

# 5 Detail drawings

The information on this chapter is complementary to Chapter 1 (Design) and Chapter 3 (Installation) and serves to complete the design and execution of UltraPly™ TPO roofing systems in a safe and durable way.

Specifiers and installers will find a vast list of standard drawings that contain information about the correct build-up of the different UltraPly TPO roofing details.

Please note that these drawings are not designed on scale and do not include any information on vapor control layers. Therefore, they need to be considered as details that are applicable in standard roofing situations.

For an easy tracking, we have organized the Elevate UltraPly TPO details in the following sections:

<b>5.1</b>	<b>Welded seams</b>	<b>5.3</b>
<b>5.2</b>	<b>Base tie-ins</b>	<b>5.15</b>
<b>5.3</b>	<b>Corners</b>	<b>5.25</b>
<b>5.4</b>	<b>Penetrations</b>	<b>5.33</b>
<b>5.5</b>	<b>Drains</b>	<b>5.43</b>
<b>5.6</b>	<b>Expansion joints</b>	<b>5.49</b>
<b>5.7</b>	<b>Roof edges</b>	<b>5.55</b>
<b>5.8</b>	<b>Wall terminations</b>	<b>5.63</b>

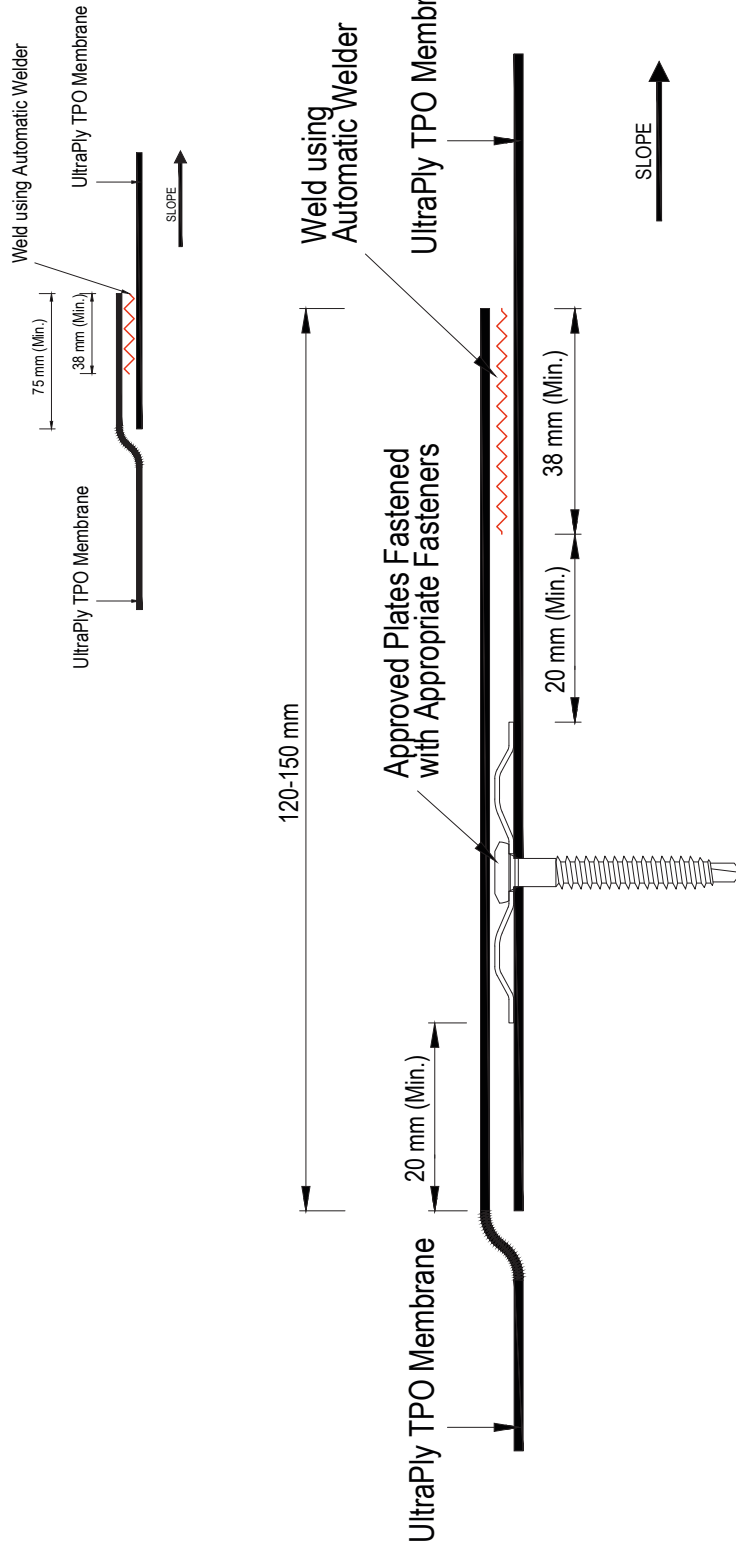
As the situation on site may differ from the conditions represented in these details, please contact our technical department or an Elevate technician for design and approval of an alternative detail.



