

TECHNICAL DOCUMENTATION



PRECAST CONCRETE SYSTEMS | **TERWA PRECAST CONNECTOR**

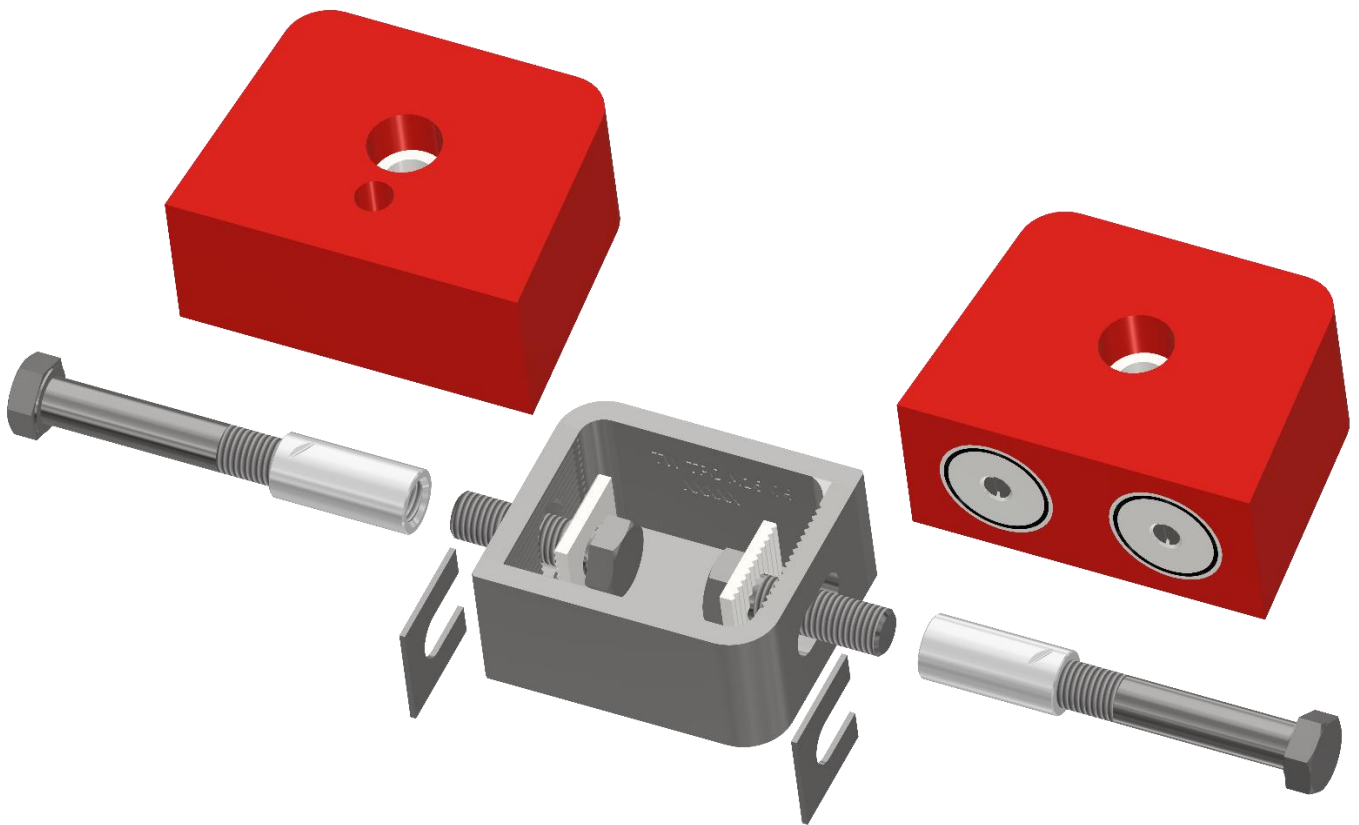


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TERWA PRECAST CONNECTOR – GENERAL INFORMATION

TERWA PRECAST CONNECTOR “TPC” is a connection system for precast concrete elements, e.g.: walls and floors, etc.

Advantages:

1. Quick and Efficient

- Enables fast assembly of precast elements on-site, significantly reducing installation time.
- Eliminates the need for complex welding processes or additional mechanical fasteners.

2. Design Flexibility

- Can be used in various connection configurations: corners, linear joints, or angled connections.
- Suitable for a wide range of applications, such as walls, floors, and other precast elements.

3. High Safety and Performance

- Manufactured from structural steel, hot dipped galvanised, ensuring durability and resistance in demanding environments.
- Provides excellent performance in transferring structural forces, maintaining connection integrity under shear and tensile loads.

4. Standardisation and Quality Assurance

- TPC connectors are designed and manufactured according to international standards (e.g., Eurocode), ensuring high-quality and reliable performance. See European Technical Assessment – ETA-24-0583.
- Standardised product design facilitates easy installation and reduces the risk of on-site errors.

5. Cost Reduction

- Minimises execution time and labour requirements on-site, translating into significant cost savings.
- Allows for the use of more complex precast elements without requiring expensive assembly methods.

6. Ease of Use

- Comes with clear installation instructions and is compatible with standard tools, making the installation process simple and intuitive.
- The modular design facilitates integration into existing prefabrication processes.

7. Durability and Low Maintenance

- Made of materials resistant to corrosion and harsh environmental conditions, reducing the need for future repairs.
- The long lifespan of the connector contributes to project sustainability.

8. Integration into Industrial Processes

- TPC can be easily incorporated into precast production, optimising manufacturing processes due to its ergonomic design.

TERWA PRECAST CONNECTOR “TPC” is made of steel S355 hot dip galvanised.

The product is available for different load groups in combination with different wall dimensions and forces applied to the structure.

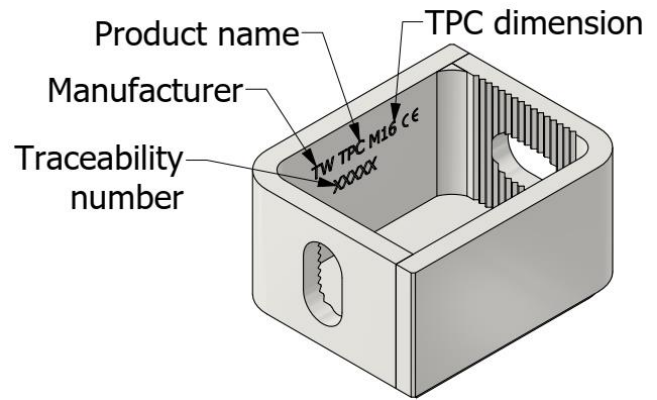
Quality

Terwa continuously monitors the TPC production process to ensure strength, dimensional and material quality, and performs all the required inspections for a superior quality system. All the products are tracked from material acquisition to the final, ready-to-use product.



Marking and traceability

All systems have all necessary data for traceability, dimensions, and product name.



Sustainability

TPC connectors align with green building certifications by enabling efficient construction, durable design, and minimal environmental impact.

The modular design of TPC facilitates optimised use of materials, reducing waste during both production and installation.

Manufactured from corrosion-resistant, high-quality materials, TPC connectors are built to last, reducing the need for replacements and repairs.

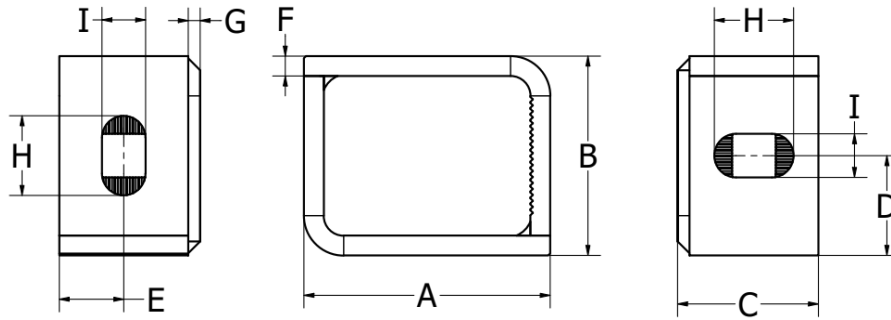
The fast and efficient assembly process minimises on-site energy consumption, noise, and emissions from construction equipment.

By streamlining installation, TPC reduces the environmental footprint of the construction phase.

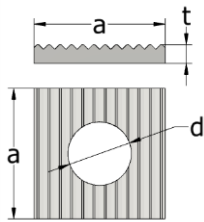
At the end of the structure's lifecycle, TPC connectors and associated materials can be dismantled and recycled, supporting principles of the circular economy.



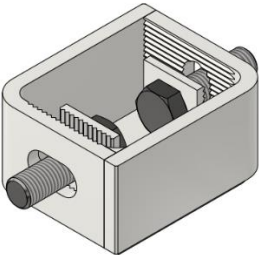
European Technical Assessment
 – ETA-24-0583

TPC GEOMETRY


Dimensions										
TPC	Article no.	A	B	C	D	E	F	G	H	I
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
TPC M16	65749	102	84	55	42	25	8	5	32	18
TPC M20	65750	124	100	71	50	32.5	10	6	40	22



Serrated washer	Article no.	Dimensions		
		a [mm]	t [mm]	d [mm]
Serrated washer Ø17	67155	35	5	17
Serrated washer Ø21	67158	45	5	21

TERWA TPC - KIT					
	The TPC KIT consists of a Precast Connector TPC, two corresponding serrated washers and two bolts.	Designation	Article no.	Components	Article no.
		TPC-M16 KIT	68214	TPC-M16	65749
				Serrated washer Ø17	67155
				Bolt ISO 4017 M16-L*_8.8	
		TPC-M20 KIT	68215	TPC-M20	65750
				Serrated washer Ø21	67158
Bolt ISO 4017 M20-L*_8.8					
<ul style="list-style-type: none"> - The length "L" of the bolt depends on the minimum thread engagement of 1.5 times the bolt diameter, gap between precast elements, TPC dimensions. (see pages below) 					

