.4 – Normally flammable joint waterproofing for concrete components with high water-penetration resistance against pressurised and non-pressurised water and against ground moisture. The tests are based on the testing principles for joint waterproofing (PG-ÜBB): Junctions of structural waterproofing on concrete components with high penetration resistance and in accordance with the specifications in the working group Building Regulations List A, Part 2, No. 1.4, for assessment of expansion joints.</p> <p>In addition, the waterproofing system is suitable for use in water-exchange zones in usage class A, load classes 1 and 2 according to the German Directive on Watertight Concrete Structures (WU Directive).</p> <p>The Triflex ProDetail / Triflex ProTect waterproofing system has been awarded ETA approval (ETAG No. 06/0269 and 03/0020 respectively) with CE mark in the highest usage categories W3, M and S, P1 to P4, S1 to S4, TL4, TH4, B_{ROOF} (t1), B_{ROOF} (t2), B_{ROOF} (t3), and its root resistance is also certified according to FLL standards.</p>		

Amount carried forward: _____



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6.1		<p>Triflex JWS, version 1 The Triflex JWS, version 1 waterproof concrete joint waterproofing system is used for crack control, construction and expansion joints with a max. joint width of <30 mm.</p> <p>A maximum resultant deformation of $V_r = 22.4$ mm is achieved with a max. water pressure of 1.5 bar (15 m water column).</p> <p>With the max. resultant deformations, the test setups and their results must be observed based on the associated General Building Supervisory Authority Test Certificate (AbP). These form the basis of the values reached. Changes to the geometry, the uncoupling zones and the loop depths can cause the maximum resulting deformation values to be higher or lower.</p>	Amount carried forward:	
6.2	_____ m	<p>Triflex JWS, version 1 (area) Waterproofing of the joint area with Triflex ProDetail or Triflex ProTect, each incl. Triflex Special Fleece. Triflex Duct Tape, 10 cm in width, is applied to the middle of the joint area. A connection of at least 10 cm to foreign material must be guaranteed on the left and right of the joint. An additional protective layer of Triflex ProDetail or Triflex ProTect is applied to conclude. Application is performed according to the material manufacturer's technical guidelines. Triflex Special Fleece: cm. (See Triflex system drawing JWS-5101)</p>	_____ /m	_____
6.3	_____ m	<p>Triflex JWS, version 1 (wall junction) Waterproofing of the joint area with Triflex ProDetail or Triflex ProTect, each incl. Triflex Special Fleece. Triflex Duct Tape, 10 cm in width, is applied to the middle of the joint area. A connection of at least 10 cm to foreign material must be guaranteed on the left and right of the joint. An additional protective layer of Triflex ProDetail or Triflex ProTect is applied to conclude. Application is performed according to the material manufacturer's technical guidelines. Wall junction height: cm Triflex Special Fleece: cm. (See Triflex system drawing JWS-5102)</p>	_____ /m	_____

Amount carried forward: _____



Specifications

Item no.	Quantity	Subject of service	Unit price EUR	Total price EUR
7		<p>Triflex JWS, version 2 The Triflex JWS, version 2 waterproof concrete joint waterproofing system is used for expansion joints.</p> <p>The joint width must be at least 30 mm in order to be able to form a loop. The joint must be widened as necessary.</p> <p>When forming this joint, a maximum resultant deformation of $V_r = 26.9$ mm is achieved with a max. water pressure of 2.0 bar (20 m water column).</p> <p>With the max. resultant deformations, the test setups and their results must be observed based on the associated General Building Supervisory Authority Test Certificate (AbP). These form the basis of the values reached. Changes to the geometry, the uncoupling zones and the loop depths can cause the maximum resulting deformation values to be higher or lower.</p>	Amount carried forward:	_____
7.1	_____ m	<p>Triflex JWS, version 2 (area) The Triflex Support Strip is adhered in the joint area with the Triflex Cryl Paste before the loop is formed with Triflex ProDetail or Triflex ProTect, with fleece reinforcement. Once the waterproofing has cured, a closed-cell PE round sealing band is inserted into the loop and then grouted flush with Triflex ProDetail or Triflex ProTect. Triflex Duct Tape is applied in the middle over the non-adhesive area as definition. It is recoated with fleece-reinforced Triflex ProDetail or Triflex ProTect joint waterproofing. Once the waterproofing has cured, an additional protective layer of Triflex ProDetail or Triflex ProTect is applied. A connection of at least 10 cm to foreign materials must be guaranteed on the left and right of the joint. Application is performed according to the material manufacturer's technical guidelines. Triflex Special Fleece: + cm. (See Triflex system drawing JWS-5103)</p>	_____ /m	_____

Amount carried forward: _____



Specifications

Item no.	Quantity	Subject of service	Unit price EUR	Total price EUR
			Amount carried forward:	_____
7.2	_____ m	<p>Triflex JWS, version 2 (wall junction) The Triflex Support Strip is adhered in the joint area with the Triflex Cryl Paste before the loop is formed with Triflex ProDetail or Triflex ProTect, with fleece reinforcement. Once the waterproofing has cured, a closed-cell PE round sealing band is inserted into the loop and then grouted flush with Triflex ProDetail or Triflex ProTect. Triflex Duct Tape is applied in the middle over the non-adhesive area as definition. It is recoated with fleece-reinforced Triflex ProDetail or Triflex ProTect joint waterproofing. Once the waterproofing has cured, an additional protective layer of Triflex ProDetail or Triflex ProTect is applied. A connection of at least 10 cm to foreign materials must be guaranteed on the left and right of the joint. Application is performed according to the material manufacturer's technical guidelines. Wall junction height: cm Triflex Special Fleece: + cm. (See Triflex system drawing JWS-5104)</p>	_____ /m	_____
8		Triflex Finish		
8.1	_____ m	<p>Finishing the junction area For optical adjustment of the wall areas, Triflex Cryl Finish 205 can be used for finishing. Wall junction height: cm Colour: at the discretion of the client. Application according to the material manufacturer's technical guidelines.</p>	_____ /m	_____
9		Protective measures		
9.1	_____ m	<p>Protective padding, protective fleece To protect the joint from mechanical damage, protective padding or protective fleece should be put in place loosely on completion of the work. Width: m Material: Mass per unit area: kg/m²</p>	_____ /m	_____
10		Hourly rates		
10.1	_____ hrs.	Hourly rate of a foreman.	_____ /hr.	_____
10.2	_____ hrs.	Hourly rate of a skilled trade worker.	_____ /hr.	_____
10.3	_____ hrs.	Hourly rate of an assistant.	_____ /hr.	_____

Amount carried forward: _____



Specifications

Item no.	Quantity	Subject of service	Unit price EUR	Total price EUR
			Amount carried forward:	_____
11		Materials		
11.1	_____ kg	Material consumption upon proof.	_____ /kg	Unit price
12		Disposal		
12.1	Lump sum	Disposal of all waste and hazardous waste materials in accordance with the current applicable laws and implementing regulations.	Lump sum	_____
		Net total:		_____
		Statutory VAT at _____%		_____
		Gross total:		_____