## 5.1 Welded seams

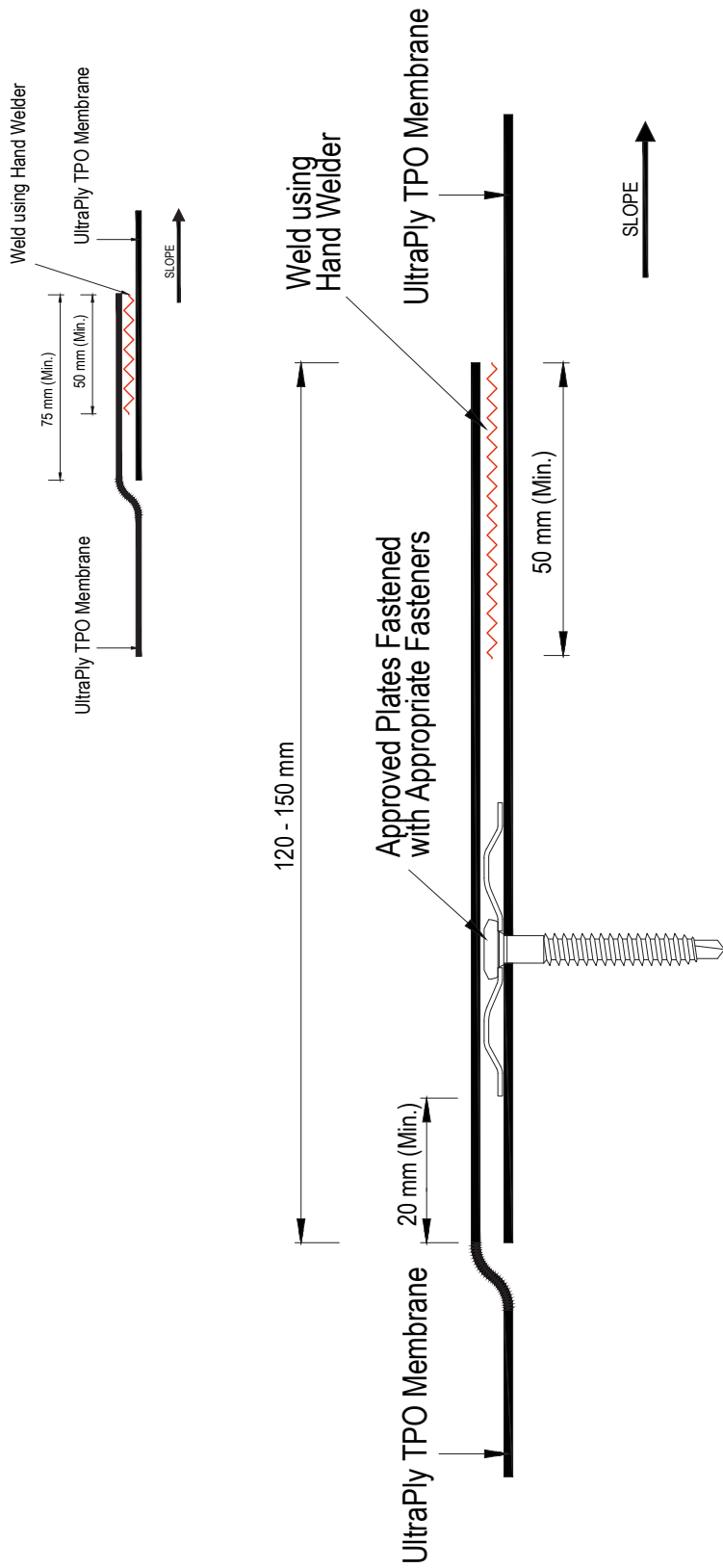
T-WS-1	Welded seam using automatic welder
T-WS-2	Welded seam using hand welder
T-WS-3	Fastener layout and factory markings
T-WS-4	TPO induction welding plate
T-WS-5	Membrane repair over TPO induction welding plate
T-WS-6	Cut edge treatment
T-WS-7	T-joint with Unsupported Flashing
T-WS-8	T-joint with Unsupported Flashing at intersection of two seams
T-WS-9	T-joint with Unsupported Flashing at base of curb or wall
T-WS-10	T-joints at 4 T-crossing membranes

