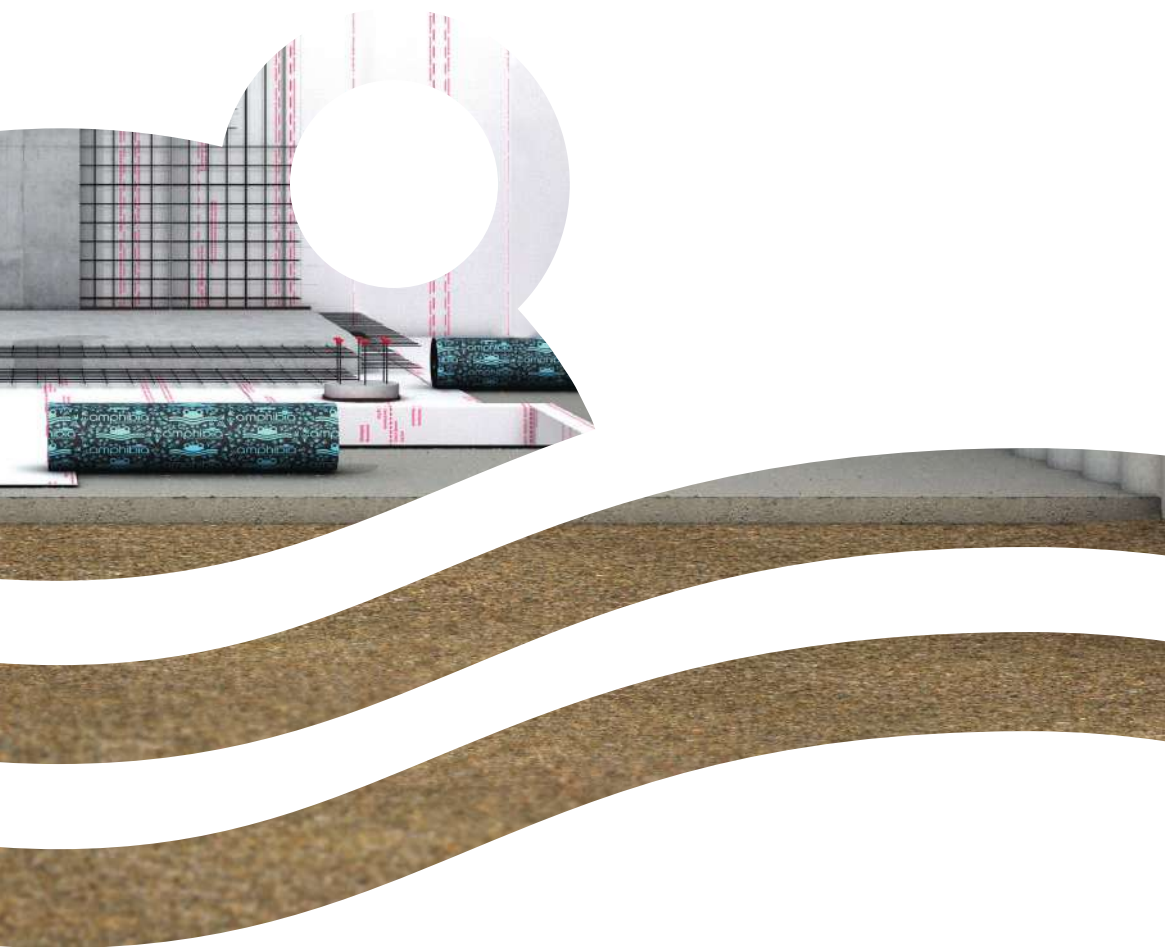
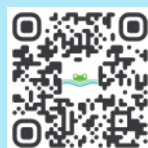


METHOD STATEMENT

Amphibia installation handbook



AMPHIBIA, HYDRO-REACTIVE MEMBRANE



Download
digital
version

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HYDRO-REACTIVE MEMBRANE



> 2000 cm - 787,40 in
> 36 m² - 387,5 ft²

> 2000 cm - 787,40 in
> 18 m² - 193,75 ft²

AMPHIBIA 3000 GRIP

AMPHIBIA 3000 GRIP is an **EPDM PRE-APPLIED waterproof membrane**, reactive to contact with water, **SELF-REPAIRING**, **SELF-SEALING** and **SELF-FASTENING** to the concrete.

This is composed of a **co-extruded, multi-layer, polymer, continuous coat**, with differentiated function for total water- tightness of underground structures against water seepage.

It is composed of 3 layers with expansive capacity differentiated by the following features:

- **TIGHT BARRIER, WATERTIGHT LAYER**
- **CORE**, self-sealing and self-repairing super expansive safety layer, even in the event of a puncture
- **ACTIVE BARRIER**, hydro-reactive layer with controlled expansion, prevents side water seepage and seals the overlaps.

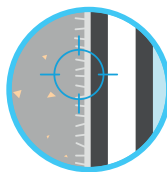
Moreover it is provided with a calibrated non-woven fabric on the inner face -side in contact with fresh concrete - which allows the **mechanical adhesion** of the membrane to the structure.



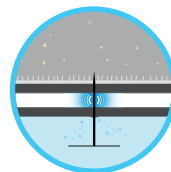
**SELF
REPAIRING**



**SELF
OVERLAPPING**



SELF GRIPPING



**EASY FIXING
NO WATER
LEAKAGE**



USE

- **Waterproofing and protection of concrete underground structures** such as residential and industrial buildings, shopping malls, public works etc...which require close and continuous contact between waterproofing product and structure (foundation slabs and walls, against slurry walls, piles, Berlinese or disposable formwork, internal tanking of existing structures). It can also be used in other structures such as channels, tanks, purification systems, tunnels, etc...
- **Radon and methane protection**
- **Anti-damp protection for concrete structures** built at ground level such as underfloor screeds.

TUTORIAL VIDEO AMPHIBIA



[Look at the video >](#)

APPLICATION VIDEO AMPHIBIA



[Look at the video >](#)