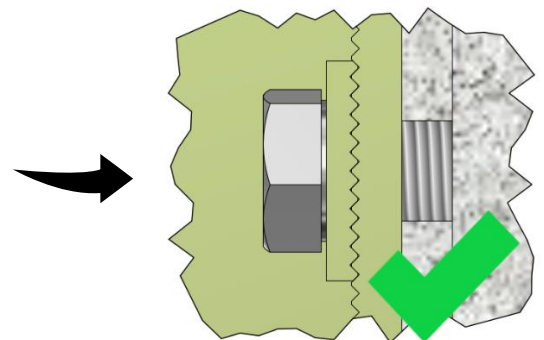
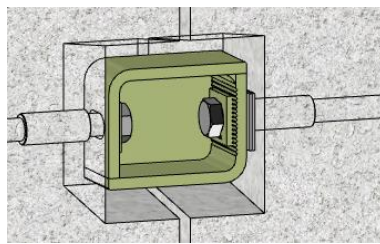
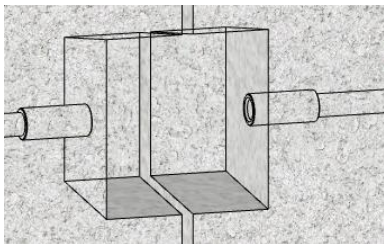
Design calculation according EN 1992-4 (Eurocode 2)

TPC MATERIAL SPECIFICATIONS

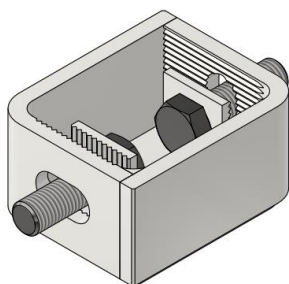
Specification	Dry conditions	Internal conditions with usual humidity
	Material types and surface protection required for use in structures subject to dry internal conditions except for usual humidity	Material types and surface protection required for use in structures subject to internal conditions with usual humidity
TPC Precast Connector M16	Steel S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm	Steel S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm
Serrated washer Ø17	Steel S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm	S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm
Bolt ISO 4017 M16-L*_8.8	Steel with mechanical properties class 8.8 or 10.9 EN ISO 898-1 Electrolytical galvanised ≥ 5 µm	Steel with mechanical properties class 8.8 or 10.9 EN ISO 898-1 Hot-dip galvanised ≥ 50 µm
* The bolt length depends on the minimum thread engagement of 1.5 times the bolt diameter, gap between precast elements, TPC dimensions		
TPC Precast Connector M20	S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm	S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm
Serrated washer Ø21	S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm	S355J2 EN 10025 Hot-dip galvanised according to EN ISO 1461 ≥ 50 µm
Bolt ISO 4017 M20-L*_8.8	Steel with mechanical properties class 8.8 or 10.9 EN ISO 898-1 Electrolytical galvanised ≥ 5 µm	Steel with mechanical properties class 8.8 or 10.9 EN ISO 898-1 Hot-dip galvanised ≥ 50 µm
* The bolt length depends on the minimum thread engagement of 1.5 times the bolt diameter, gap between precast elements, TPC dimensions		

The TPC is positioned in a cavity formed in the concrete element around the anchor head. This recess is subsequently filled with cementitious filler concrete after mounting the TPC. For installing the fixing, two pairs of bolts ISO 4017 in class 8.8 or 10.9 and two serrated washers are required.

Ensure that the correct length bolt is used (see page 7) and the serrated washer is mounted correctly.

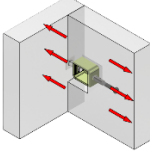
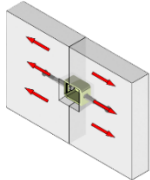
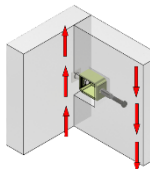
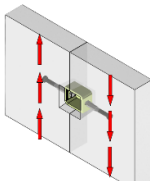
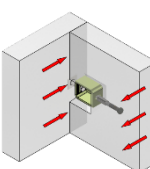
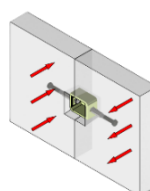


During the TPC installation, the concrete element must be aligned, and the bolts must be tightened parallel and crosswise until the desired joint width has been reached.



TPC with bolts gr. 8.8 or 10.9 and serrated washers mounted
The minimum length of the bolts is determined according to the distance between the panels and the minimum thread engagement.

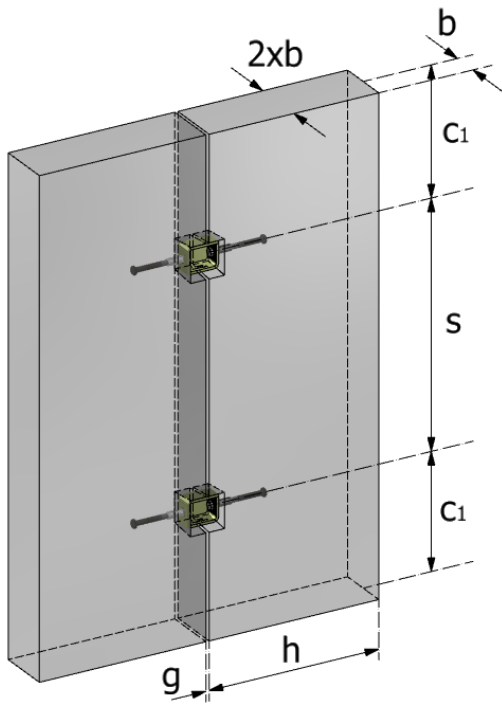
Design resistance in different applications of TPC precast coupler with Terwa Fixing bolt anchor TBA and TBA-P

Type of precast connection	Terwa Fixing bolt anchor M16/M20 (gr.8.8)			
	Type $d_{nom} \times L$ [mm]	Design resistance N_{Rd} [kN]		
	M16/M20	C30/37	C40/50	C50/60
	TBA M16x75 EV/TV	16.17	18.67	20.88
	TBA-P M16x75 EV/TV	14.99	17.31	19.35
	TBA M20x90 EV/TV	22.20	25.63	28.65
	TBA-P M20x90 EV/TV	20.88	24.11	26.96
	TBA M16x140-EV/TV	13.78	15.91	17.79
	TBA M16x220-EV/TV	16.82	19.42	21.71
	TBA M20x140-EV/TV	19.52	22.54	25.20
	TBA M20x150-EV/TV	20.09	23.20	25.94
	TBA M20x180-EV/TV	21.72	25.08	28.04
	TBA M20x270-EV/TV	26.02	30.04	33.59
Design resistances shear stress only, parallel to the joint	Type $d_{nom} \times L$ [mm]	Design resistance $V_{Rd,L}$ [kN]		
	M16/M20	C30/37	C40/50	M16/M20
	TBA M16x75 EV/TV	12.66	14.62	16.35
	TBA-P M16x75 EV/TV	12.41	14.33	16.02
	TBA M20x90 EV/TV	20.19	23.32	26.07
	TBA-P M20x90 EV/TV	19.88	22.95	25.66
	TBA M16x140-EV/TV	15.50	17.89	20.01
	TBA M16x220-EV/TV	18.45	21.30	23.82
	TBA M20x140-EV/TV	23.83	27.51	30.76
	TBA M20x150-EV/TV	24.38	28.15	31.47
	TBA M20x180-EV/TV	25.97	29.98	33.52
	TBA M20x270-EV/TV	30.33	35.02	39.15
Design resistances shear stress only, perpendicular to the joint	Type $d_{nom} \times L$ [mm]	Design resistance $V_{Rd,T}$ [kN]		
	M16/M20	C30/37	C40/50	C50/60
	TBA M16x75 EV/TV	6.33	7.31	8.17
	TBA-P M16x75 EV/TV	6.20	7.16	8.01
	TBA M20x90 EV/TV	10.10	11.66	13.03
	TBA-P M20x90 EV/TV	9.94	11.48	12.83
	TBA M16x140-EV/TV	7.75	8.95	10.00
	TBA M16x220-EV/TV	9.22	10.65	11.91
	TBA M20x140-EV/TV	11.91	13.76	15.38
	TBA M20x150-EV/TV	12.19	14.08	15.74
	TBA M20x180-EV/TV	12.98	14.99	16.76
	TBA M20x270-EV/TV	15.16	17.51	19.58

- (1) The resistances provided for tensile or shear stress are design resistance values according to EN 1992-4-1/-2. These apply to a fixing, bolt anchor, installed at the component edge with tensile splitting reinforcement and the following boundary conditions: minimum component thickness h_{min} (with $c_{nom} = 25$ mm), edge distance $c_1 = 50$ mm (M16) and $c_1 = 70$ mm (M20), and joint width $g = 5$ mm (shear load with ever arm $e = 20$ mm). These values apply only to uncracked concrete and avoid dense reinforcement to mitigate the risk of concrete spalling.
- (2) Further requirements may arise from the verification or the fixing of the bolt anchor.

INSTALLATION OF THE FIXING ANCHORS

The limit conditions and the instructions, which must be followed, for the placement of the fixing anchors can be found in their specific technical documentation.