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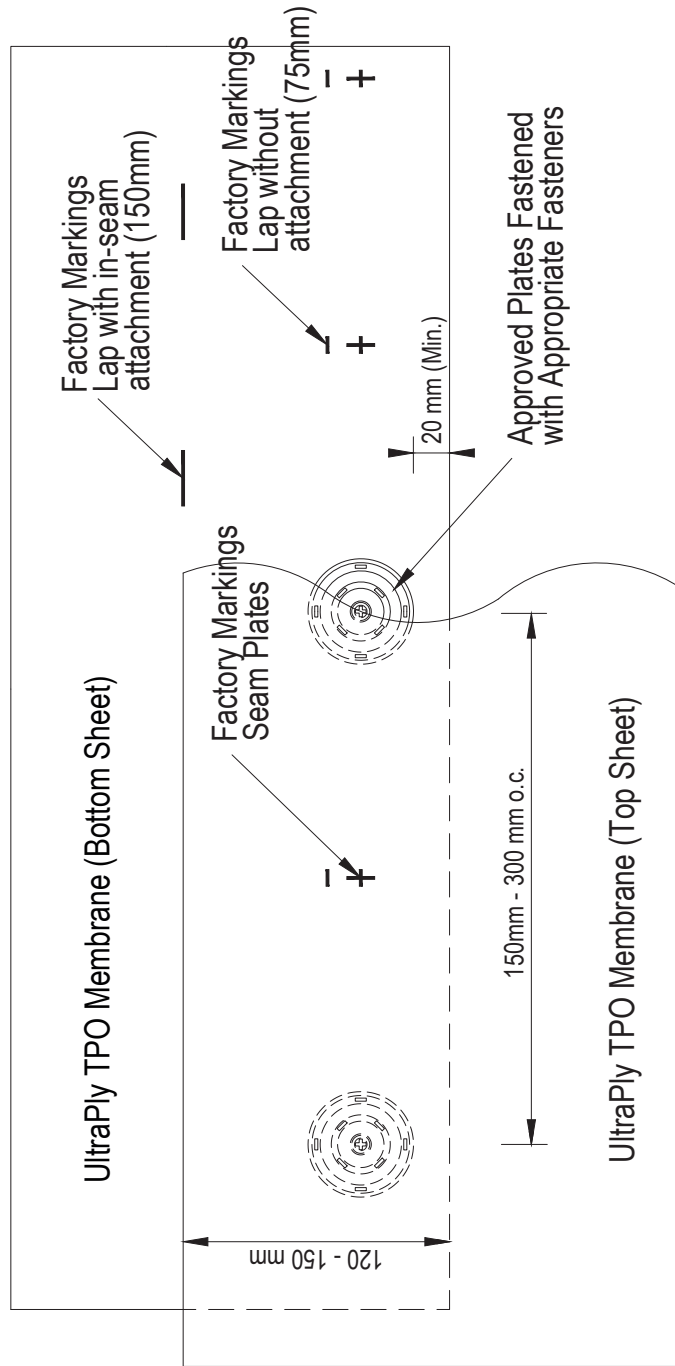
	<b>UltraPly™ TPO</b>	System All	<b>UT - WS - 1</b>
	Welded Seam using Automatic Welder	Not to scale	10/2022
			EMEA & Asia

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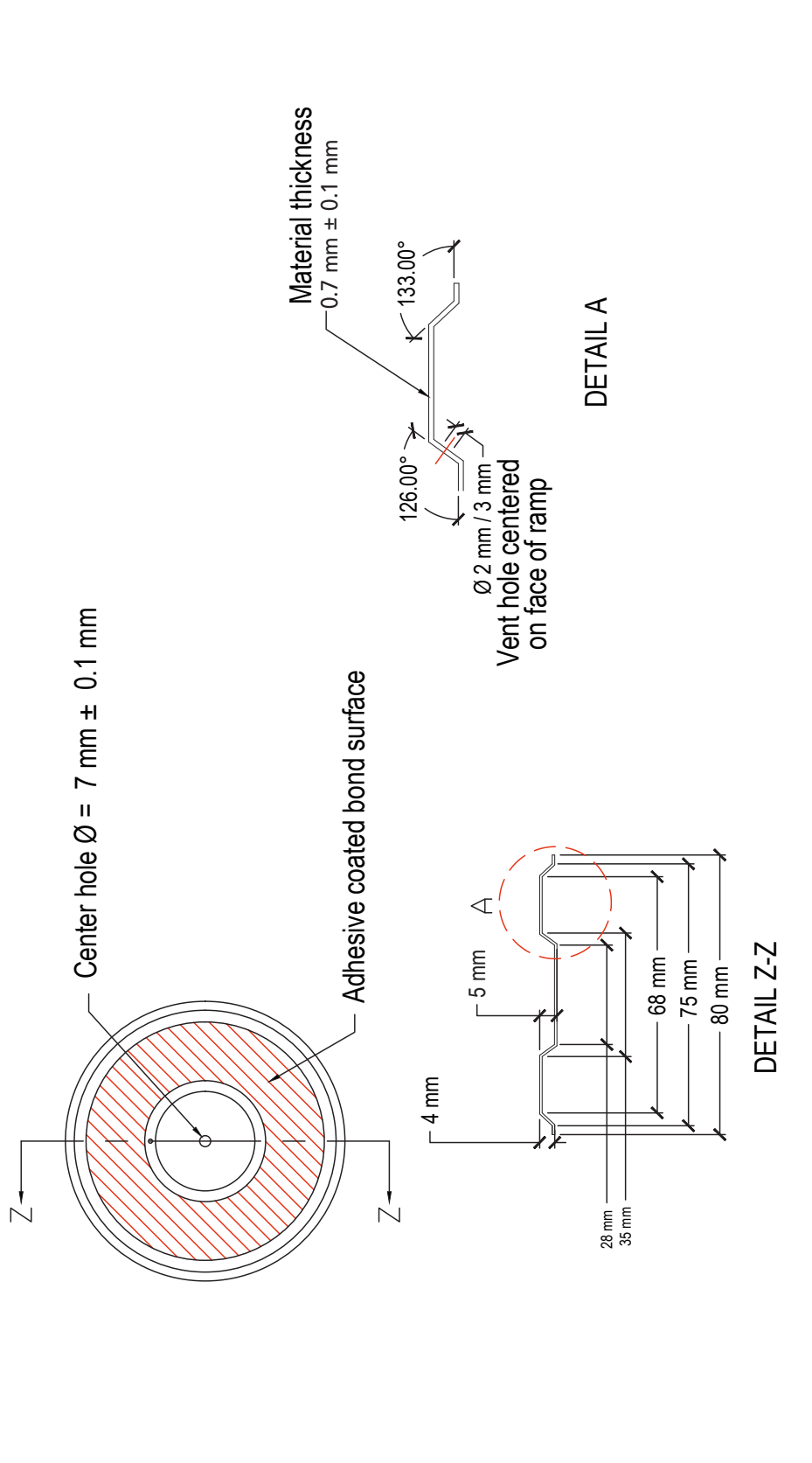
	<b>UltraPly™ TPO</b> Welded Seam using Hand Welder		System All	UT - WS - 2
			Not to scale	10/2022
				EMEA & Asia