ACCESSORIES

SYSTEM COMPONENTS



AMPHIBIA PRESSURE LINE

METALLIC PROFILE, COATED ON ONE SIDE WITH AMPHIBIA 3000

size cm 150x4



AMPHIBIA PRESSURE CORNER 90°

CORNER METALLIC PROFILE COATED WITH AMPHIBIA 3000 MEMBRANE

size cm 150x5x10

AMPHIBIA PRESSURE CORNER 270°

CORNER METALLIC PROFILE COATED WITH AMPHIBIA 3000 MEMBRANE AND ADHESIVE BUTYLIC TAPE AMPHIBIA SAFETY TAPE BT

size cm 150x5x10



AMPHIBIA SAFETY TAPE

ADHESIVE TAPE FOR OVERLAPPING PROTECTION

size cm 6x2500



AMPHIBIA LAP SEAL

BUTYL ADHESIVE TAPE FOR GAS PROTECTION

size cm 6x1000



AMPHIBIA STOPPER

PROTECTION CAP FOR CLOSING FORMWORK PIPE SPACERS



AMPHIBIA 3000 STRIP

TAPE OF AMPHIBIA 3000 MEMBRANE

size cm 12x1850



BI MASTIC

DEFORMABLE ADHESIVE MASTIC WITH HIGH PERFORMANCE



AKTI-SEAL 201

SYNTHETIC RUBBER SWELLABLE SEALANT



WT CONSTRUCTION

EPDM HYDRO-SWELLABLE WATERSTOP REINFORCED WITH STEEL MESH

size mm 25x15 - length m 7 | mm 20x10 - length m 10 | mm 25x5 - length m 15



WT EXPANSION

EPDM HYDRO-SWELLABLE WATERSTOP FOR JOINTS

size mm 20x20 - length m 1,20 | mm 30x30 - length m 1,20



WT PANEL

EPDM HYDRO-SWELLABLE MODULAR WATERSTOP PANEL

size mm 250x5 - length m 10 | mm 125x5 - length m 1,20



WT STRIP

EPDM HYDRO-EXPANDING WATERSTOP TAPE

size mm 30x5 mm - length m 15 | mm 50x5 - length m 15

TOOLS



FLEXOMETER



CUTTER



SCISSORS



GUN FOR UNIPACK



GUN FOR SEALANT IN CARTRIDGES



NAILER



STAPLER



ROLLER



STRAIGHT EDGE



DETAILS

J P. 36

N P. 46

D1 P. 16

H1 P. 28

O1 P. 48

H2 P. 30

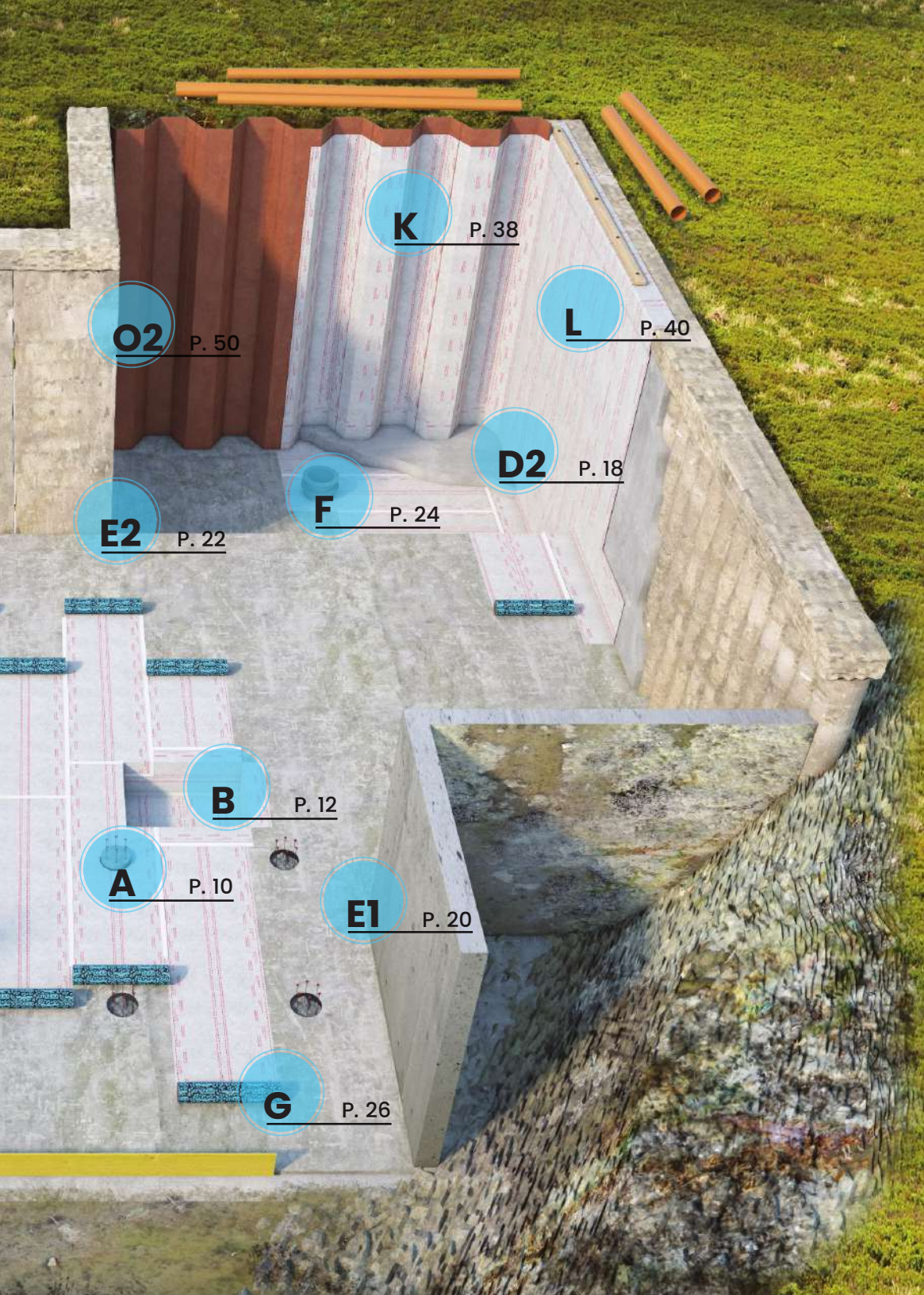
M2 P. 44

P P. 52

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C P. 14



O2

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D2

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E2

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B

P. 12

A

P. 10

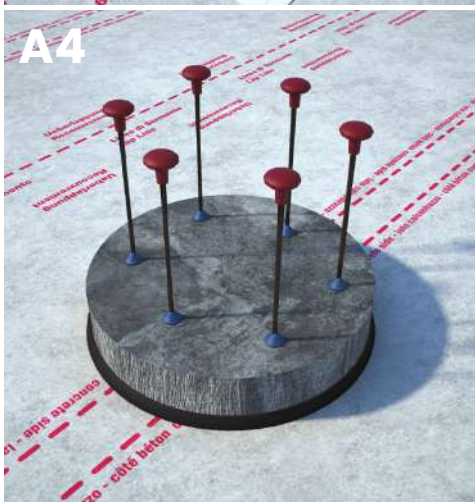
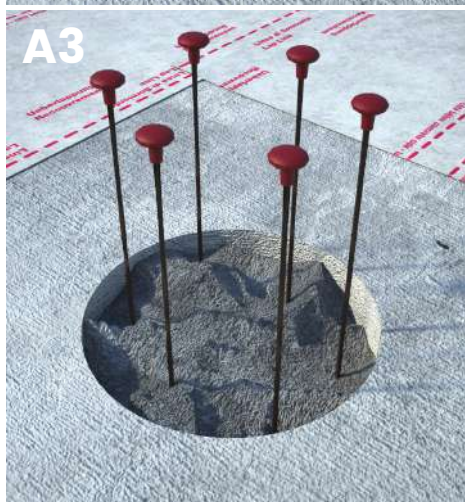
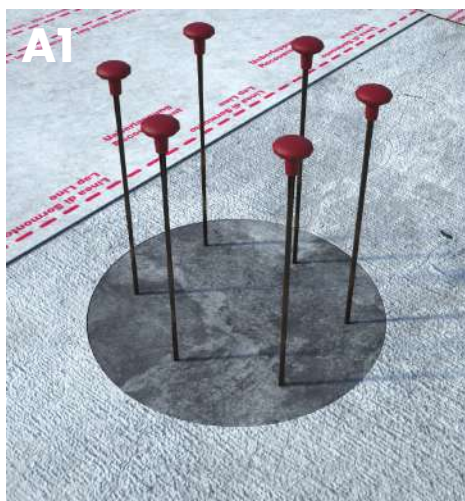
E1

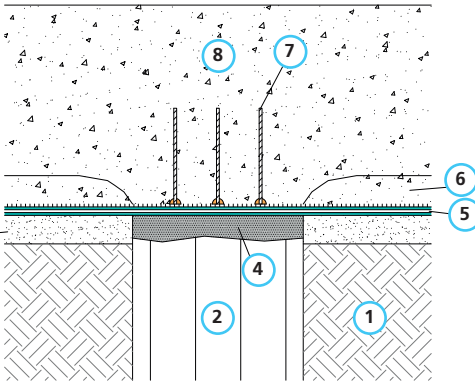
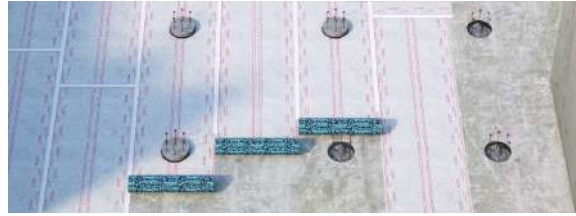
P. 20

G

P. 26

A FOUNDATION PILES

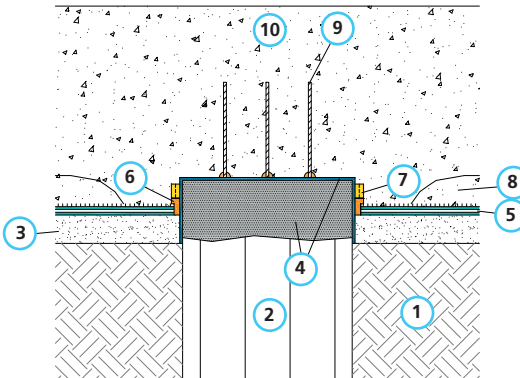




A1/A2

AMPHIBIA OVER PILE HEADS

1. Soil
2. Foundation pile
3. Lean concrete
4. Reconstruction with BI MORTAR LEVELLING SEAL, FIBRO HFR or with concrete
5. AMPHIBIA 3000 GRIP over pile heads
6. Concrete protective screed (optional)
7. Steel bars sealed with AKTI-SEAL 201
8. RC structure suitable to withstand hydraulic pressures and exempt from defects [EN_UT SS 079 - AMP]

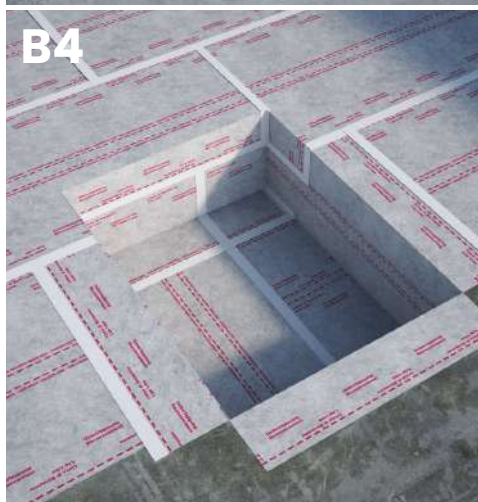
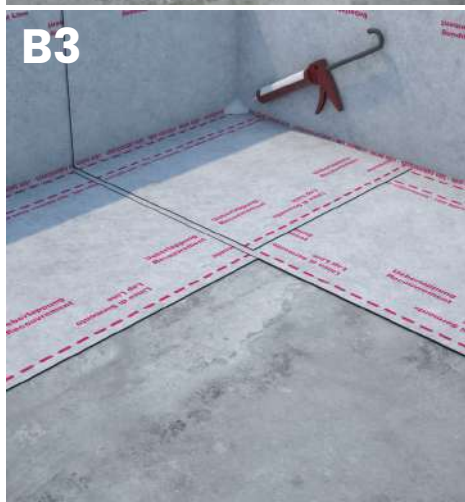
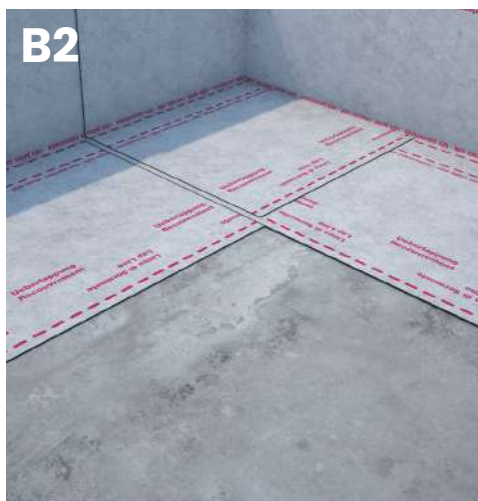


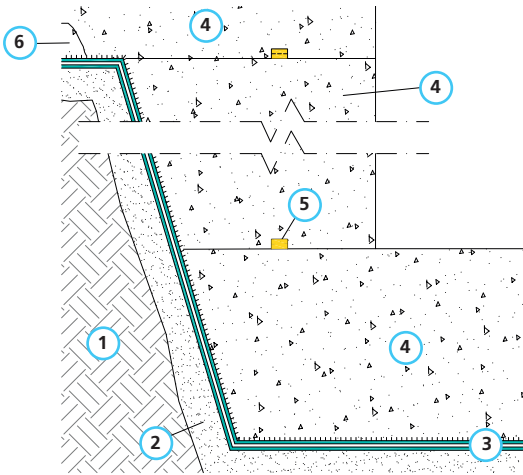
A3/A4

AMPHIBIA AROUND PILE HEADS

1. Soil
2. Foundation pile
3. Lean concrete
4. Suitable reconstruction with FIBRO HFR/BI MORTAR LEVELLING SEAL or with concrete externally waterproofed with BI MORTAR CONCRETE SEAL
5. AMPHIBIA 3000 GRIP
6. AKTI-SEAL 201
7. WT CONSTRUCTION
8. Concrete protective screed (optional)
9. Steel bars sealed with AKTI-SEAL 201
10. RC structure suitable to withstand hydraulic pressures and exempt from defects [EN_SS 097 - AMP - WTC]

B LIFT PIT AND DIFFERENT HEIGHTS



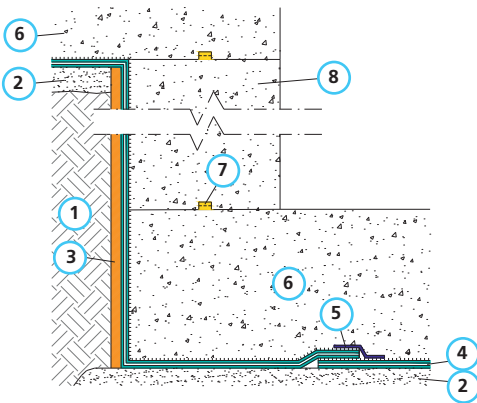


B1/B2/B3/B4

LIFT PIT

1. Soil
2. Lean concrete
3. AMPHIBIA 3000 GRIP
4. RC structure suitable to withstand hydraulic pressures and exempt from defects
5. WT CONSTRUCTION
6. Concrete protective screed (optional)

[EN_UT SS 016]