Fixing anchor installations		TPC 16	TPC 20
Element thickness	2xb	≥ 100 mm	≥ 140 mm
Gap between precast elements	g	≤ 20 mm	≤ 20 mm
Edge distance at right angle to connection	b	50 mm	70 mm
Edge distance parallel to connection	c₁	≥ 250 mm	
Axial spacing parallel to connection	s	≥ 450 mm	
Element height	h	≥ 170 mm	≥ 200 mm
Suitable bolts		M16	M20
TPC Recess former – article no.		66153	66154
Concrete strength class		C20/25 to C50/60	
Installation torque	T_{inst}	70 [Nm]	90[Nm]

Fixing anchors verification according to EN 1992-4 (Eurocode-2)

Verifications in accordance with EN 1992-4			
Tensile load		Shear load	
Failure type	Verification	Failure type	Verification
Steel failure	$N_{Ed} \leq N_{Rd,s} = \frac{N_{Rk,s}}{\gamma_{Ms}}$	Steel failure without lever arm	$V_{Ed} \leq V_{Rd,s} = \frac{V_{Rk,s}}{\gamma_{Ms}}$
Concrete cone failure	$N_{Ed} \leq N_{Rd,c} = \frac{N_{Rk,c}}{\gamma_{Mc}}$	Steel failure with lever arm	$V_{Ed} \leq V_{Rd,s,M} = \frac{V_{Rk,s,M}}{\gamma_{Ms}}$
Pull-out failure	$N_{Ed} \leq N_{Rd,p} = \frac{N_{Rk,p}}{\gamma_{Mp}}$	Concrete pry-out failure	$V_{Ed} \leq V_{Rd,cp} = \frac{V_{Rk,cp}}{\gamma_{Mc}}$
Splitting failure	$N_{Ed} \leq N_{Rd,sp} = \frac{N_{Rk,sp}}{\gamma_{Msp}}$	Concrete edge failure	$V_{Ed} \leq V_{Rd,c} = \frac{V_{Rk,c}}{\gamma_{Mc}}$
Blow-out failure *	$N_{Ed} \leq N_{Rd,cb} = \frac{N_{Rk,cb}}{\gamma_{Mc}}$	-	-

* Not required for fasteners with edge distance $c > 0.5 h_{ef}$

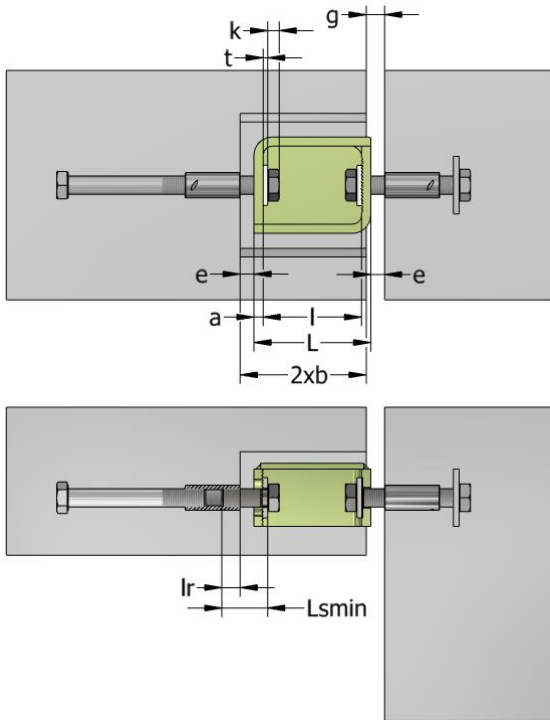
BOLT LENGTH

The bolt should be of sufficient length to ensure a minimum thread engagement of 1.5 times the bolt diameter.

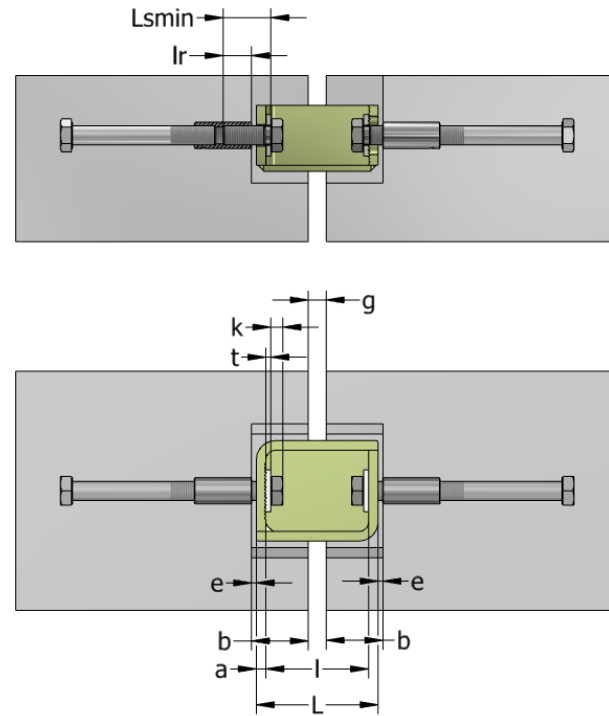
Thread	Required thread engagement. l_r mm
M16	24
M20	30

The bolt length depends on the fixing anchor used and its minimum thread engagement.

CORNER APPLICATION

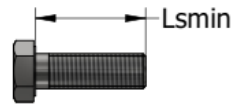


WALL - WALL APPLICATION



$$L_{smin} = l_r + e + a + t$$

$$e = (2 \times b + g - L) / 2$$

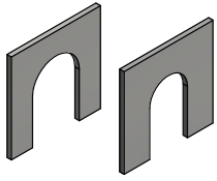


L_{smin} - Minimum bolt length
 g - Gap between the precast elements
 a and L - TPC dimensions
 t - Washer thickness
 b - Recess former width

TPC	L_{smin}	l_r	e	g	a	L	b	t
	mm	mm	mm	mm	mm	mm	mm	mm
TPC M16	55	24	16	20	8	102	57	4
	50	24	14	16				
	50	24	11	10				
	45	24	9	6				
	45	24	6	0				

TPC	L_{smin}	l_r	e	g	a	L	b	t
	mm	mm	mm	mm	mm	mm	mm	mm
TPC M20	65	30	20	20	10	124	72	4
	65	30	18	16				
	60	30	15	10				
	60	30	13	6				
	55	30	10	0				

The gap “*e*” between TPC and the anchor can be filled with square slotted washers made of hot-dip galvanised plates that are 2mm, 3mm or 5mm thick.



	Thickness		
	2 mm	3 mm	5 mm
Square slotted washer M16 - TV	67164	67165	67166
Square slotted washer M20 - TV	67168	67169	67170

The required amount of square slotted washer M16 depending on the distance between the precast elements (*g*) is indicated in the following table.

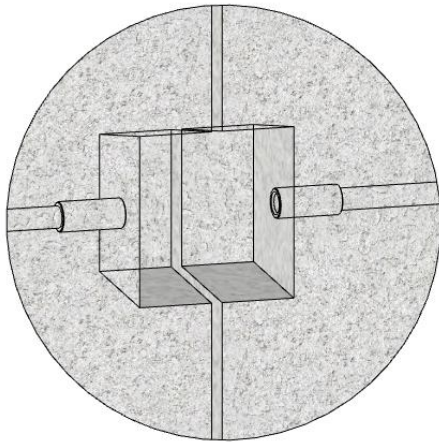
TPC	<i>L</i> mm	<i>g</i> mm	<i>e</i> mm	Square slotted washer M16 2 mm	Square slotted washer M16 3 mm	Square slotted washer M16 5 mm
				qty	qty	qty
TPC M16	102	20	16	1	-	6
		16	14	4	-	4
		10	11	-	4	2
		6	9	4	-	2
		0	6	-	4	-

The required amount of square slotted washer M20 depending on the distance between the precast elements (*g*) is indicated in the following table.

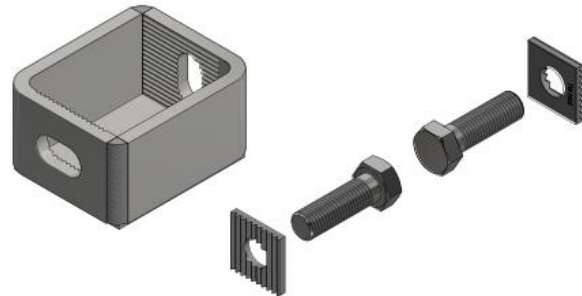
TPC	<i>L</i> mm	<i>g</i> mm	<i>e</i> mm	Square slotted washer M20 2 mm	Square slotted washer M20 3 mm	Square slotted washer M20 5 mm
				qty	qty	qty
TPC M20	124	20	20	-	-	8
		16	18	-	2	6
		10	15	-	-	6
		6	13	-	2	4
		0	10	-	-	4

TERWA PRECAST CONNECTOR INSTALLATION

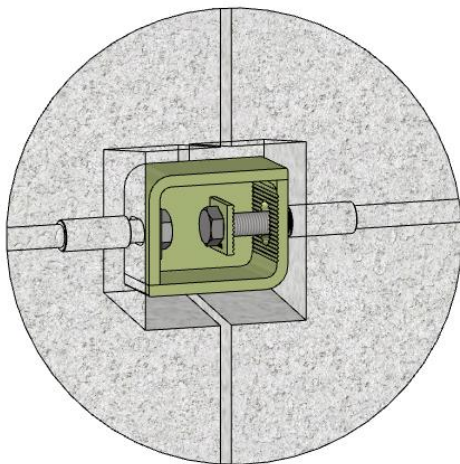
- 1.** On the construction site, the concrete elements are placed in the installation positions.



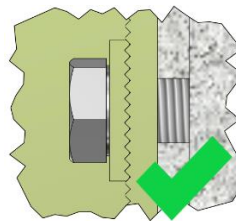
Terwa precast connector with two pair of bolts and serrated washers ready to be assembled.



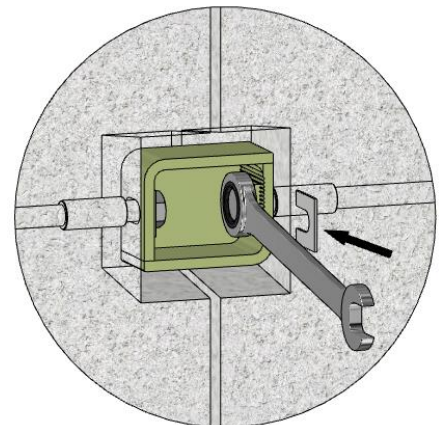
- 2.** The Terwa precast connector is inserted into the panel cavity. Bolts must be properly aligned and screwed by hand.



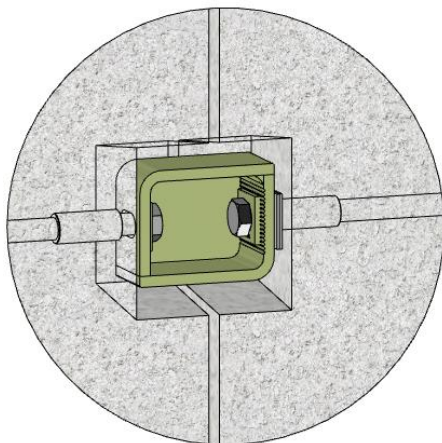
- 3.** The bolts must be tightened parallel and crosswise by using a ratchet spanner until the planned joint width has been reached. Fill the gap between TPC and the anchor with square slotted washers to ensure reliable load transfer.