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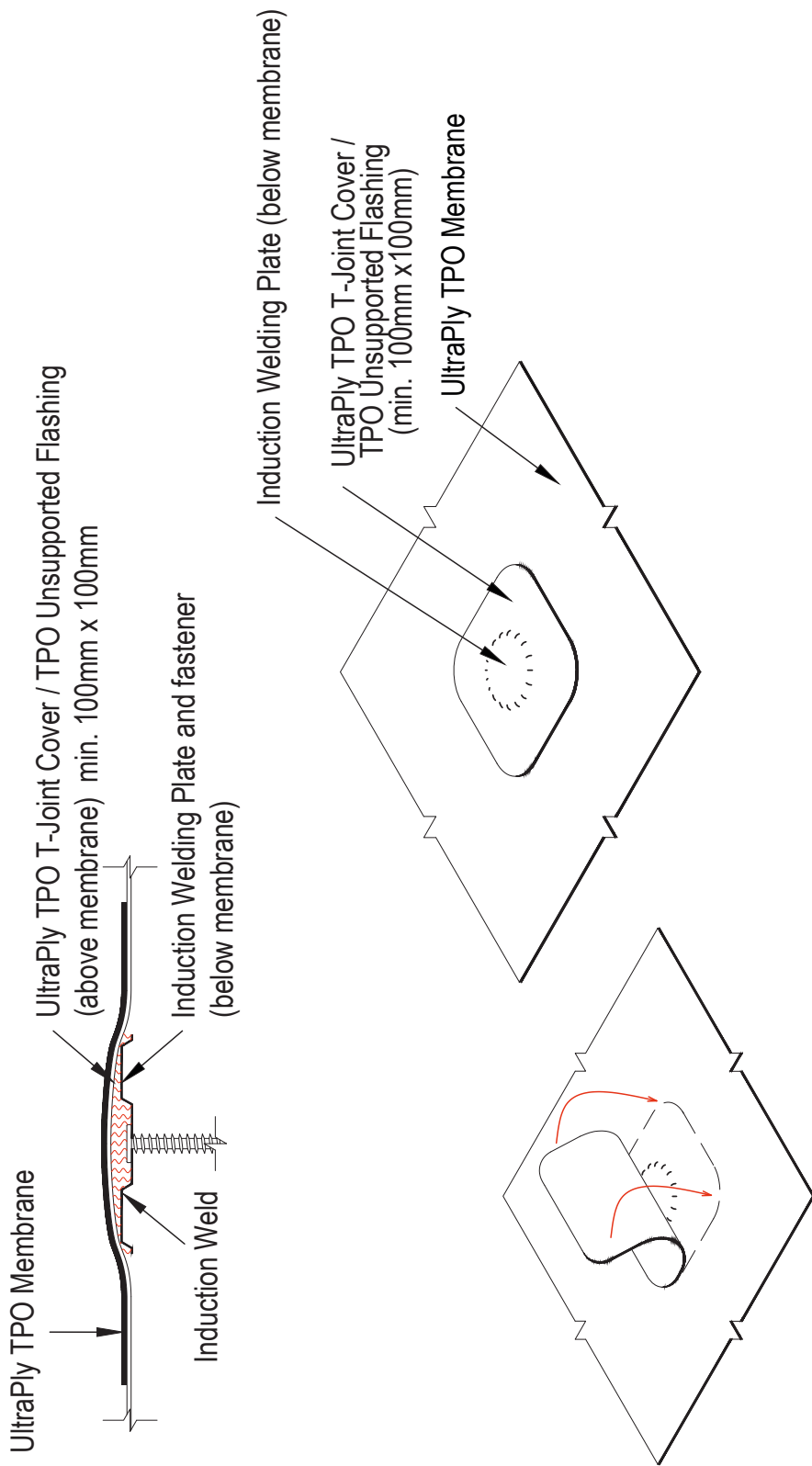
	<b>UltraPly™ TPO</b> Fastener Layout and Factory Markings	System MEC.	<b>UT - WS - 3</b>
		Not to scale	10/2022
			EMEA & Asia

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	<b>UltraPly™ TPO</b>		System Induction	<b>UT - WS - 4</b>
	Induction Welding Plate		Not to scale	10/2022
				EMEA & Asia