B3

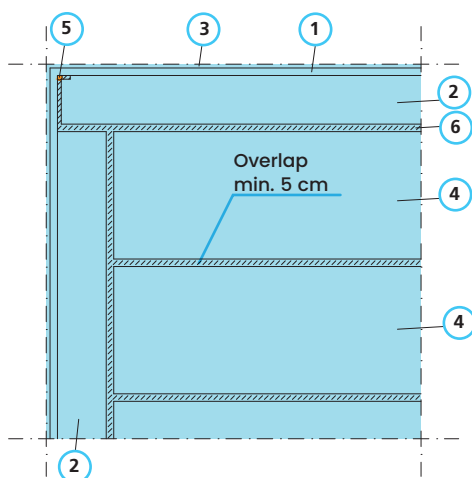
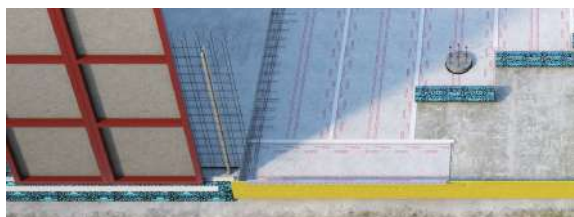
RAFT FOUNDATIONS AT DIFFERENT LEVELS

1. Soil
2. Lean concrete
3. Non-degradable panels
4. AMPHIBIA 3000 GRIP
5. AMPHIBIA SAFETY TAPE o BI MASTIC
6. Raft foundation suitable to withstand hydraulic pressures and exempt from defects
7. WT CONSTRUCTION
8. RC structure suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SS 112]

C APPLICATION ON RAFT FOUNDATION TOE OPEN BASEMENT EXCAVATION





c1/c2

RAFT FOUNDATION: INSTALLATION ON LEAN CONCRETE BLINDING

1. Formworks
2. AMPHIBIA 3000 GRIP vertically installed all along the formworks and folded on the raft foundation
3. AMPHIBIA 3000 GRIP flap over the formwork
4. AMPHIBIA 3000 GRIP on lean concrete
5. AKTI-SEAL 201
6. AMPHIBIA SAFETY TAPE or BI MASTIC
[EN_UT SS 003 B]



› Raft foundation with AMPHIBIA SYSTEM

D1 CORNER 90° OPEN BASEMENT EXCAVATION



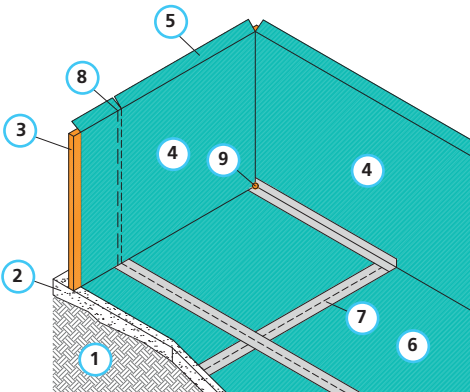


D1.1/D1.2/D1.3/D1.4

SEALING OF INTERNAL 90° CORNER ON FORMWORKS

1. Soil
2. Lean concrete
3. Formwork
4. AMPHIBIA 3000 GRIP vertically applied all along the formworks and folded on the raft foundation
5. AMPHIBIA 3000 GRIP flap over the formwork
6. AMPHIBIA 3000 GRIP on lean concrete
7. AMPHIBIA SAFETY TAPE or BI MASTIC
8. Apply staples to fix vertically the sheets to the formworks
9. AKTI-SEAL 201

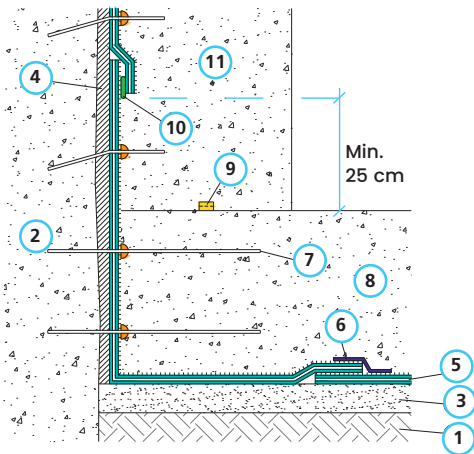
[EN_UT SS 074]



› 90° corner in case of open basement excavation with AMPHIBIA SYSTEM

D2 CORNER 90° BLINDSIDE





D2.1/D2.2/D.2.3/D2.4/D2.5

SEALING OF INTERNAL 90° CORNER ON DIAPHRAGM WALLS

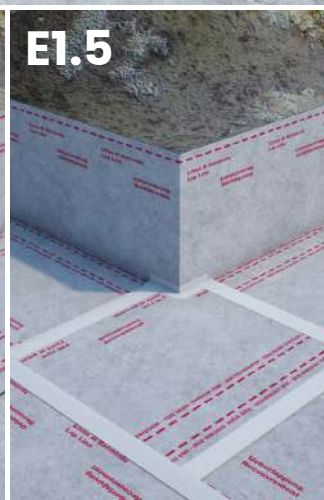
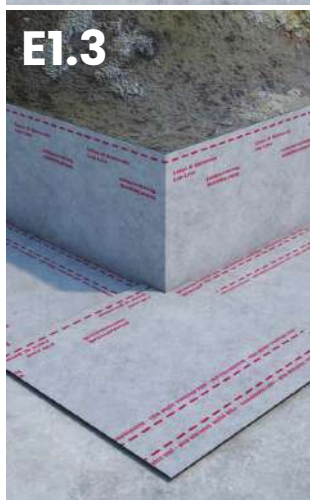
1. Soil
2. Diaphragm walls
3. Lean concrete
4. Smoothing or non-degradable rigid panel
5. AMPHIBIA 3000 GRIP
6. AMPHIBIA SAFETY TAPE or BI MASTIC
7. Connectors sealed with AKTI-SEAL 201
8. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
9. WT CONSTRUCTION
10. BI MASTIC
11. RC walls suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SD 024]



➤ 90° corner in case of blindside application with AMPHIBIA SYSTEM

E1 CORNER 270° OPEN BASEMENT EXCAVATION



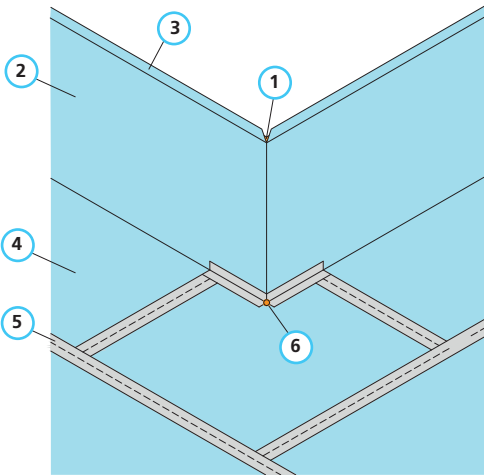


E1.1/E1.2/E1.3/E1.4/E1.5

SEALING OF INTERNAL 270° CORNER ON FORMWORKS

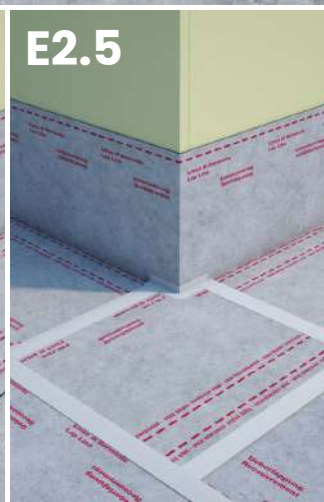
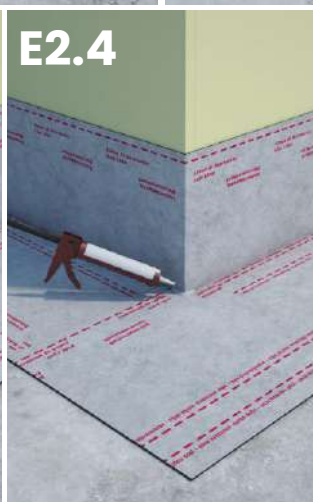
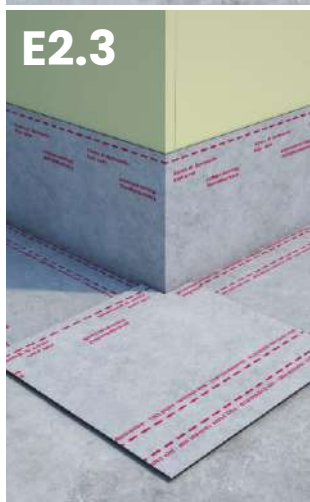
1. Formwork
2. AMPHIBIA 3000 GRIP vertically applied all along the formworks and folded on the raft foundation
3. AMPHIBIA 3000 GRIP flap over the formwork
4. AMPHIBIA 3000 GRIP on lean concrete
5. AMPHIBIA SAFETY TAPE or BI MASTIC
6. AKTI-SEAL 201

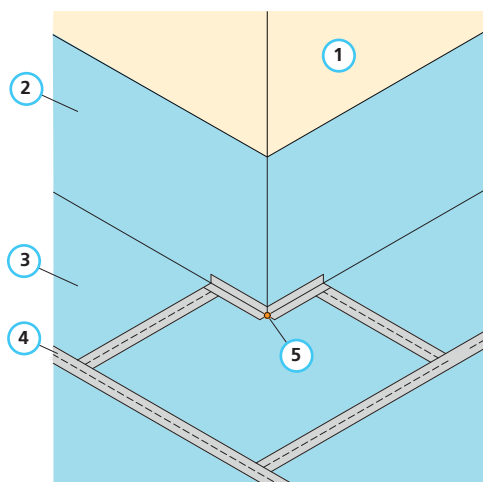
[EN_UT SS 075]



› 270° corner in case of open basement excavation with AMPHIBIA SYSTEM

E2 CORNER 270° BLINDSIDE





E2.1/E2.2/E2.3/E2.4/E2.5 **SEALING OF INTERNAL 270° CORNER** **ON DIAPHRAGM WALLS**

1. Smoothing or non-degradable rigid panels
2. AMPHIBIA 3000 GRIP vertically applied, folded on the raft foundation
3. AMPHIBIA 3000 GRIP on lean concrete
4. AMPHIBIA SAFETY TAPE or BI MASTIC
5. AKTI-SEAL 201

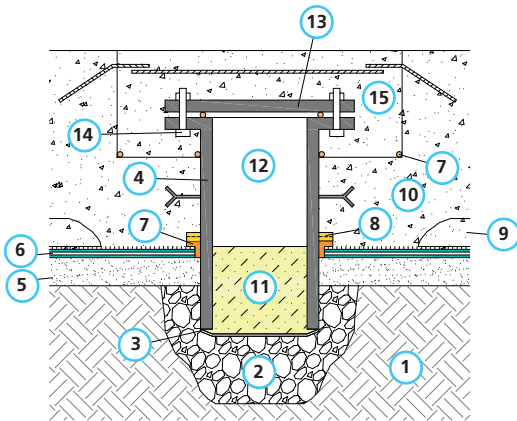
[EN_UT SD 041]