Ensure that the correct length bolt is used (see page 7) and the serrated washer is mounted correctly.



- 4.** The joint cavity area can be filled with fine mortar or concrete caps to protect the connection against corrosion.


Important!

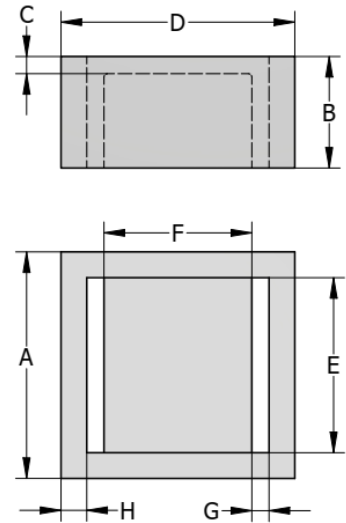
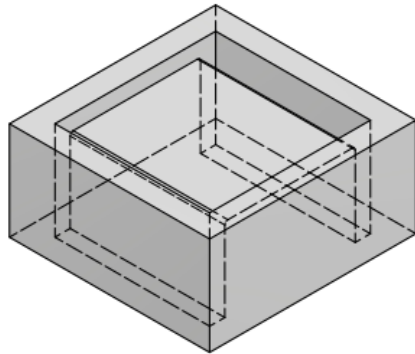
- The bolts must be tightened parallel and crosswise to avoid tilting.
- The bolt thread must not be damaged or deformed and without corrosion.
- Tightening torque must be according to fixing anchor material property.

Recommended torque spanner – see page 8

TPC	Tightening torque [Nm]
M16	70
M20	90

After TPC installation, the recess with all parts of precast connector must be filled using the proper cementitious filler concrete.

If the requirement for easy disassembly of the concrete elements is specified or if an aesthetic finish is needed, we recommend using a TPC recess filler.

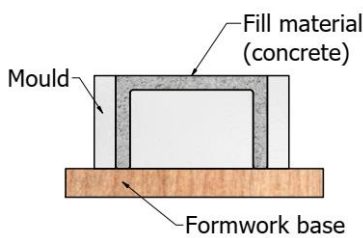


TPC recess fillers can be produced in the precast plant using concrete from the same pour as the concrete element. A polyurethane mould is available for creating these recess fillers.

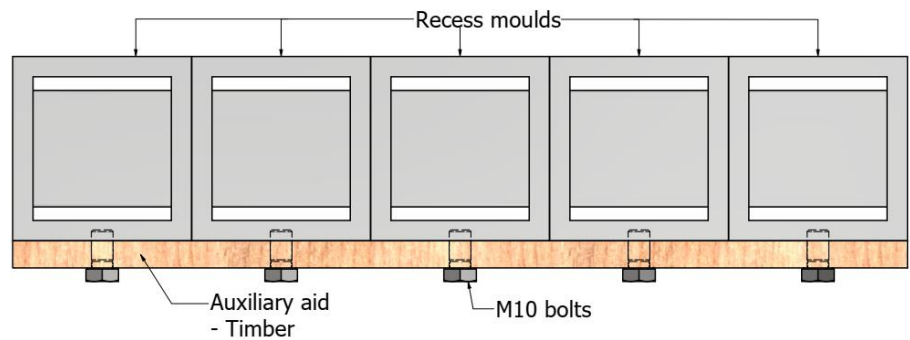
TPC recess filler mould	Article no.	Dimensions [mm]							
		A	B	C	D	E	F	G	H
M16	81576	132	65	10	136	102	86	10	15
M20	81577	154	80	10	154	124	104	10	15

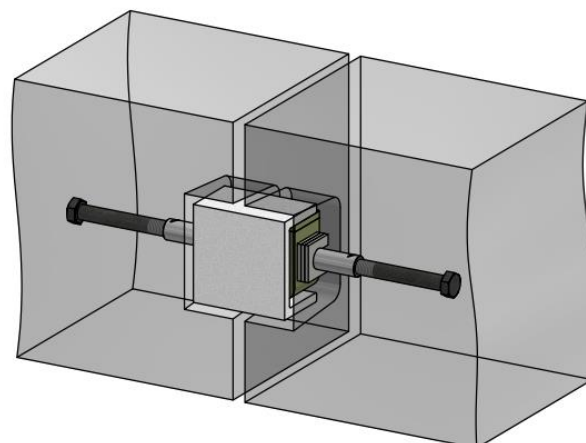
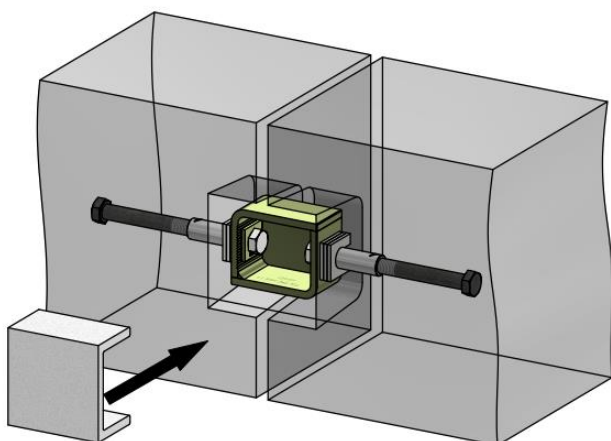
The moulds can be used individually, or multiple moulds can be fixed to an auxiliary timber plank using M10 bolts.

Individually reusable polyurethane mould

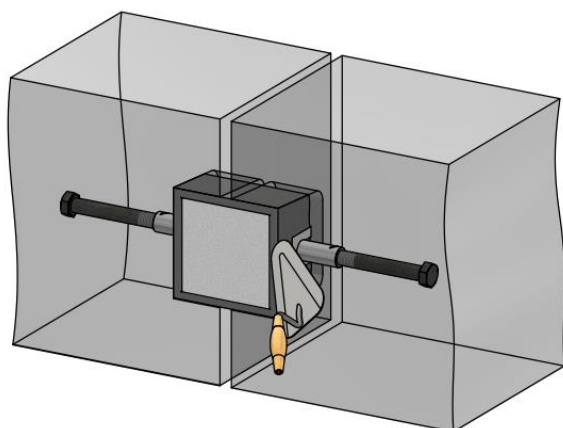


Multiple recess filler moulds

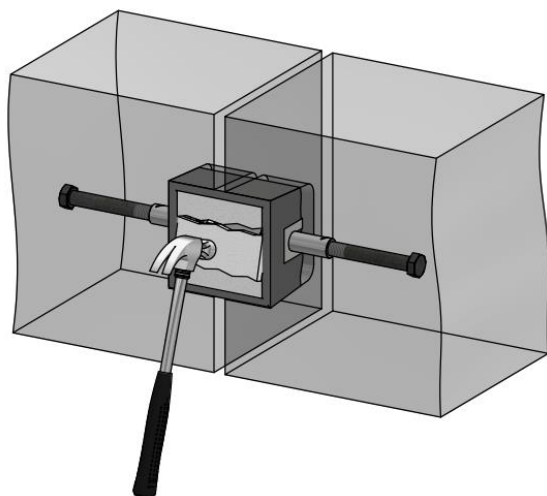


For non-permanent connections – Recess filler installing instructions

The recess filler is placed over the TPC

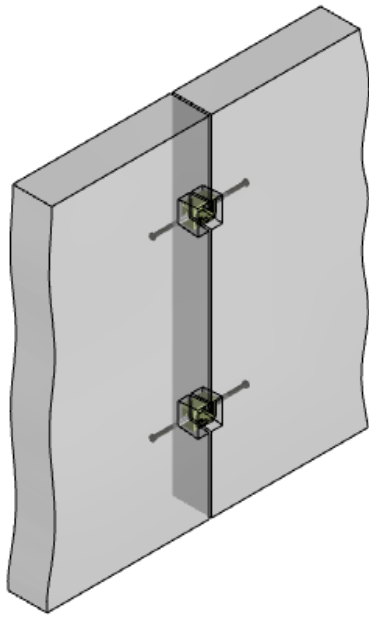


The grout mortar is applied to the front edges of the recess

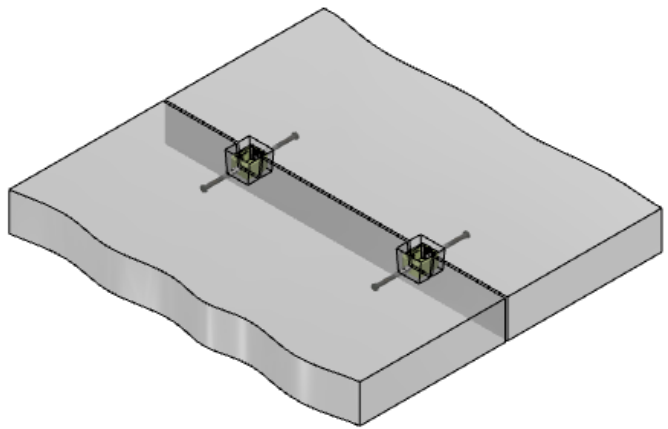


To gain access to the TPC bolts, the filler can be broken using a hammer.