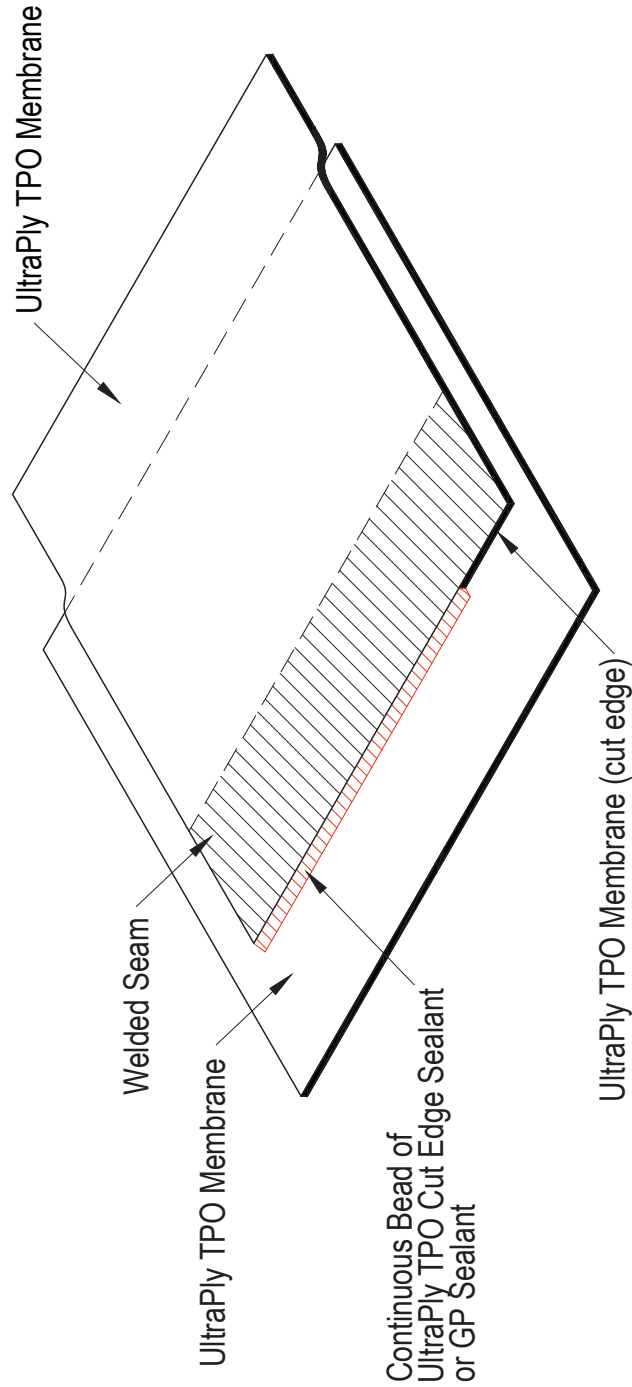
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	<b>UltraPly™ TPO</b> Membrane Repair over Induction Welding Plate	System Induction	<b>UT - WS - 5</b>
		Not to scale	10/2022
		EMEA & Asia	



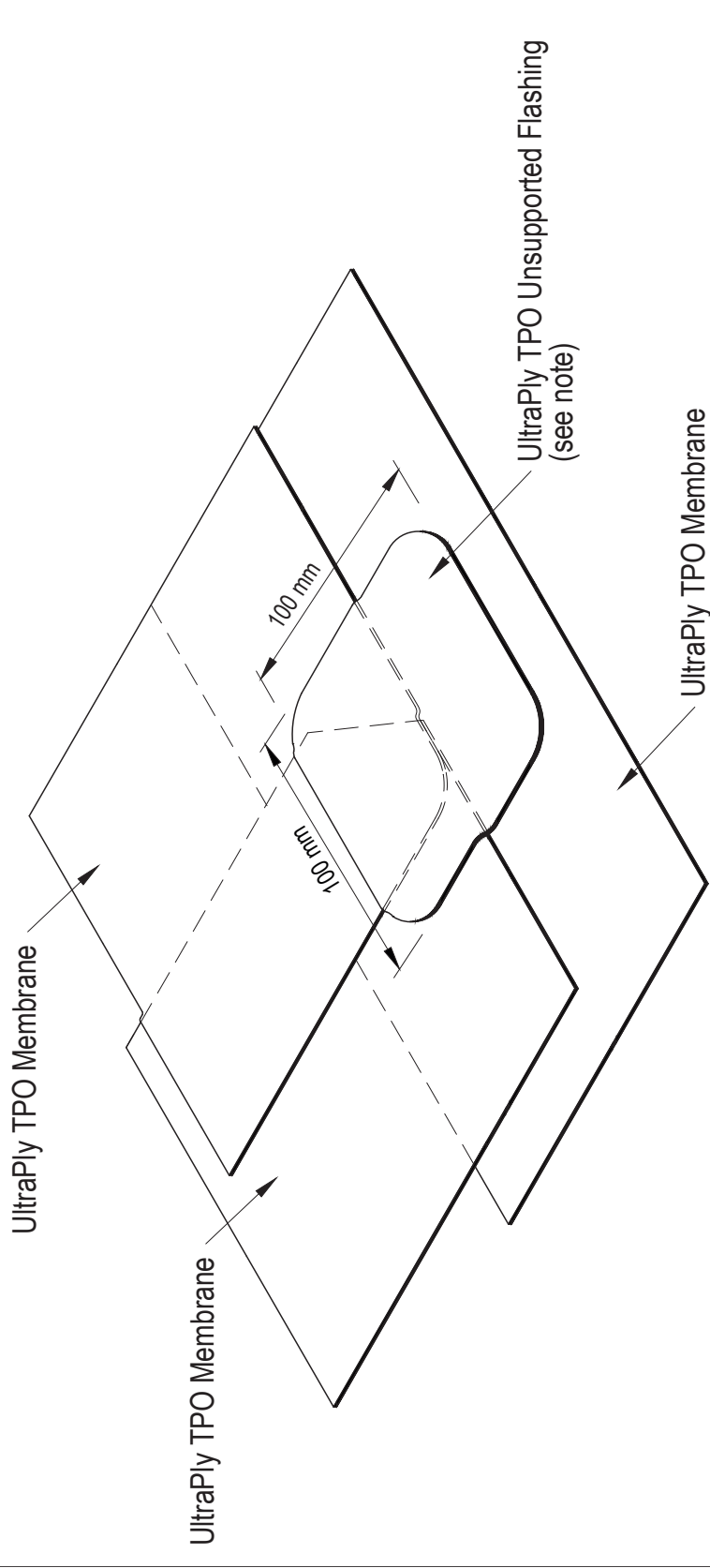
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Note: When polyester reinforcement of TPO is exposed, apply Cut Edge or GP Sealant to entire exposed edge.