› 270° corner in case of blindside application with AMPHIBIA SYSTEM

F PRESENCE OF DEWATERING WELLS AND DIFFERENT LEVELS



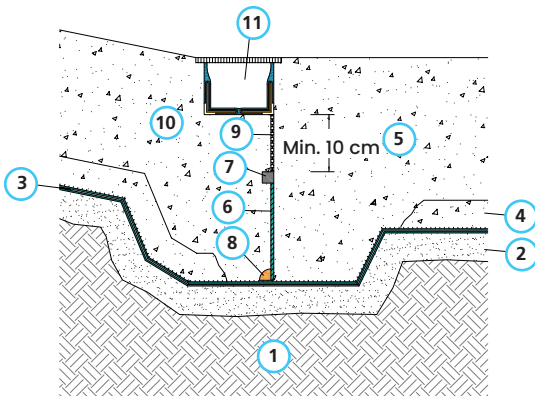


F1/F2

DEWATERING WELL

1. Soil
2. Drainage area
3. Non-woven textile + net
4. Flanged pipe with clamp-irons (stainless or galvanised)
5. Lean concrete
6. Amphibia 3000 Grip
7. AKTI-SEAL 201
8. WT CONSTRUCTION
9. Protective screed (optional)
10. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
11. Granular bentonite
12. Cast-in-place concrete to fill the well
13. Stainless steel cap sealed with AKTI-SEAL 201
14. Welded bolts
15. Cast-in-place concrete to fill the void on the raft

[EN_UT SS 025]



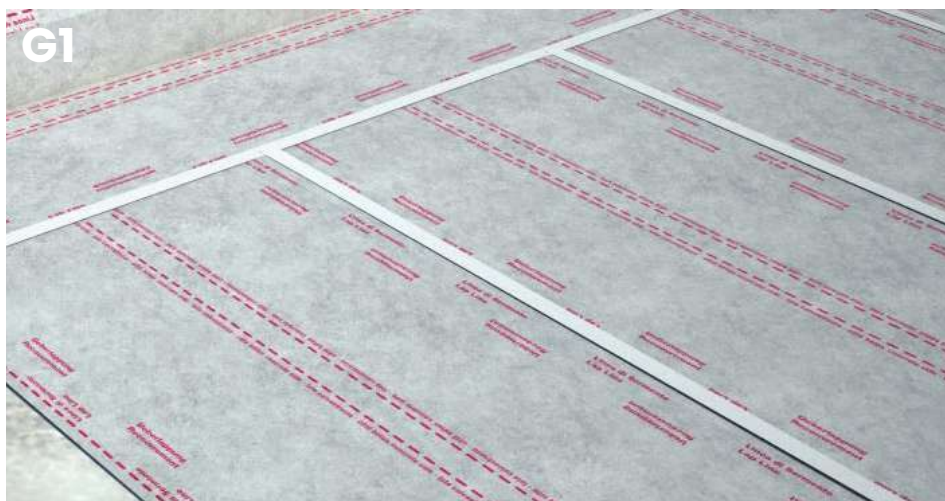
F3

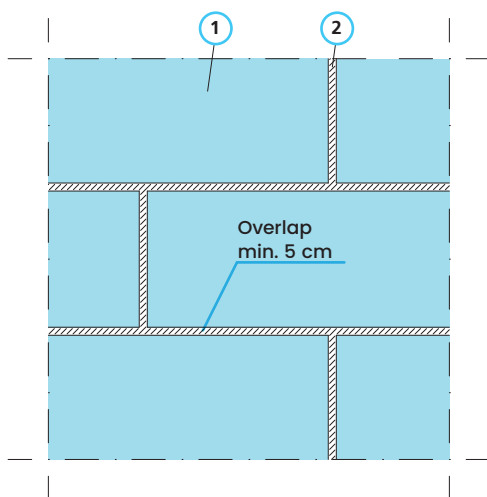
RAMP

1. Soil
2. Lean concrete
3. Amphibia 3000 Grip
4. Concrete protective screed (optional)
5. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
6. WT PANEL
7. WT EXPANSION
8. AKTI-SEAL 201
9. Separating element
10. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
11. Gutter with grid

[EN_UT SS 085 A]

G SHEET APPLICATION





G1/G2

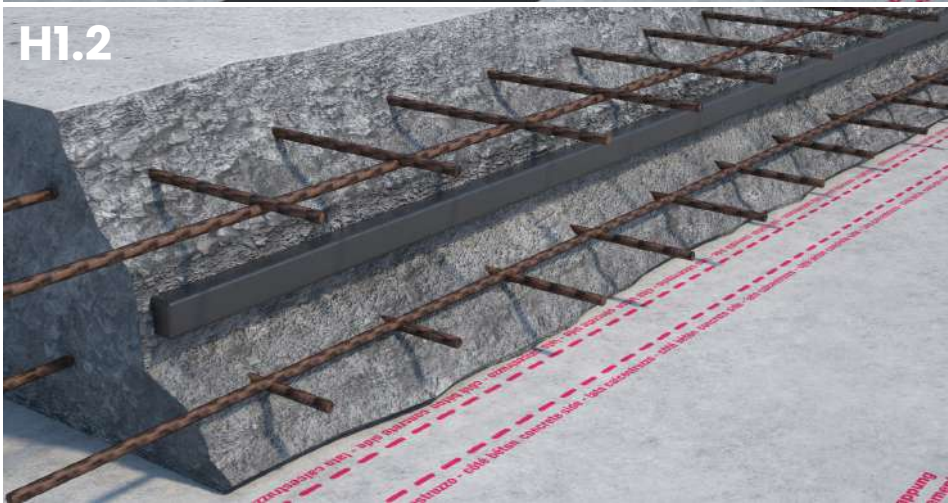
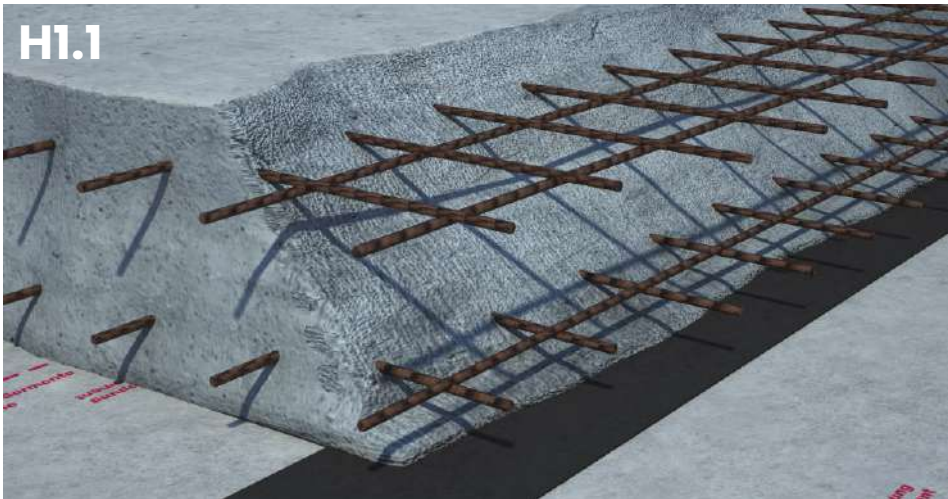
AMPHIBIA INSTALLATION PATTERN TYPE

1. AMPHIBIA 3000 GRIP
 2. AMPHIBIA SAFETY TAPE or BI MASTIC
- [EN_UT SS 003 A]



› Raft foundation with AMPHIBIA SYSTEM

H1 JOINTS IN RAFT FOUNDATION CONSTRUCTION JOINTS



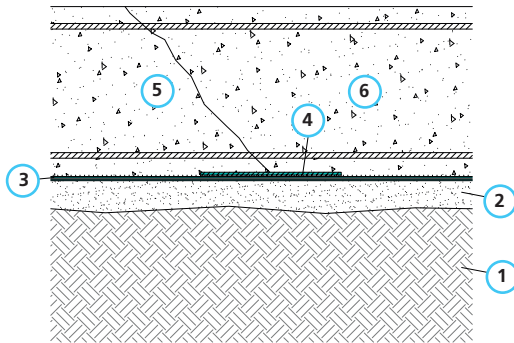


H1.1

HORIZONTAL CONSTRUCTION JOINT - RAFT FOUNDATION

1. Soil
2. Lean concrete
3. AMPHIBIA 3000 GRIP
4. WT PANEL
5. First part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
6. Second part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SS 083 A-AMP-WTP]

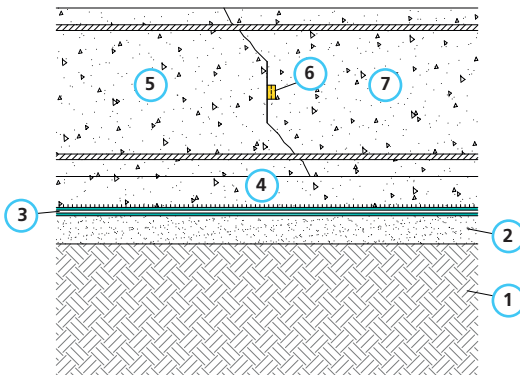


H1.2

RAFT FOUNDATION CONSTRUCTION JOINT MADE BY FORMWORK

1. Soil
2. Lean concrete
3. AMPHIBIA 3000 GRIP
4. Concrete protective screed (optional)
5. First part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
6. WT CONSTRUCTION
7. Second part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SS 010 AMP -WTC]



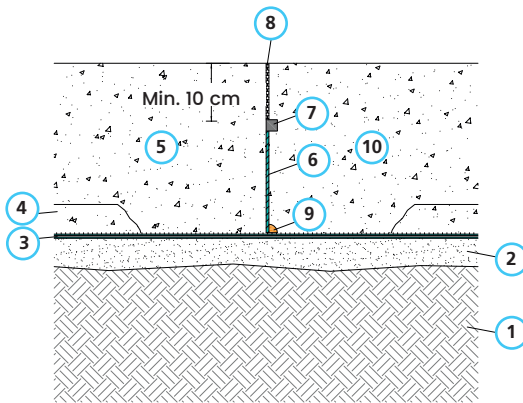
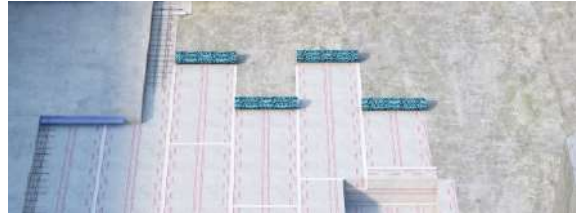
H2 JOINTS IN RAFT FOUNDATION EXPANSION JOINTS

H2.1



H2.2



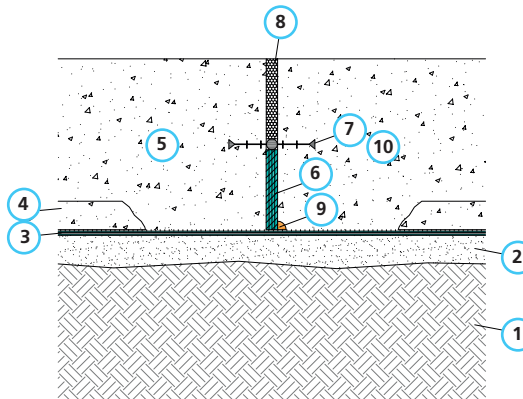


H2.1

HORIZONTAL EXPANSION JOINT

1. Soil
2. Lean concrete
3. Amphibia 3000 Grip
4. Concrete protective screed (optional)
5. First part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
6. WT PANEL
7. WT EXPANSION
8. Separating element
9. AKTI-SEAL 201
10. Second part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SS 073 A]