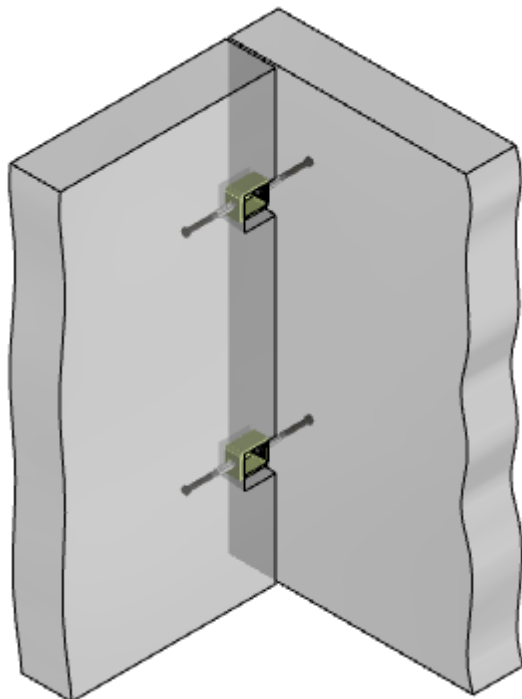
TERWA PRECAST CONNECTOR APPLICATION



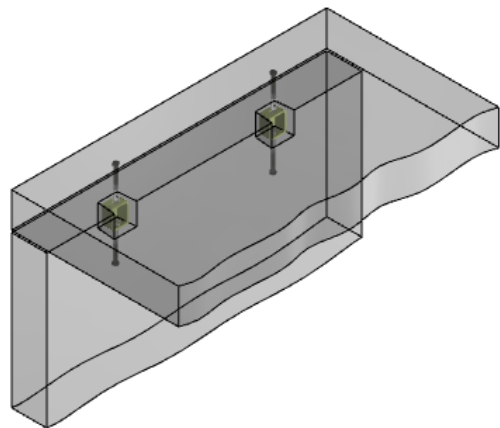
WALL – WALL



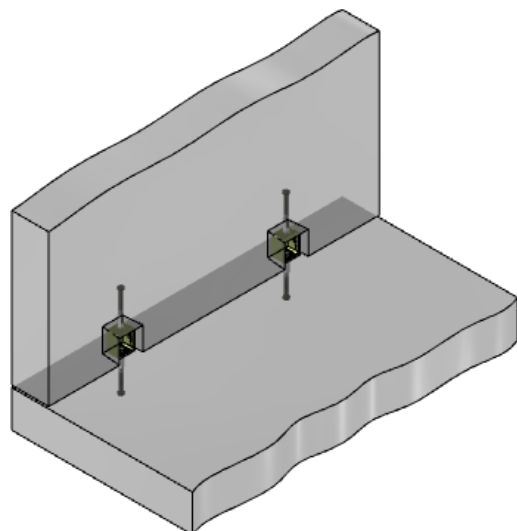
FLOOR SLAB – FLOOR SLAB
CEILING PANEL – CEILING PANEL



CORNER WALLS CONNECTIONS

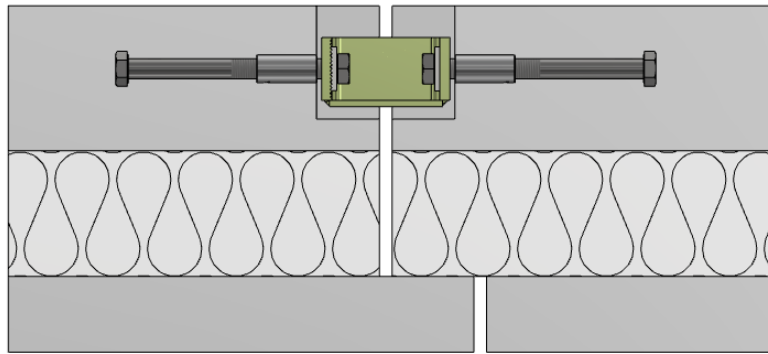


WALL – CEILING PANEL

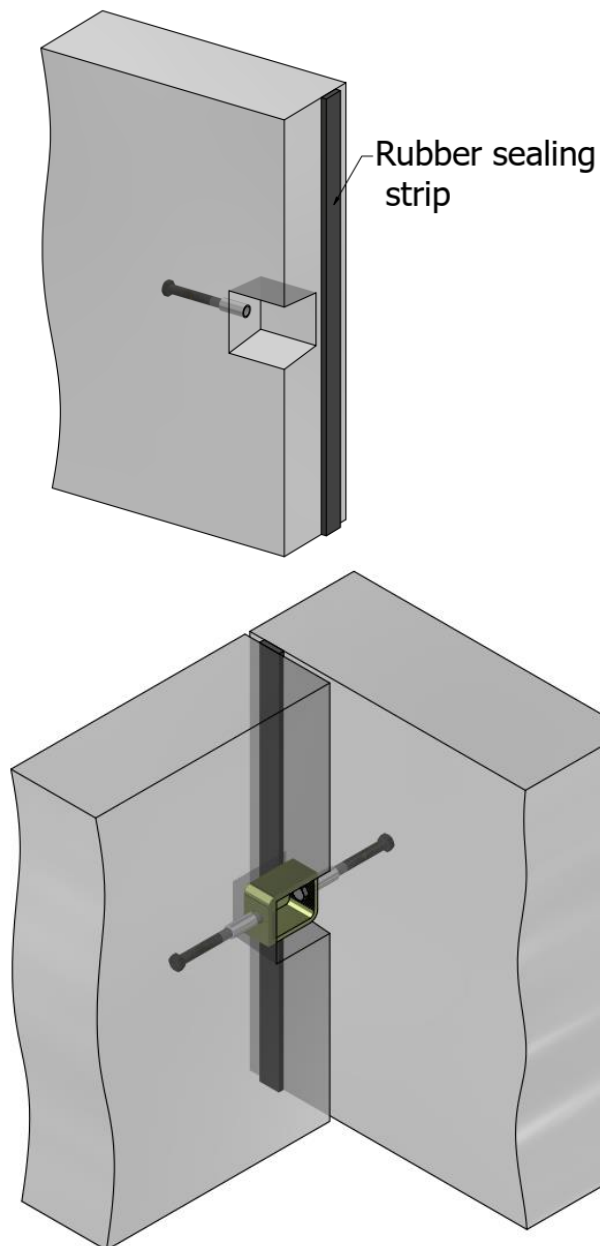


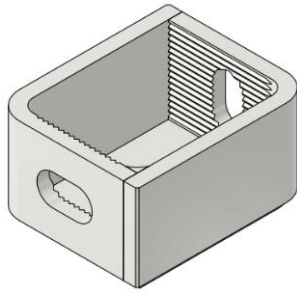
FLOOR SLAB - WALL

TPC precast connector can also be used to connect two concrete sandwich panels.

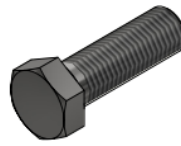


A watertight building can be achieved by placing a rubber strip between the precast elements.



TERWA PRECAST CONNECTOR SETS FOR CONSTRUCTION SITE

65749 - TPC-M16

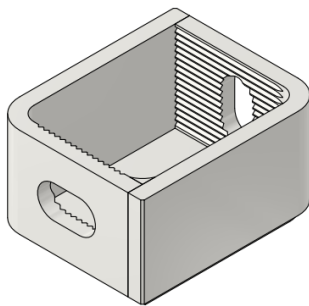
2 x


Bolt ISO 4017 M16 x L

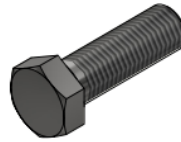
2 x


Serrated washer Ø17

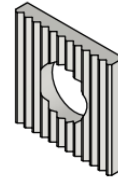
- The length "L" of the bolt depends on the minimum thread engagement of 1.5 times the bolt diameter, gap between precast elements, and the TPC dimensions. (see page 9)


65750 - TPC-M20

2 x


Bolt ISO 4017 M20 x L

2 x


Serrated washer Ø21

- The length "L" of the bolt depends on the minimum thread engagement of 1.5 times the bolt diameter, gap between precast elements, and the TPC dimensions. (see page 9)

Recommended tool for construction site:


Interchangeable torque spanner

Torque: 40 – 200 Nm


**Interchangeable head torque spanner
14x18**

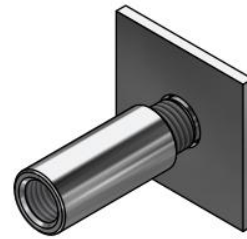
Metric	Size
M16	24
M20	30

RECOMMENDED FIXING ANCHORS FOR THE PRECAST PLANT

- FIXING ANCHORS



Terwa bolt anchor "TBA"



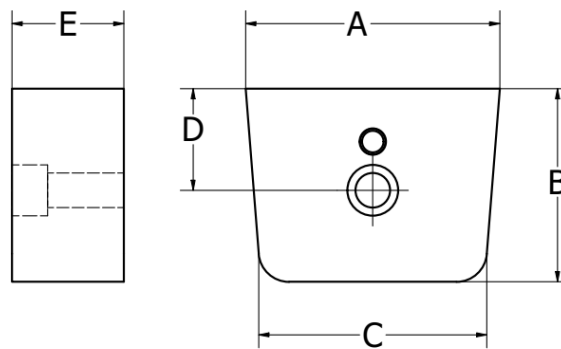
Terwa bolt anchor with plate "TBA-P"

The TPC precast connector, fastening bolt and the fixing anchor must each be individually verified. Edge distances, centre distances are provided in EN 1992-4 (Eurocode 2).