	<b>UltraPly™ TPO</b> Cut Edge Treatment	System All	<b>UT - WS - 6</b>
		Not to scale	
		10/2022 EMEA & Asia	

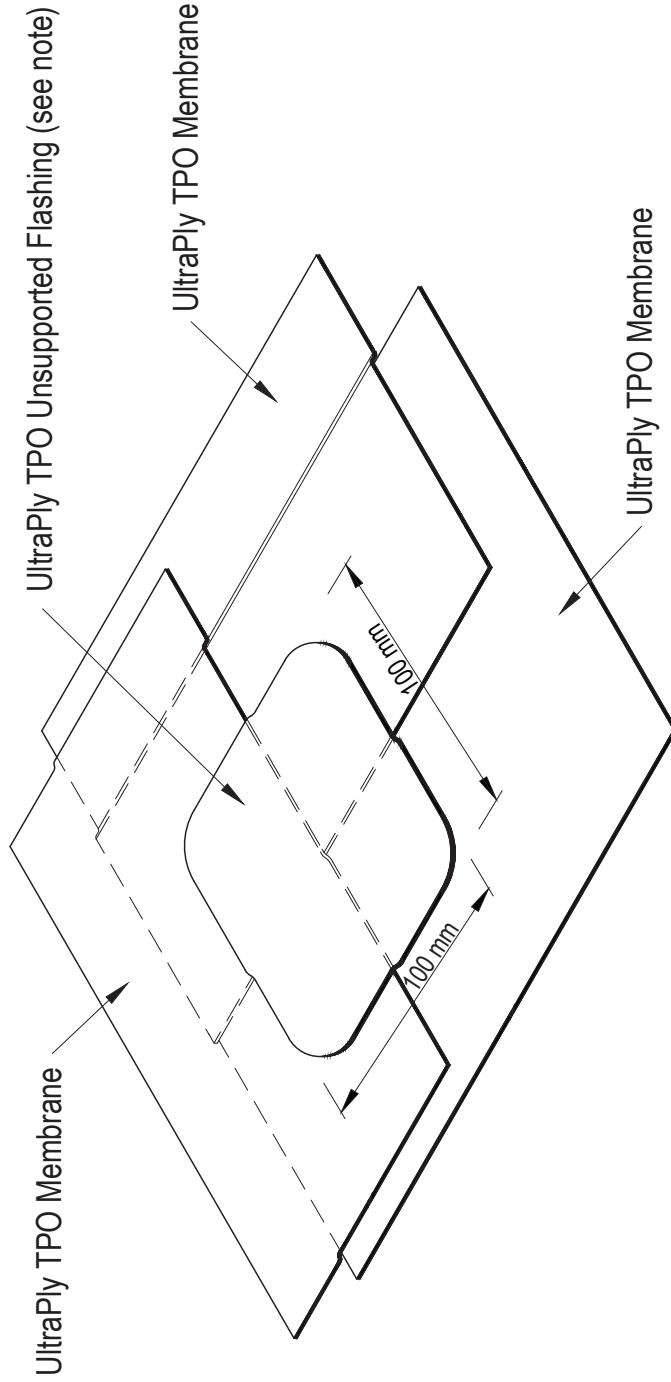
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Note: T-joint with UltraPly TPO Unsupported Flashing required for membranes thickness of 1.5mm or more

	UltraPly™ TPO		System All	UT - WS - 7
	T-joint with Unsupported Flashing		Not to scale	10/2022
				EMEA & Asia