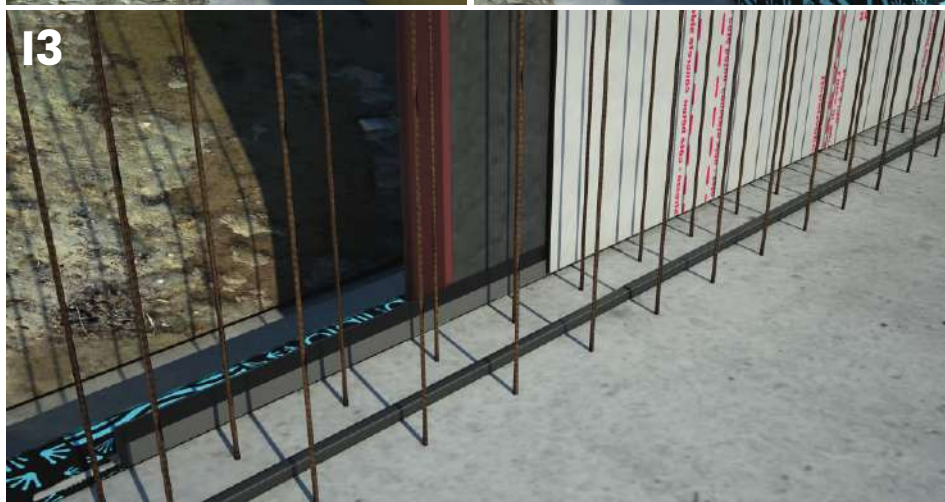
H2.2

EXPANSION JOINT WITH PVC WATERSTOP

1. Soil
2. Lean concrete
3. AMPHIBIA 3000 GRIP
4. Concrete protective screed (optional)
5. First part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
6. WT PANEL (multiples)
7. PVC waterstop
8. Separating element
9. AKTI-SEAL 201
10. Second part of the RC raft foundation suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SS 073 B]

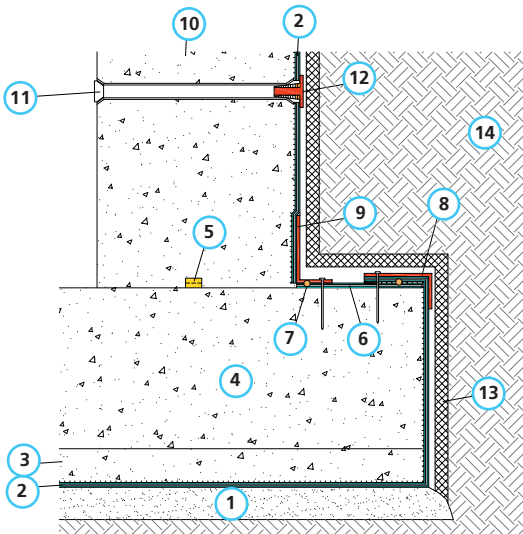
VERTICAL APPLICATION PRE AND POST APPLIED





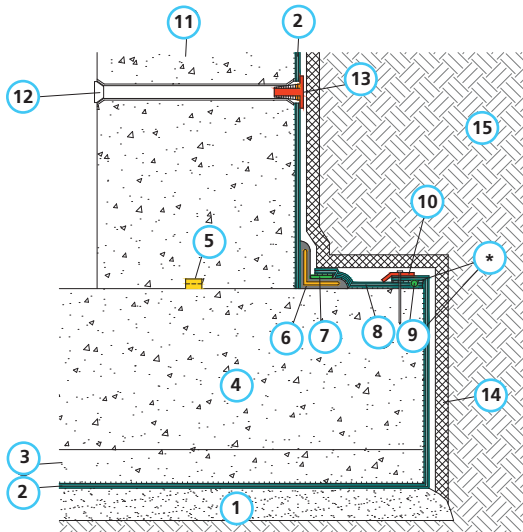
11/12/13

A – PRE APPLICATION WITH FOUNDATION TOE



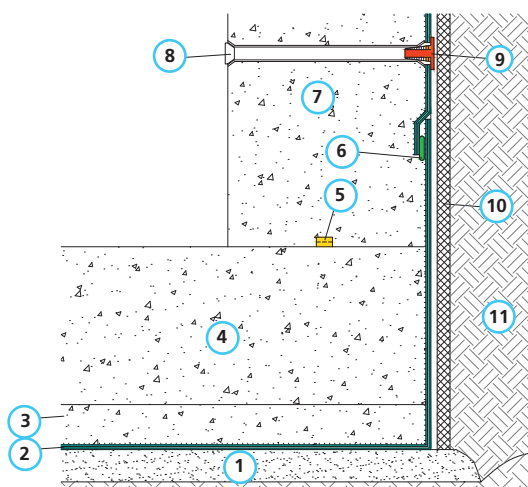
1. Lean concrete
 2. AMPHIBIA 3000 GRIP
 3. Concrete protective screed (optional)
 4. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 5. WT CONSTRUCTION
 6. AMPHIBIA 3000 GRIP
 7. BI MASTIC or AKTI-SEAL 201
 8. AMPHIBIA PRESSURE CORNER 90°
 9. AMPHIBIA PRESSURE CORNER 270°
 10. RC wall suitable to withstand hydraulic pressures and exempt from defects
 11. PVC distance tube to seal
 12. AMPHIBIA STOPPER with AKTI-SEAL 201 to seal the distance tube
 13. Rigid insulation panels or non-woven textile min 250 g/m²
 14. Well compacted soil without voids
- [EN_UT SS 104 WTC – AMP PRE-CAST]

B – CONSTRUCTION JOINT WITH AMPHIBIA PRE-APPLIED AGAINST FORMWORKS



1. Lean concrete
 2. AMPHIBIA 3000 GRIP
 3. Concrete protective screed (optional)
 4. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 5. WT CONSTRUCTION
 6. BI FLEX
 7. BI MASTIC
 8. AMPHIBIA 3000 GRIP
 9. BI MASTIC o AKTI-SEAL 201
 10. AMPHIBIA PRESSURE LINE
 11. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 12. PVC spacer tube seal
 13. AMPHIBIA STOPPER with AKTI-SEAL 201 to seal the spacer tube
 14. Rigid insulation panels or non-woven textile min 250 g/m²
 15. Well compacted soil without voids
- (*) Use BI MASTIC to fix all vertical overlaps of the sheets installed along the fromworks
- [EN_UT SS 072]

VERTICAL APPLICATION PRE AND POST APPLIED

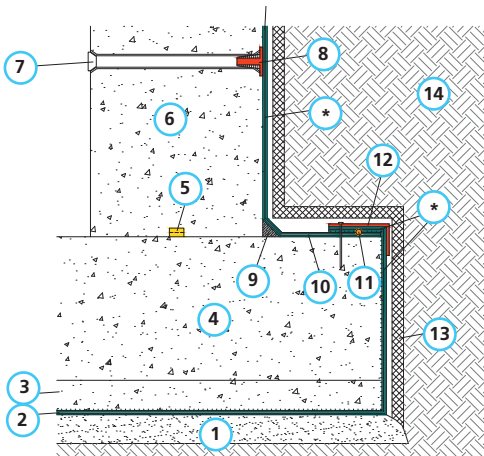


C – PRE APPLICATION WITHOUT FOUNDATION TOE

1. Lean concrete
 2. AMPHIBIA 3000 GRIP
 3. Protective concrete screed
 4. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 5. WT CONSTRUCTION
 6. Overlaps fixed with BI MASTIC
 7. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 8. PVC distance tube to seal
 9. AMPHIBIA STOPPER with AKTI-SEAL 201 to seal the distance tubes
 10. Rigid insulation panels or non-woven textile min 250 g/m²
 11. Well compacted soil without voids
- (* Use BI MASTIC to fix all vertical overlaps of the sheets installed along the formworks)
- [EN_UT SS 063 B – AMP PRE-GETTO]



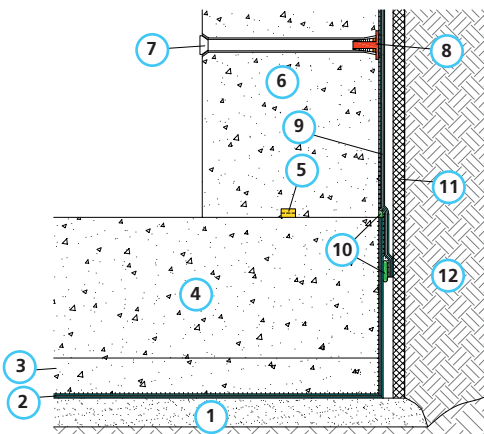
› Vertical application on formworks



A - POST-APPLICATION WITH FOUNDATION TOE

1. Lean concrete
 2. AMPHIBIA 3000 GRIP
 3. Protective concrete screed (optional)
 4. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 5. WT CONSTRUCTION
 6. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 7. PVC spacer tube to seal
 8. AMPHIBIA STOPPER with AKTI-SEAL 201 to seal the distance tubes
 9. Fillet with SPIDY 15
 10. AMPHIBIA 3000 GRIP
 11. BI MASTIC or AKTI-SEAL 201
 12. AMPHIBIA PRESSURE CORNER 90°
 13. Pannello isolante o TNT da 250 g/m²
 14. Rigid insulation panels or non-woven textile min 250 g/m²
- (*) Use BI MASTIC to fix all vertical overlaps of the sheets installed along the fromworks

[EN_UT SS 103 - WTC - AMP POST GETTO]



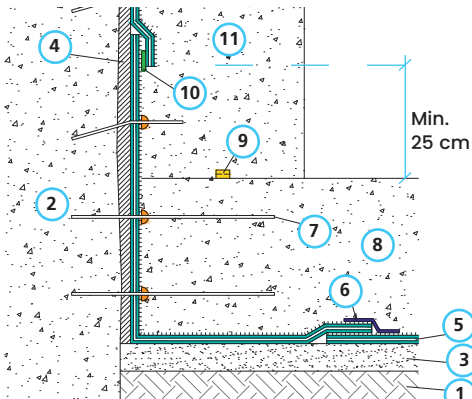
B - POST-APPLICATION WITHOUT FOUNDATION TOE

1. Lean concrete
 2. AMPHIBIA 3000 GRIP
 3. Protective concrete screed (optional)
 4. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 5. WT CONSTRUCTION
 6. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
 7. PVC spacer tube to seal
 8. AMPHIBIA STOPPER with AKTI-SEAL 201 to seal the distance tubes
 9. AMPHIBIA 3000 GRIP post-applied
 10. Overlaps fixed with BI MASTIC
 11. Rigid insulation panels or non-woven textile min 250 g/m²
 12. Well compacted soil without voids
- (*) Use BI MASTIC to fix all vertical overlaps of the sheets installed along the fromworks

[EN_UT SS 117 - AMP - WTC POST-GETTO]