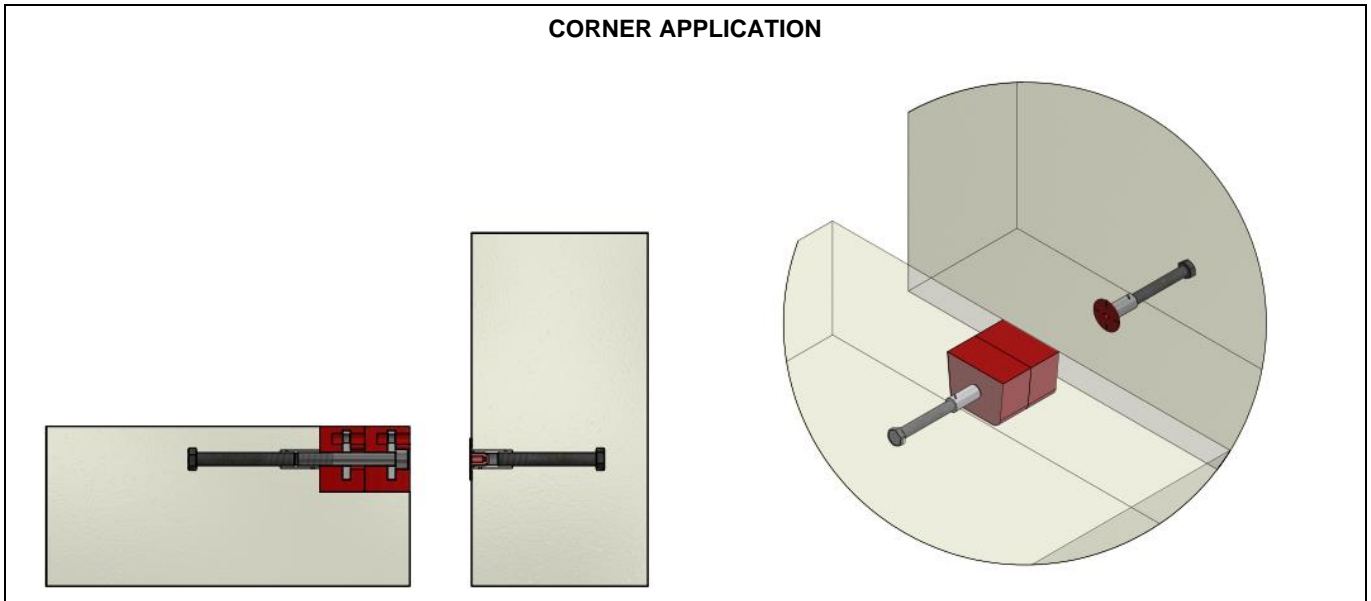
The minimum required edge distances and centre distances are according to the fixing anchors used in precast panels.

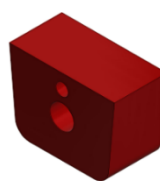
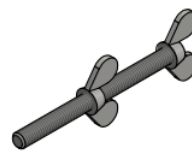
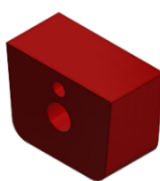
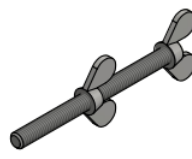

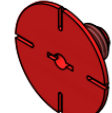

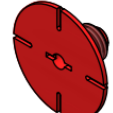
The characteristic strength of the system is guaranteed only if components manufactured by Terwa are used.

TPC recess former - geometry




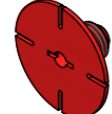

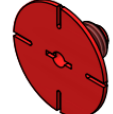


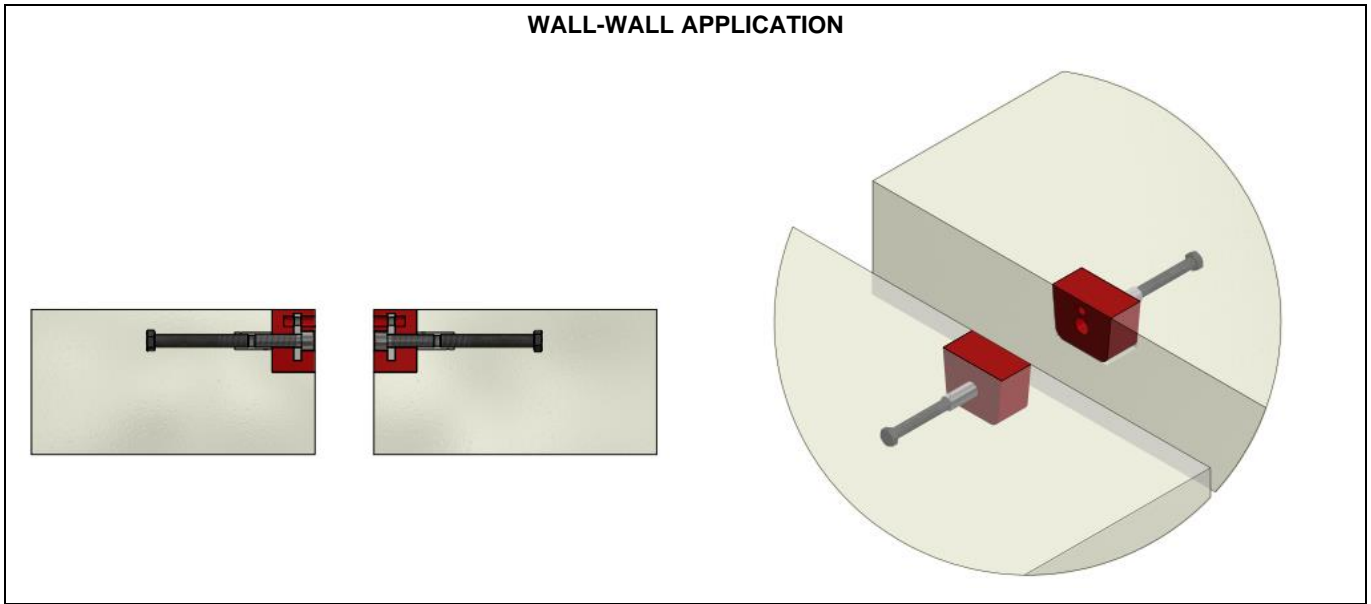
Dimensions						
TPC recess former	Article no.	A	B	C	D	E
		[mm]	[mm]	[mm]	[mm]	[mm]
Recess former for TPC M16	66153	125	85	110	50	57
Recess former with magnets for TPC M16	68165	125	85	110	50	57
Recess former for TPC M20	66154	150	120	130	70	72
Recess former with magnets for TPC M20	68166	150	120	130	70	72

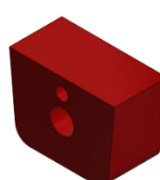
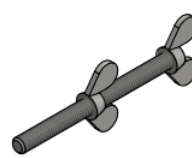

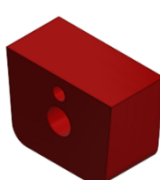
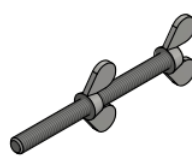

TERWA PRECAST CONNECTOR ACCESSORIES FOR PRECAST PLANT

ACCESSORIES - CORNER APPLICATION – WOOD FORMWORK





TPC M16		TPC M20	
2 x  66153 – TPC Recess former M16	 44577 – TDV 100 – M12	2 x  66154 – TPC Recess former M20	 44577 – TDV 100–M12
1 x  Hexagon socket head screw ISO 4762 M16 - 120	 47113 – KU-02 – M16	1 x  Hexagon socket head screw ISO 4762 M20 - 140	 47114 – KU-02 – M20

ACCESSORIES - CORNER APPLICATION – STEEL FORMWORK

TPC M16		TPC M20	
2 x  68165 - TPC recess former with magnets M16		2 x  68166 - TPC recess former with magnets M20	
1 x  Hexagon socket head screw ISO 4762 M16 - 120	 47113 – KU-02 – M16	1 x  Hexagon socket head screw ISO 4762 M20 - 140	 47114 – KU-02 – M20



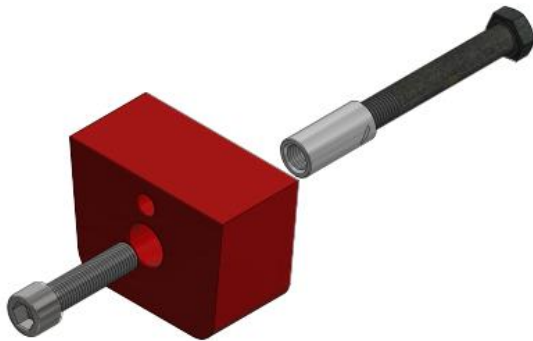
ACCESSORIES – WALL-WALL APPLICATION – WOOD FORMWORK	
TPC M16	TPC M20
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  2 x 66153 – TPC Recess former M16 </div> <div style="text-align: center;">  44577 – TDV 100 – M12 </div> </div> <div style="text-align: center; margin-top: 20px;">  2 x Hexagon socket head screw ISO 4762 M16 - 60 </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  2 x 66154 – TPC Recess former M20 </div> <div style="text-align: center;">  44577 – TDV 100–M12 </div> </div> <div style="text-align: center; margin-top: 20px;">  2 x Hexagon socket head screw ISO 4762 M20 - 70 </div>

ACCESSORIES - WALL-WALL APPLICATION – STEEL FORMWORK	
TPC M16	TPC M20
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  2 x 68165 - TPC recess former with magnets M16 </div> </div> <div style="text-align: center; margin-top: 20px;">  2 x Hexagon socket head screw ISO 4762 M16 - 60 </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  2 x 68166 - TPC recess former with magnets M20 </div> </div> <div style="text-align: center; margin-top: 20px;">  2 x Hexagon socket head screw ISO 4762 M20 - 70 </div>

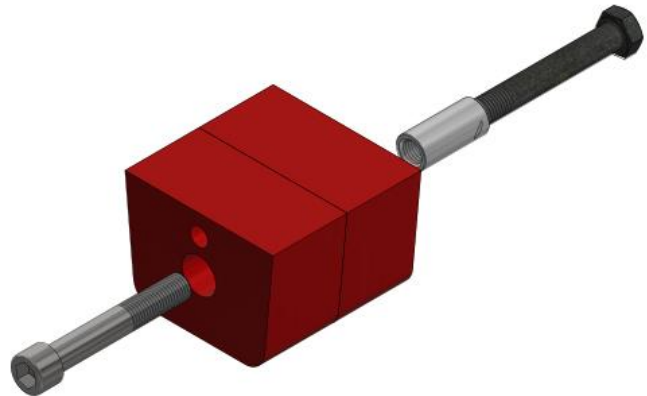
ANCHOR INSTALLATION – FORMWORK MADE OF WOOD

Before fixing in the formwork, assemble the anchor with the appropriate recess former using a corresponding hexagon socket head screw ISO 4762 based on the required type of connection.