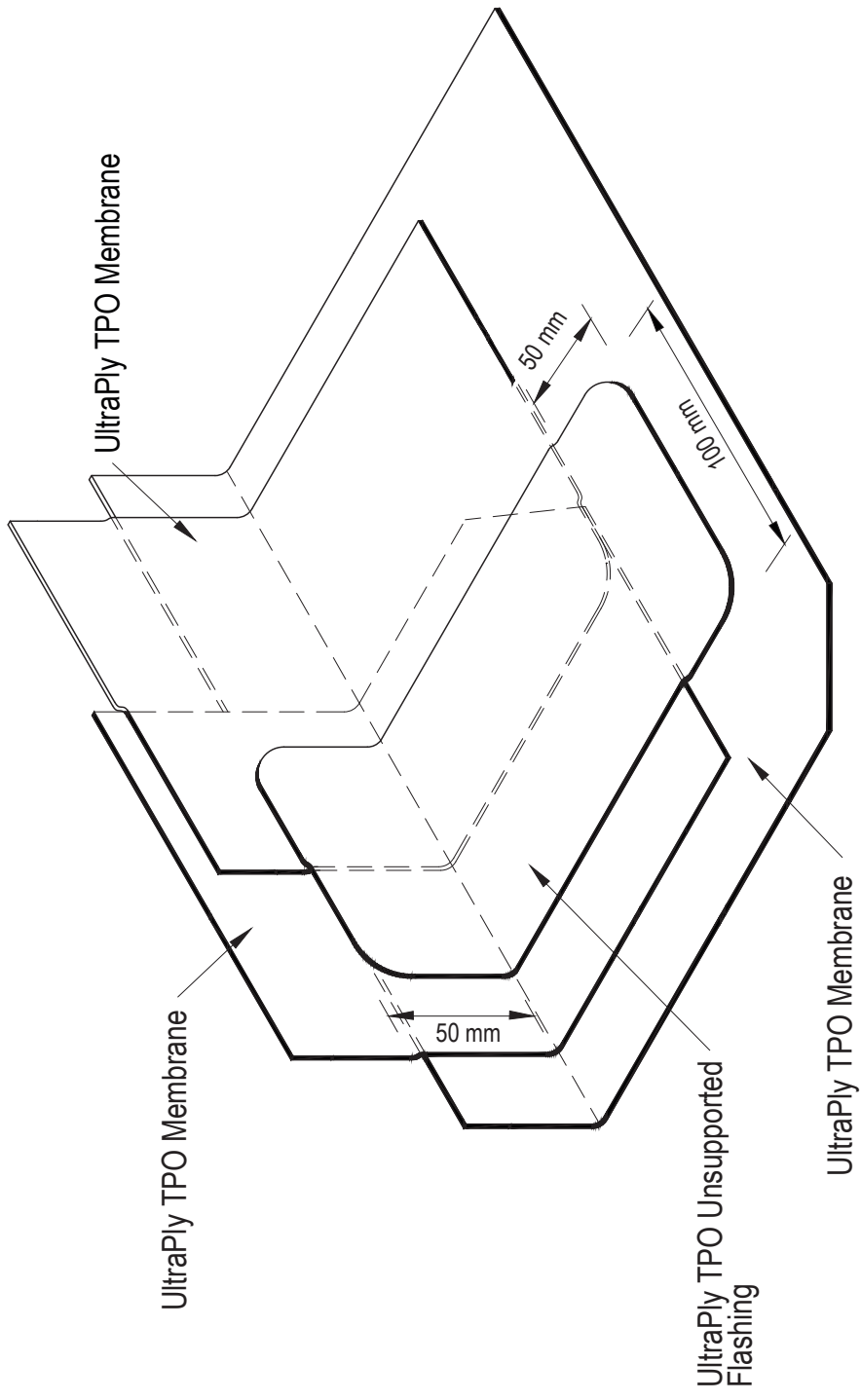
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Note: T-joint with UltraPly TPO Unsupported Flashing required for membranes thickness of 1.5mm or more

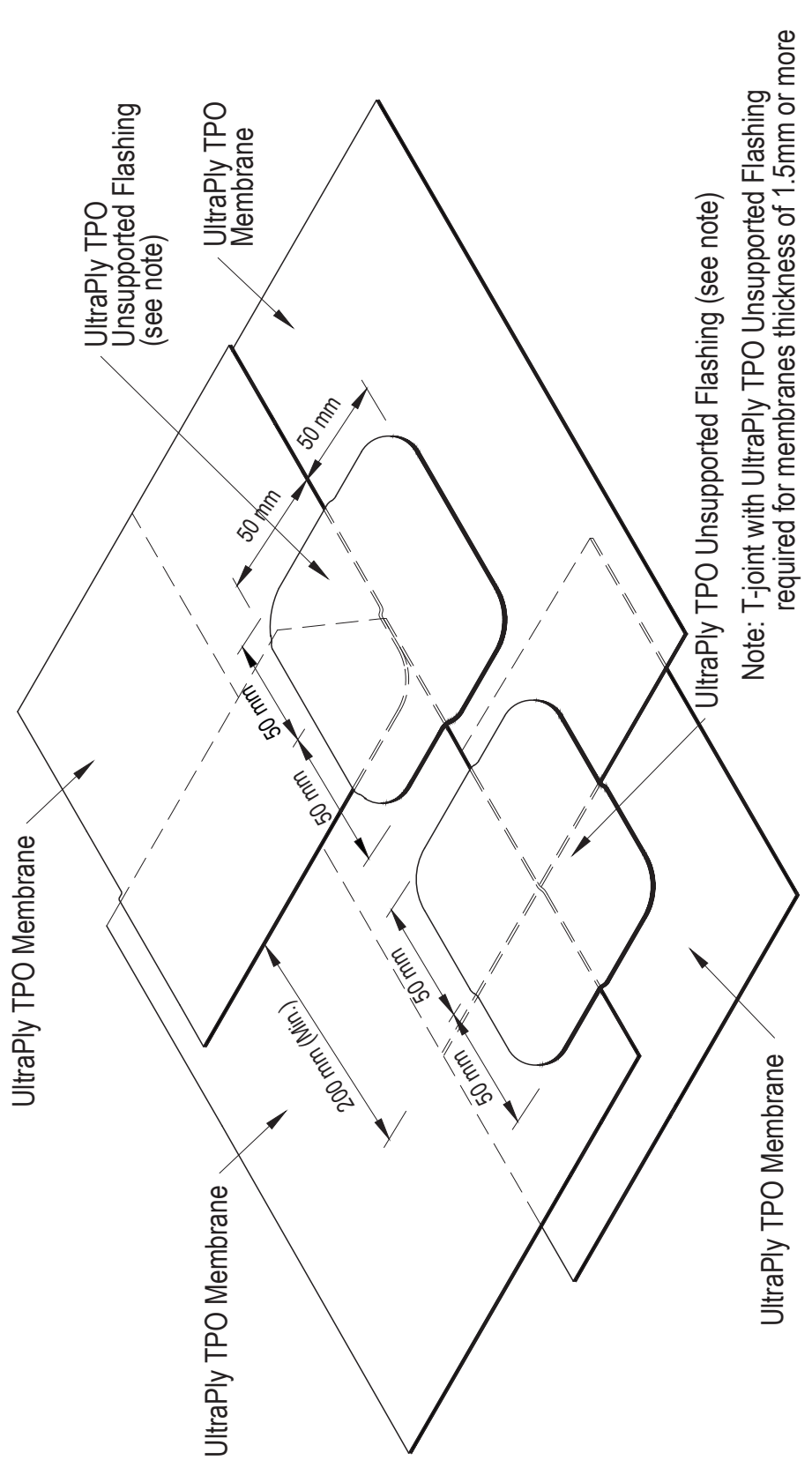
	<b>UltraPly™ TPO</b> T-joint with Unsupported Flashing at intersection of two seams	System	<b>UT - WS - 8</b>
		All	10/2022
		Not to scale	EMEA & Asia