J VERTICAL APPLICATION ON DIAPHRAGM WALLS





J1/J2/J3/J4

VERTICAL APPLICATION ON DIAPHRAGM WALLS

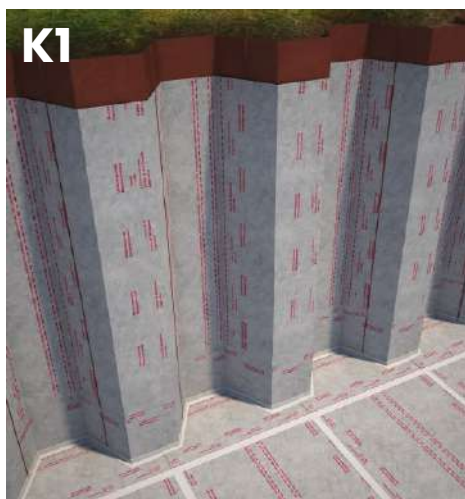
1. Soil
2. Diaphragm wall
3. Lean concrete
4. Suitable smoothing or non-degradable rigid panel
5. AMPHIBIA 3000 GRIP
6. AMPHIBIA SAFETY TAPE o BI MASTIC
7. Connectors sealed with AKTI-SEAL 201
8. RC raft foundation suitable to withstand hydraulic pressures and exempt from defects
9. WT CONSTRUCTION
10. BI MASTIC
11. RC wall suitable to withstand hydraulic pressures and exempt from defects

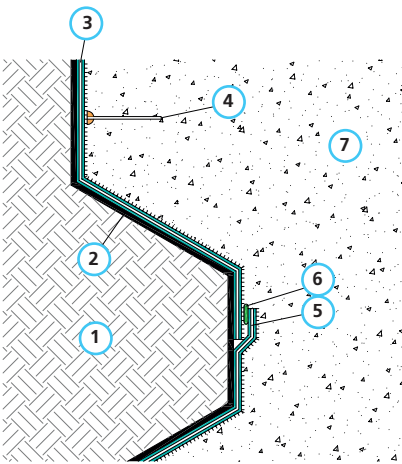
[EN_UT SD 024]



› Application of AMPHIBIA SYSTEM on regularized diaphragm walls

K VERTICAL APPLICATION ON METAL SHEET PILING

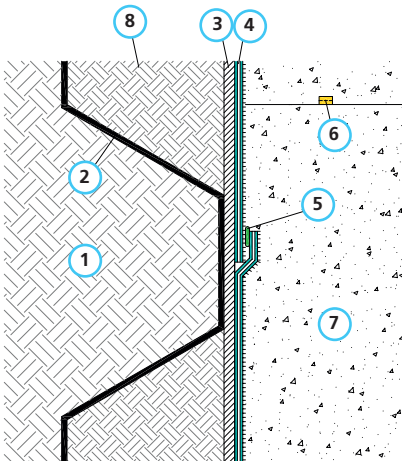




K1/K2/K3

DISPOSABLE METAL SHEET PILES

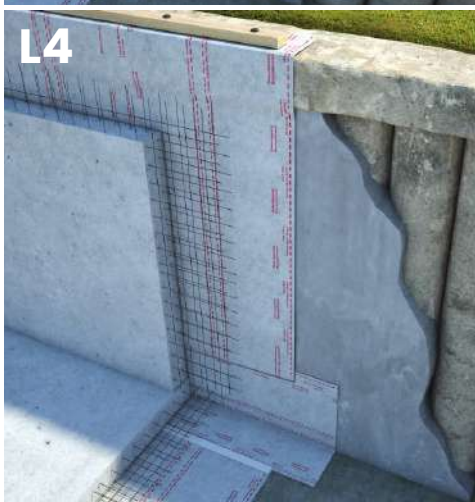
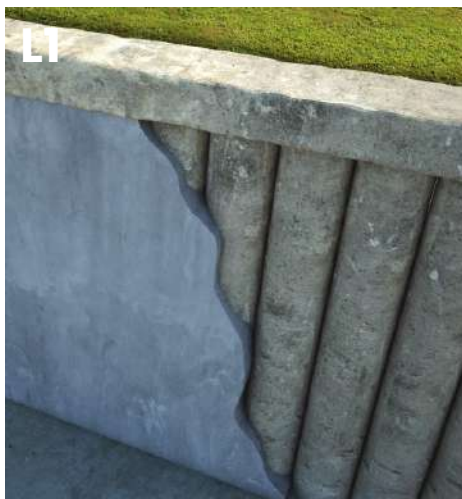
1. Soil
 2. Metal sheet piles
 3. AMPHIBIA 3000 GRIP
 4. Connectors sealed with AKTI-SEAL 201
 5. Overlap sealed with nail gun
 6. BI MASTIC
 7. RC structure suitable to withstand hydraulic pressures and exempt from defects
- [EN_UT SD 034]



RECOVERABLE METAL SHEET PILES

1. Soil
 2. Recoverable metal sheet piles
 3. Non-degradable rigid panel
 4. AMPHIBIA 3000 GRIP
 5. Overlap fixed with BI MASTIC
 6. WT CONSTRUCTION
 7. RC structure suitable to withstand hydraulic pressures and exempt from defects
 8. Well compacted soil without voids
- [EN_UT SD 034 A]

L VERTICAL APPLICATION ON PILE WALLS



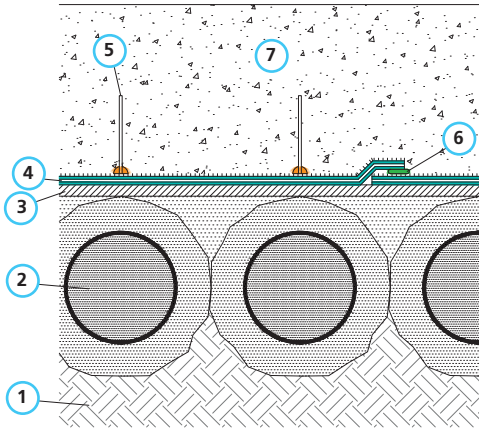


L1/L2/L3/L4

MICROPILES

1. Soil
2. Micropiles
3. Smoothing or non-degradable rigid panel
4. AMPHIBIA 3000 GRIP
5. Connectors sealed with AKTI-SEAL 201
6. BI MASTIC
7. RC structure suitable to withstand hydraulic pressures and exempt from defects

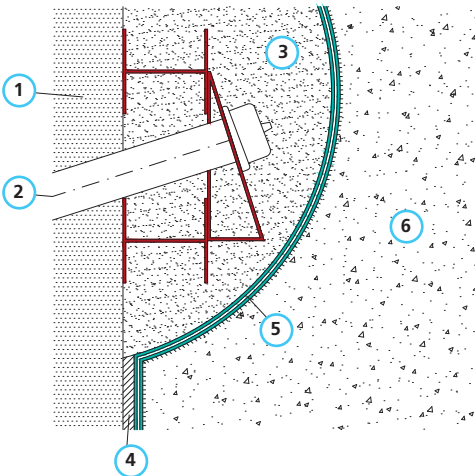
[EN_UT SD 032 - AMP]



ANCHORED PILING

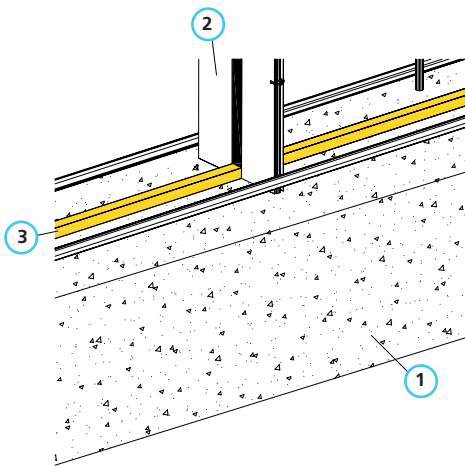
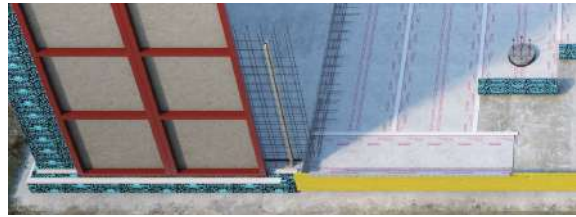
1. Piling
2. Tieback anchor
3. Smoothing
4. Smoothing or non-degradable rigid panel
5. AMPHIBIA 3000 GRIP
6. RC structure suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SD 029 - AMP]



M1 JOINTS IN RETAINING WALLS CONSTRUCTION JOINTS AND STRUCTURAL CRACK INDUCER





M1.2

WT BREAK

1. RC structure suitable to withstand hydraulic pressures and exempt from defects

2. WT BREAK

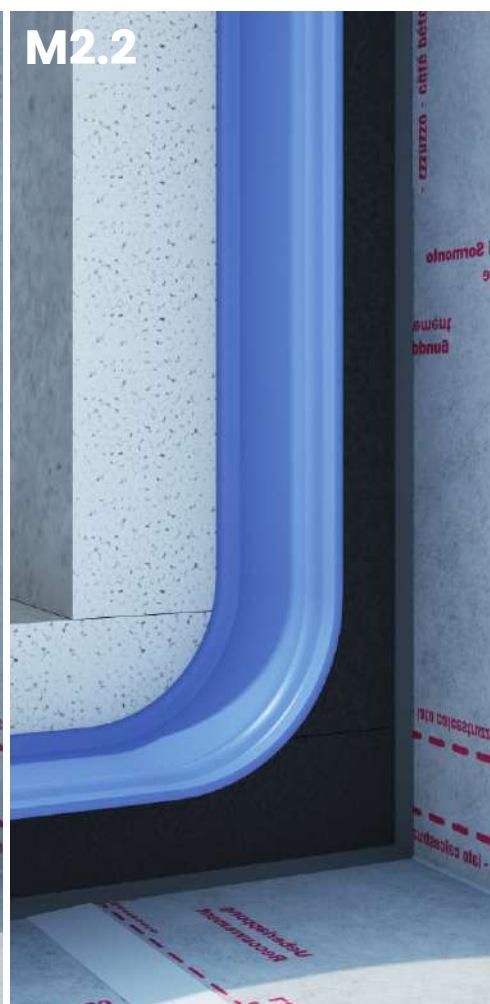
3. WT CONSTRUCTION

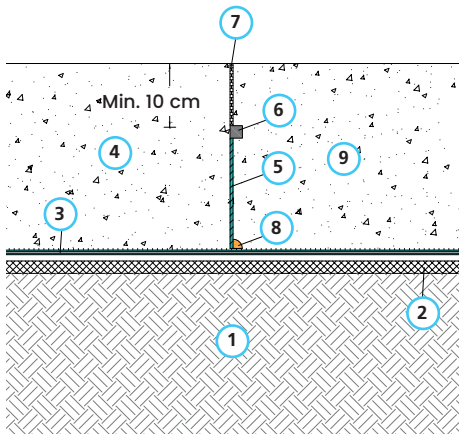
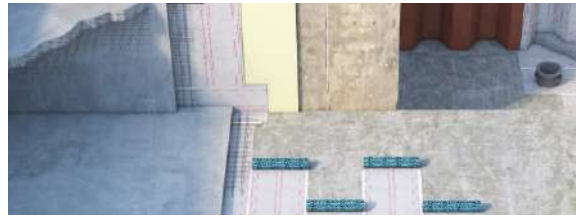
[EN_UT SS 002]