Wall-wall connection – wood formwork

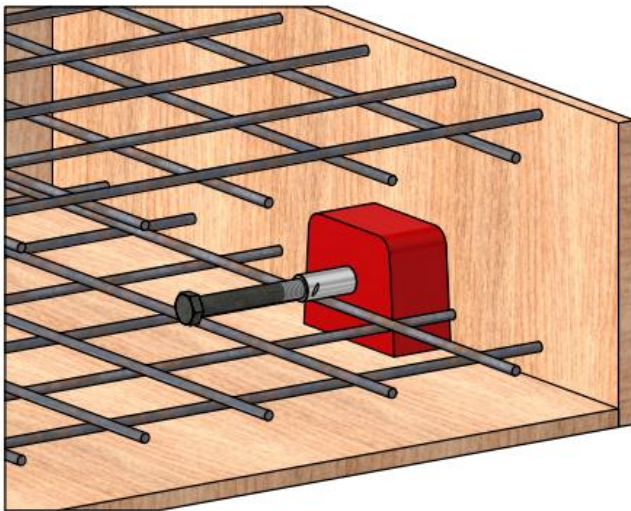


Corner connection – wood formwork



<i>TPC recess former M16 KIT-wall 68575</i>			<i>TPC recess former M16 KIT-corner 68574</i>		
Component	Article no.	Qty	Component	Article no.	Qty
Recess former for TPC M16	66153	1	Recess former for M16	66153	2
Hexagon socket head screw ISO 4762 M16 - 60	25357	1	Hexagon socket head screw ISO 4762 M16 - 120	26309	1
TDV-100-M12	44577	1	TDV-100-M12	44577	1

<i>TPC recess former M20 KIT-wall 68577</i>			<i>TPC recess former M20 KIT-corner 68576</i>		
Component	Article no.	Qty	Component	Article no.	Qty
Recess former for TPC M20	66154	1	Recess former for TPC M20	66154	2
Hexagon socket head screw ISO 4762 M20 - 70	26308	1	Hexagon socket head screw ISO 4762 M20 - 140	26311	1
TDV-100-M12	44577	1	TDV-100-M12	44577	1

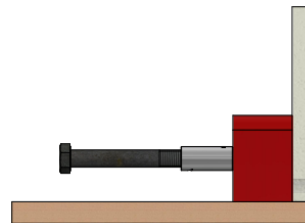


The first layer of reinforcement mesh is placed in the formwork. The recess former, mounted with the TBA anchor, is fixed to the formwork. Next, the second layer of reinforcement mesh is installed.

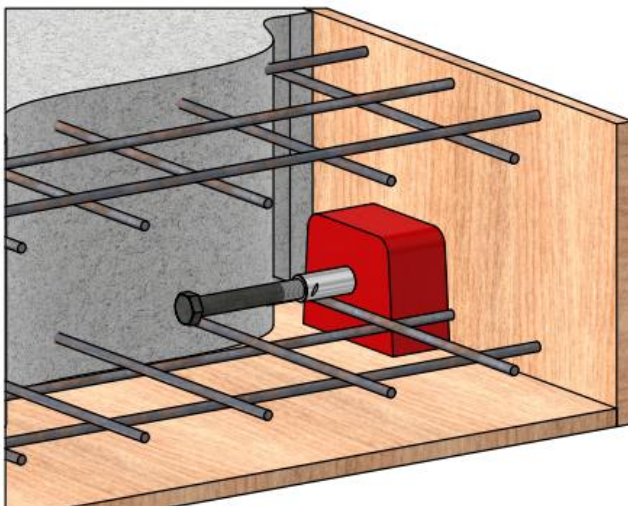
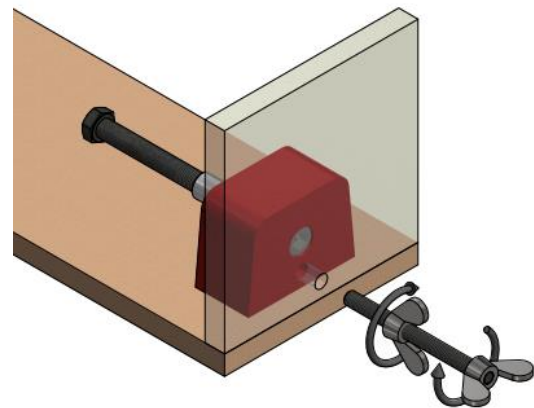
Important!

The recess former must be in contact with the bottom of the formwork.

By using forming wax on the recess former, it is easier to remove it from the concrete.

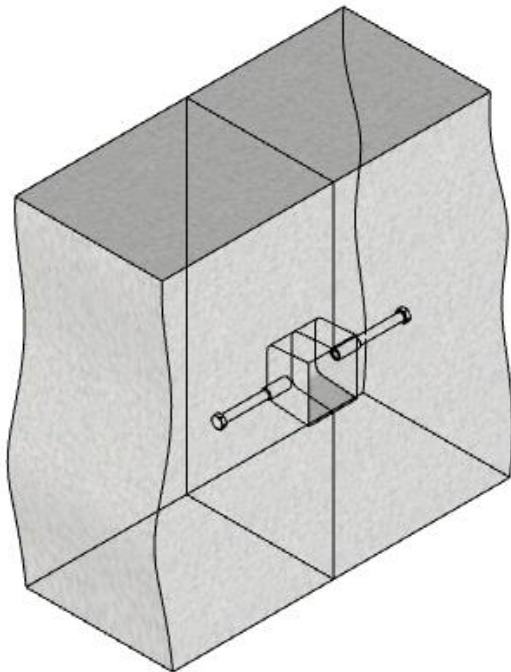
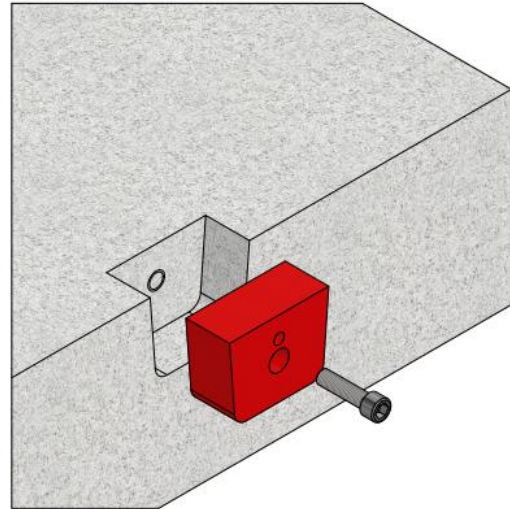


Drill the formwork and insert the TDV into the designated hole. Screw the TPC recess former, with the anchor mounted, into place. Pull it towards the formwork and tighten it against the formwork using the second nut.



Pour the concrete.

After the concrete has hardened and the formwork is removed, the screw used to fix the recess former to the anchor can be unscrewed. The recess former can then be removed by using a plastic or rubber hammer. To ensure that these recess formers can be reused, it is recommended to remove the concrete residues from them and from the formwork. Do not use sharp or pointed object to remove the recess former from the formwork.

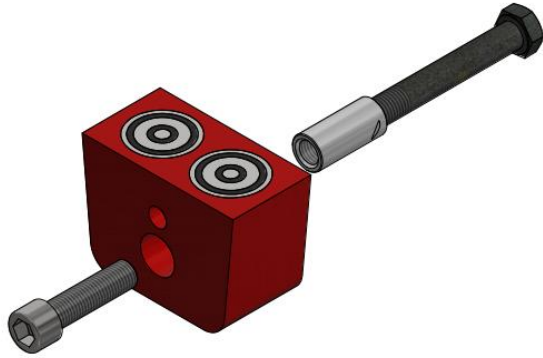


On-site, two precast concrete elements are ready to be assembled using the Terwa precast connector.

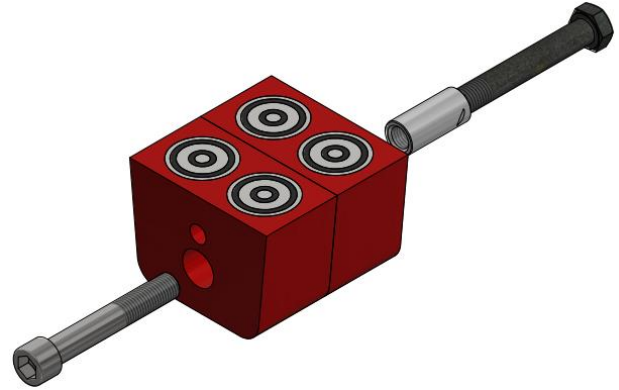
ANCHOR INSTALLATION – FORMWORK MADE OF STEEL

Before fixing it in the formwork, assemble the anchor with the appropriate recess former fitted magnets, using a corresponding hexagon socket head screw ISO 4762 based on the required type of connection.

Wall-wall connection – steel formwork

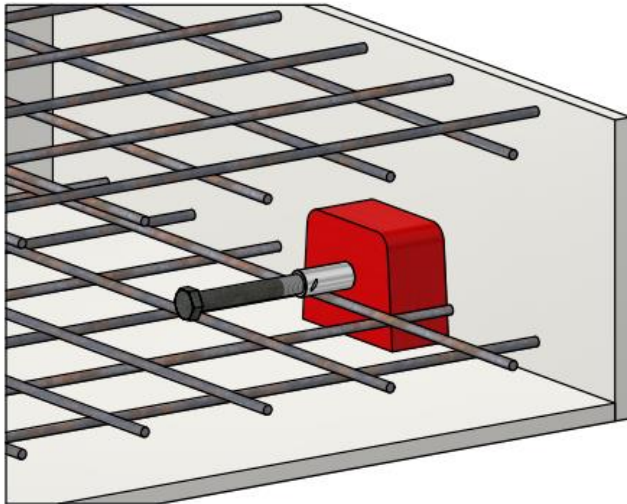


Corner connection – steel formwork



<i>TPC magnetic recess former M16 KIT-wall 68579</i>			<i>TPC magnetic recess former M16 KIT-corner 68578</i>		
Component	Article no.	Qty	Component	Article no.	Qty
Recess former with magnets for TPC M16	68165	1	Recess former with magnets for M16	68165	2
Hexagon socket head screw ISO 4762 M16 - 60	25357	1	Hexagon socket head screw ISO 4762 M16 - 120	26309	1

<i>TPC recess former M20 KIT-wall 68581</i>			<i>TPC recess former M20 KIT-corner 68580</i>		
Component	Article no.	Qty	Component	Article no.	Qty
Recess former with magnets for TPC M20	68166	1	Recess former with magnets for TPC M20	68166	2
Hexagon socket head screw ISO 4762 M20 - 70	26308	1	Hexagon socket head screw ISO 4762 M20 - 140	26311	1

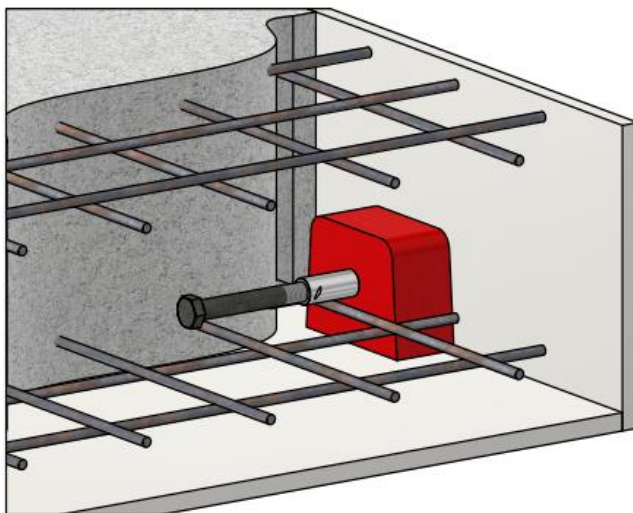
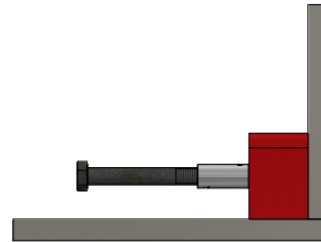


The first layer of reinforcement mesh is placed in the formwork. The recess former, fitted with magnets and mounted with TBA anchor, is positioned into the formwork. Next, the second layer of reinforcement mesh is installed.

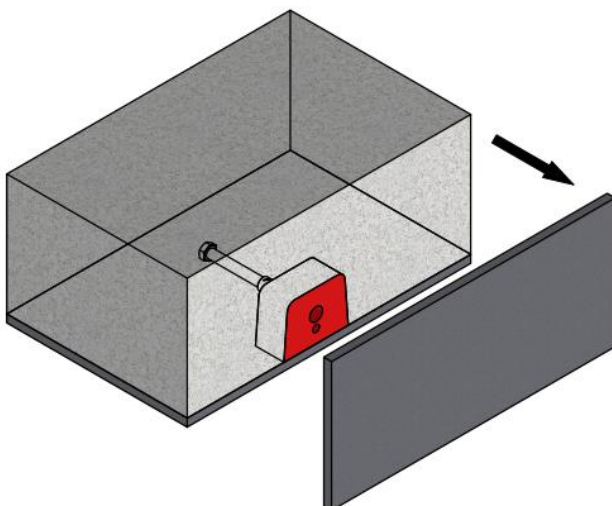
Important!

The recess former must be in contact with the bottom of the formwork.

By using forming wax on the recess former, it is easier to remove it from the concrete.

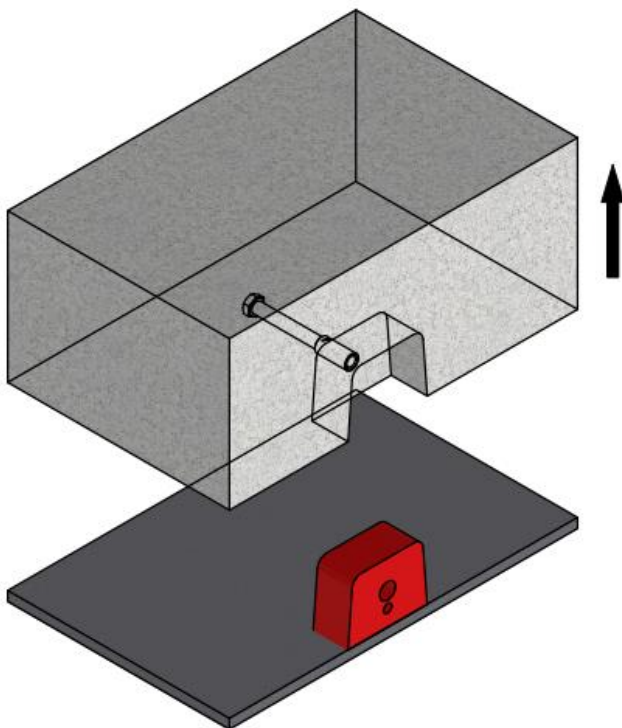
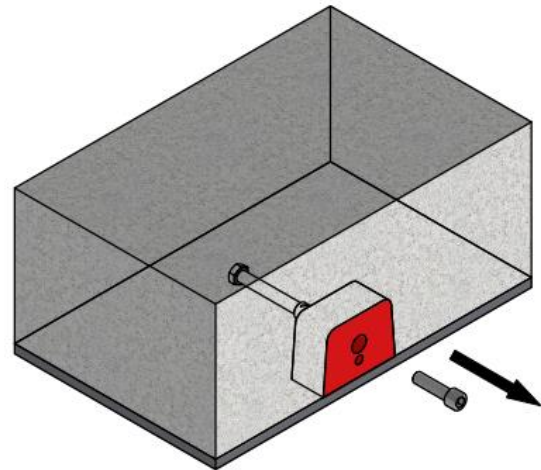


Pour the concrete



After the concrete has hardened, the lateral part of the formwork can be removed.

Remove the hexagon socket head screw ISO 4762 used to fix the recess former with magnets to the anchor.

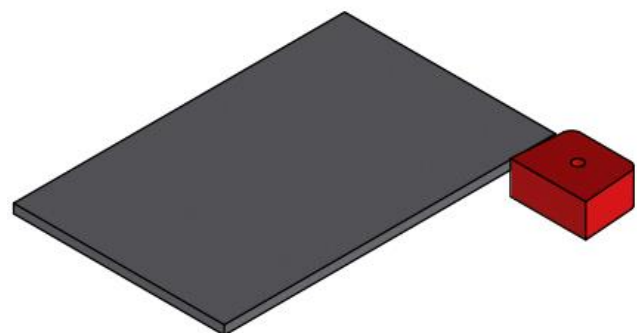


Now, the precast panel can be lifted. By using forming wax on the recess former, it is easier for this to remain fixed on the lower part of the formwork.

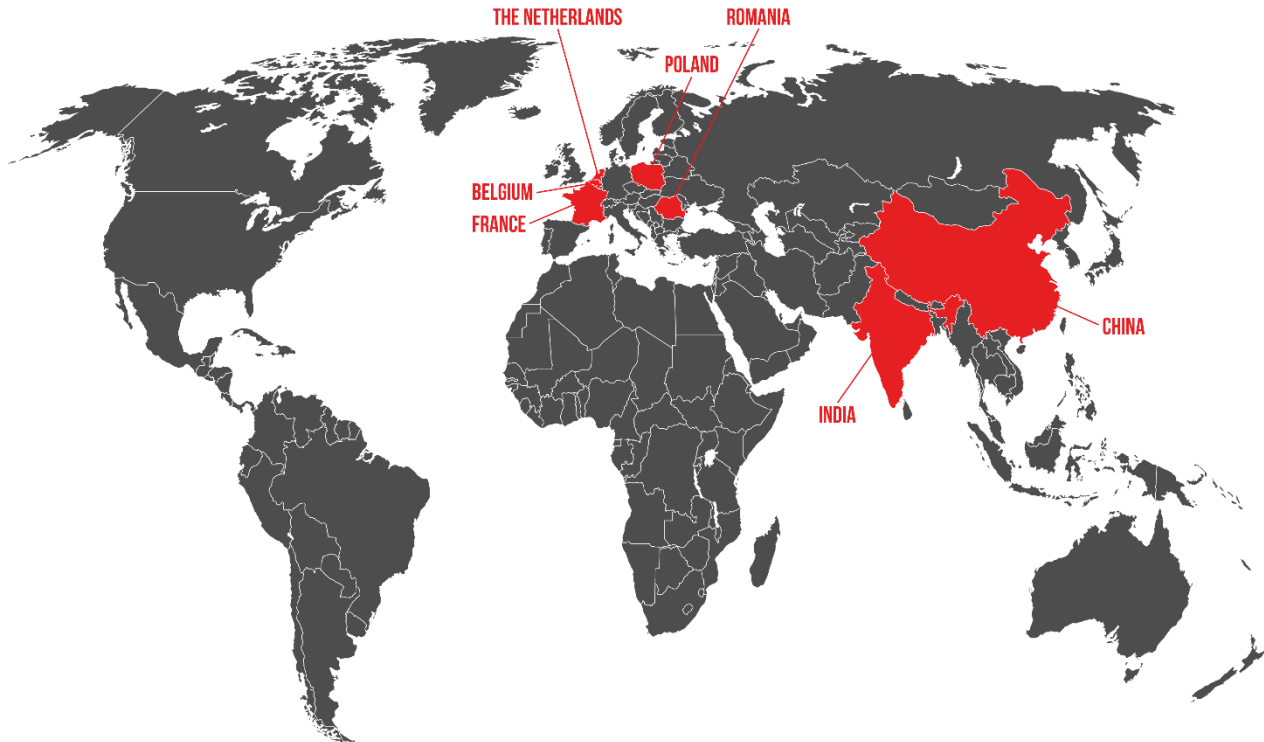
The recess former can be removed using a plastic or rubber hammer.

To ensure that this recess former can be reused, it is recommended to clean any concrete residues from both the formwork and the former.

Do not use sharp or pointed objects to remove the recess former from the formwork.



CONTACT



TERWA is the global supplier for precast and construction solutions with multiple offices around the world. With all our staff, partners and agents, we are happy to provide all construction and precast companies who work in the building industry with full service and 100% support.

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