› Application of self-sealing structural crack inducer WT BREAK

M2 JOINTS IN RETAINING WALLS EXPANSION JOINTS



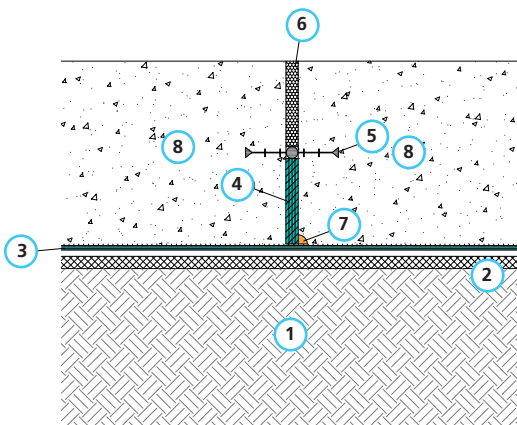


HORIZONTAL SECTION - VIEW FROM ABOVE

M2.1

RC WALLS, VERTICAL DILATATION JOINT

1. Well compacted soil without voids
 2. Rigid insulation panel or non-woven textile (min. 250 g/m²)
 3. AMPHIBIA 3000 GRIP
 4. First part of RC wall suitable to withstand hydraulic pressures and exempt from defects
 5. WT PANEL
 6. WT EXPANSION
 7. Separating element
 8. AKTI-SEAL 201
 9. Second part of RC wall suitable to withstand hydraulic pressures and exempt from defects
- [EN_UT SS 091 A - AMP - WTP - WTE]



HORIZONTAL SECTION - VIEW FROM ABOVE

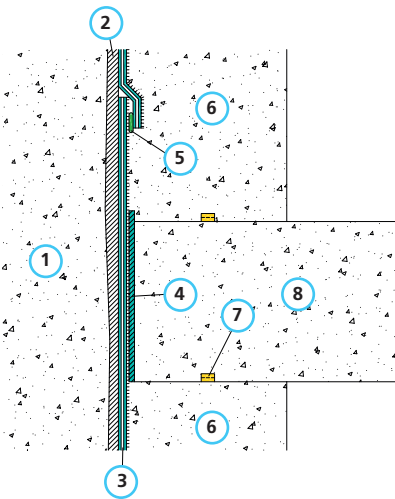
M2.2

VERTICAL EXPANSION JOINT WITH PVC WATERSTOP

1. Well compacted soil without voids
 2. Rigid insulation panel or non-woven textile (min 250 g/m²)
 3. AMPHIBIA 3000 GRIP
 4. WT PANEL (multiples)
 5. PVC waterstop
 6. Separating element
 7. AKTI-SEAL 201
 8. RC structure suitable to withstand hydraulic pressures and exempt from defects
- [EN_UT SS 091 B - AMP - WTP]

N SLAB SEALING IN BLINDSIDE INSTALLATIONS





N1/N2

INTERMEDIATE SLAB AGAINST DIAPHRAGM WALL

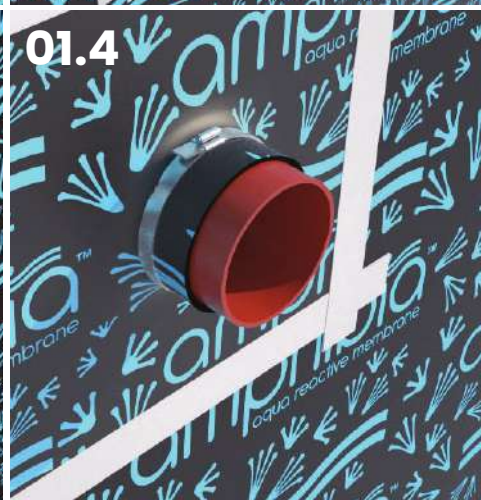
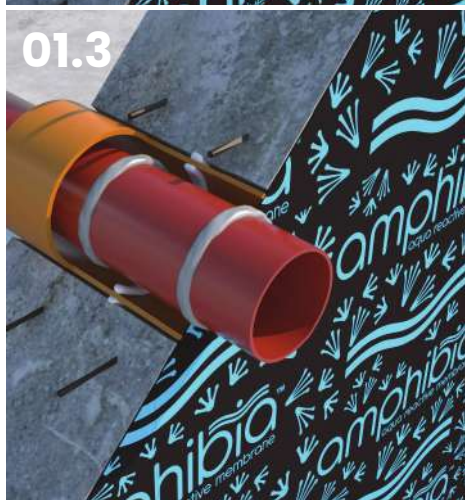
1. Diaphragm walls
 2. Smoothing or non-degradable rigid panel
 3. AMPHIBIA 3000 GRIP
 4. WT PANEL or double WT PANEL glued/fixed (on Amphibia) and with their adjacent edges sealed with BI MASTIC/AKTI-SEAL 201
 5. BI MASTIC
 6. RC wall suitable to withstand hydraulic pressures and exempt from defects
 7. WT CONSTRUCTION
 8. Intermediate slab
- [EN_UT SD 010 A]

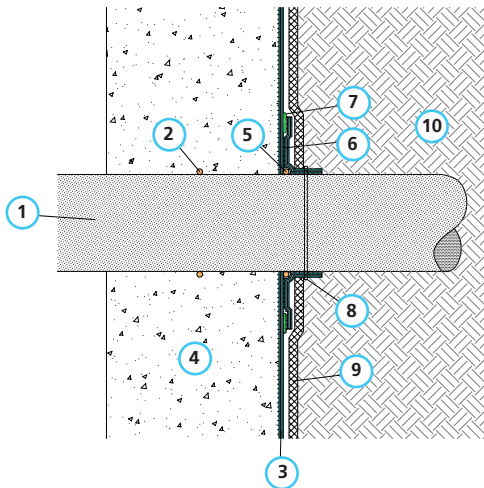


› Application of hydro-expanding rubber WT PANEL for concrete slab sealing

01 SEALING OF PENETRATIONS

open basement excavation



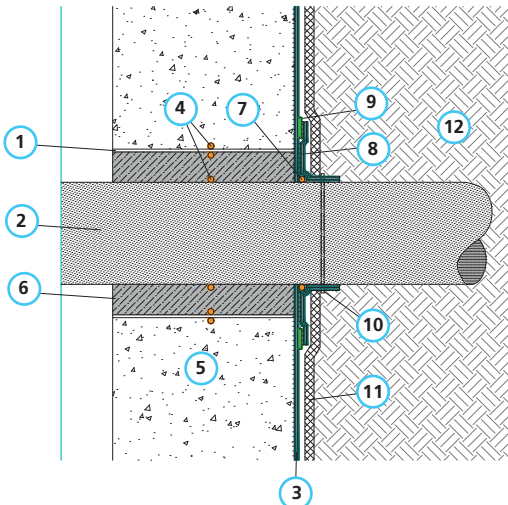


01.1/01.2

SEALING OF PENETRATIONS

1. Penetration (pre-applied installation)
2. AKTI-SEAL 201 already crystallized before pouring concrete/or WT STRIP
3. AMPHIBIA 3000 GRIP
4. RC structure suitable to withstand hydraulic pressures and exempt from defects
5. AKTI-SEAL 201 after casting concrete
6. AMPHIBIA 3000 patch all around the penetration
7. AMPHIBIA SAFETY TAPE and/or BI MASTIC
8. Hose clamp
9. Rigid insulation panels or non-woven textile (min. 250 g/m²)
10. Well compacted soil without voids

[EN_UT SS 76 – AMP – AKT]



01.3/01.4

SEALING PENETRATIONS WITH PIPE SLEEVE

1. Pipe sleeve installed before pouring concrete
2. Penetration
3. AMPHIBIA 3000 GRIP
4. AKTI-SEAL 201 already crystallized before pouring concrete/or WT STRIP
5. RC structure suitable to withstand hydraulic pressures and exempt from defects
6. Filling with BI MORTAR LEVELLING SEAL
7. AKTI-VO 201 post-application
8. AMPHIBIA 3000 patch
9. AMPHIBIA SAFETY TAPE and/or BI MASTIC
10. Hose clamp
11. Rigid non-degradable insulation panel or non-woven textile (min 250 g/m²)
12. Well compacted soil without voids

[EN_UT SS 105]

02 SEALING OF PENETRATIONS

Blindside



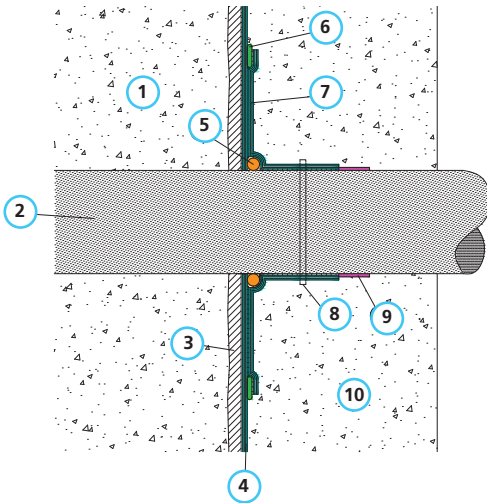


02.1/02.2

EXISTING STRUCTURES SEALING OF PENETRATIONS

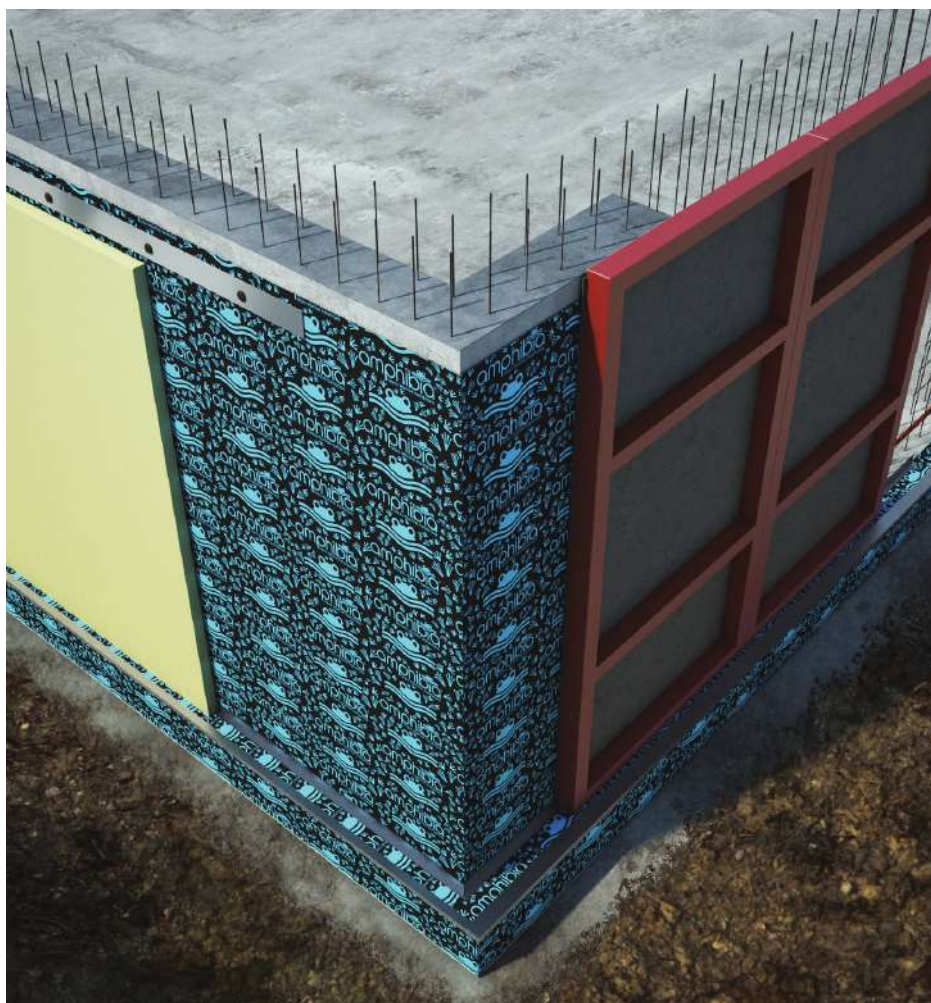
1. Slurry wall/Existing structure
2. Penetration (pre-applied installation)
3. Smoothing or rigid non-degradable panels
4. AMPHIBIA 3000 GRIP
5. AKTI-SEAL 201
6. BI MASTIC
7. AMPHIBIA 3000 patch installed all around the penetration
8. Hose clamp
9. WT STRIP glued with ULTRATAACK/BI MASTIC
10. RC structure suitable to withstand hydraulic pressures and exempt from defects

[EN_UT SD 040]



› Sealing penetration with hydro-expanding mastic and AMPHIBIA SYSTEM

P CONNECTIONS AND sealing details

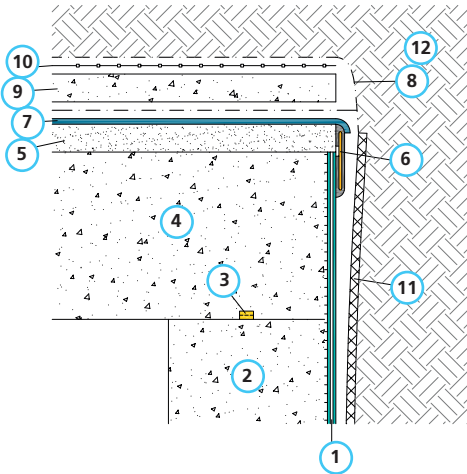




CONNECTION BETWEEN AMPHIBIA AND AQUASCUD

1. AMPHIBIA 3000 GRIP
2. RC wall suitable to withstand hydraulic pressures and exempt from defects
3. WT CONSTRUCTION
4. RC roof slab
5. Concrete sloped screed
6. BI FLEX SYSTEM
7. AQUASCUD SYSTEM
8. Separating protective element
9. Concrete protective screed
10. Suitable drainage system
11. Rigid non-degradable insulation panels or non-woven textile (min 250 g/m²)
12. Well compacted soil without voids

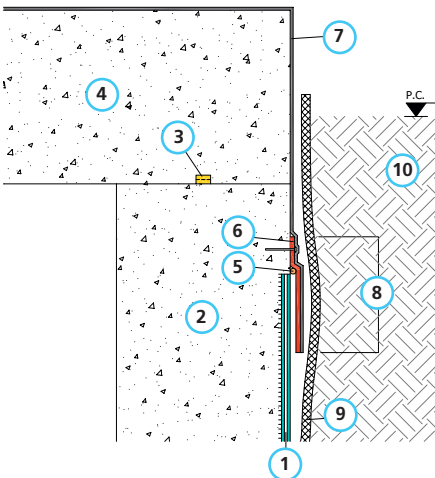
[EN_UT FT 057]

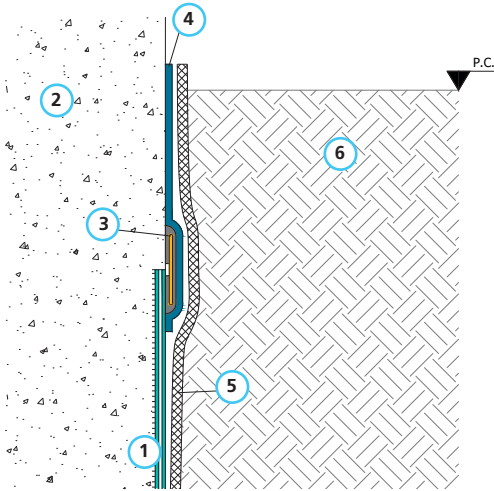


CONNECTION BETWEEN AMPHIBIA 3000 GRIP AND BITUMINOUS WATERPROOFING MEMBRANES

1. AMPHIBIA 3000 GRIP
2. RC wall suitable to withstand hydraulic pressures and exempt from defects
3. WT CONSTRUCTION
4. RC roof slab
5. AKTI-SEAL 201
6. Zinc-coated metal flashing (min. 20 cm)
7. Bituminous waterproofing membrane
8. Part of bituminous waterproofing sheet membrane to be torched onto the metal flashing
9. Rigid non-degradable insulation panels or non-woven textile (min 250 g/m²)
10. Well compacted soil without voids

[EN_UT SS 109]

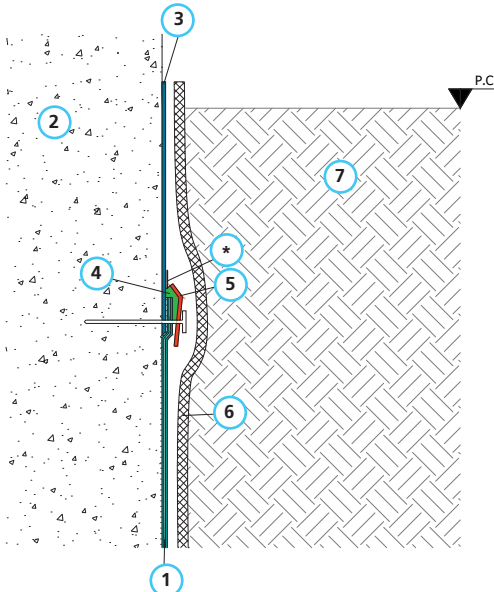




CONNECTION BETWEEN AMPHIBIA AND PLASTIVO

1. AMPHIBIA 3000 GRIP
2. RC wall suitable to withstand hydraulic pressures and exempt from defects
3. BI FLEX SYSTEM
4. PLASTIVO
5. Rigid insulation panels or non-woven textile (min 250 g/m²)
6. Well compacted soil without voids

[EN_UT SS 108 B]



CONNECTION BETWEEN AMPHIBIA AND PLASTIVO WITH MECHANICAL FIXING

1. AMPHIBIA 3000 GRIP
 2. RC wall suitable to withstand hydraulic pressures and exempt from defects
 3. PLASTIVO
 4. BI MASTIC or AKTI-SEAL 201
 5. AMPHIBIA PRESSURE LINE (*)
 6. Rigid insulation panels or non-woven textile (min 250 g/m²)
 7. Well compacted soil without voids
- (*) PLASTIVO protection from AMPHIBIA PRESSURE LINE

[EN_UT SS 108 C]

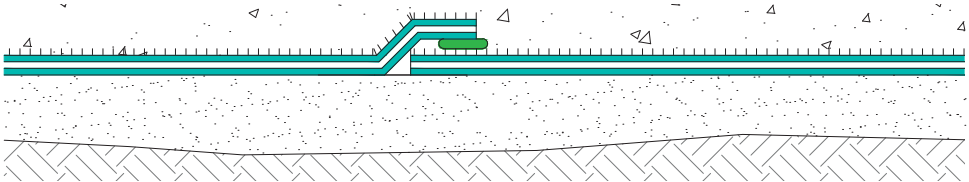
FOCUS

radon and methane gas



The presence of gas (methane and radon) in the soil can be a relevant problem for underground structures. In particular, **radon is a radioactive gas naturally occurring in the ground**. There is a higher concentration of radon if the house is above or near granitic or volcanic land, especially if its foundations are resting directly on the ground. What can be done about it?

Once ascertained that the radon level in the house is higher than average – radon is also present in upper floors, but it decreases with height – you need to reduce its hazard. Soil depressurisation, forced ventilation in crawl spaces, foundation waterproofing, crack sealing as well as ventilation of rooms can be carried out to face the issue.



RADON & UNDERGROUND STRUCTURES: DESIGN NOTES

Radon is an inert gas, which means that it does not chemically react with the environment around it. Once generated, it can migrate through the soil and spread from construction materials. **The concentration of radon in a house depends on many factors:** the presence of uranium and radium in the soil and in construction materials, soil permeability, construction techniques and living habits. The pressure inside buildings is generally lower than outside.

The lower pressure influences the normal convective motion of the soil, so that radon is 'drawn' inside the buildings themselves, penetrating through different areas: cracks in the foundation bed or vertical walls, construction joints in the horizontal and vertical connection points, bed interruptions or drains. In this sense, both in new buildings and in underground structures to be refurbished, at the design stage it **is best to provide for vents, construction joints, cracks and drains**. In this way the Amphibia system can be considered a protection against gas ingress in the structures reducing risks for health.

CASE HISTORY AMPHIBIA



Year: 2025
Location: Fort Lauderdale (Florida - USA)



Year: 2024
Location: Alba (Italy)



Year: 2024
Location: Madonna di Campiglio (Italy)



Year: 2024
Location: Hong Kong (China)



Year: 2024
Location: Vicenza (Italy)



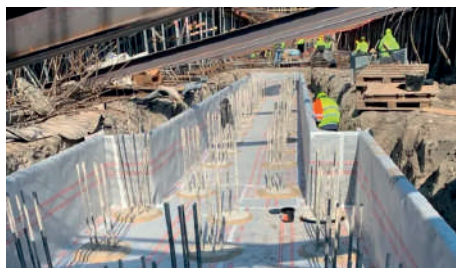
Year: 2023
Location: Toronto (Canada)



Discover all Amphibia case histories



Year: 2022
Location: **Turin (Italy)**



Year: 2021
Location: **Riga (Latvia)**



Year: 2021
Location: **Šentjernej (Slovenia)**



Year: 2020
Location: **Sofia (Bulgaria)**



Year: 2020
Location: **Gorizia (Italy)**



Year: 2020
Location: **Belgrade (Serbia)**

CASE HISTORY

AMPHIBIA



Year: 2019
Location: Milan (Italy)



Year: 2019
Location: Ankara (Turkey)



Year: 2019
Location: Verona (Italy)



Year: 2019
Location: Rome (Italy)



Year: 2018
Location: Zurich (Switzerland)



Year: 2018
Location: Verona (Italy)

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➤ **Blog**



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➤ **Network of installers**



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➤ **References:**
www.volteco.com



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RA - RB D 05 00 - 10/2026 EN



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Tel. +39 04229653 - volteco@volteco.it
www.volteco.com



COMPANY CERTIFIED MANAGEMENT SYSTEM QUALITY
ISO 9001 - ENVIRONMENT ISO 14001 - SAFETY ISO 45001