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	<b>UltraPly™ TPO</b> T-joint with Unsupported Flashing at base of Curb or Wall		System All	UT - WS - 9
			Not to scale	10/2022
				EMEA & Asia

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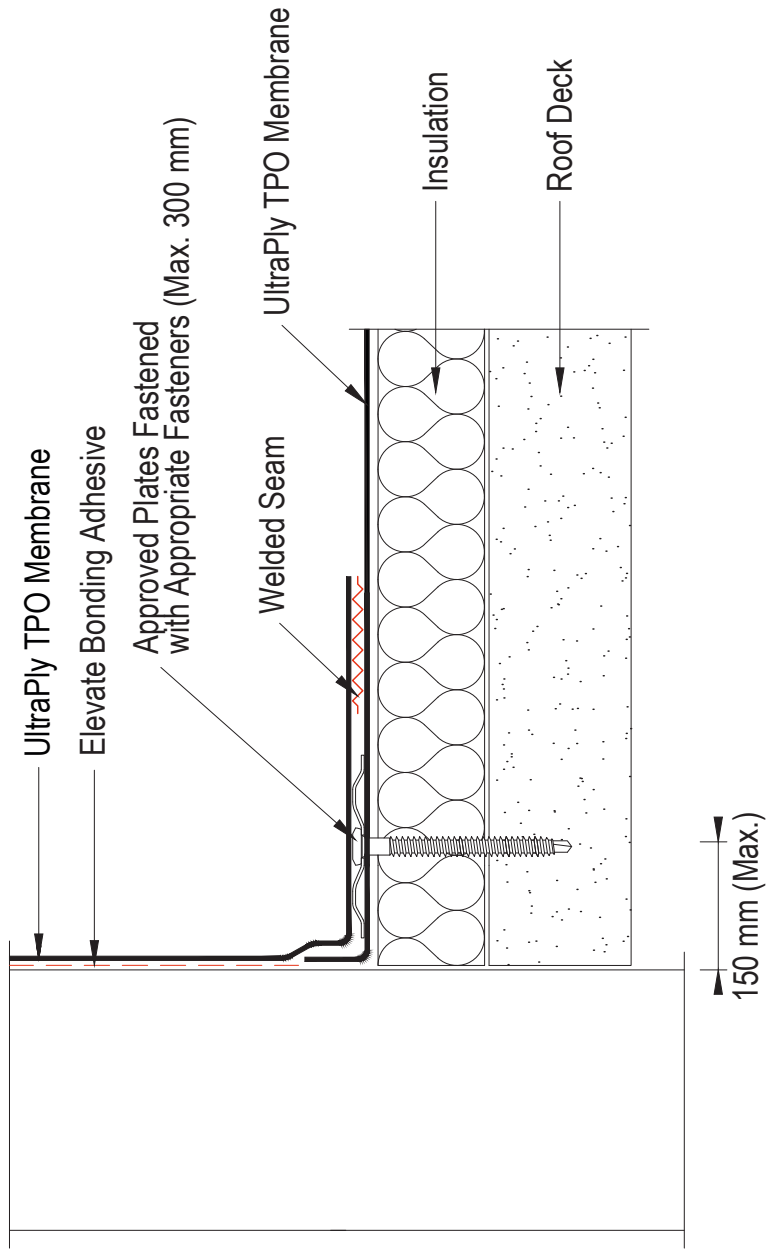
	<b>UltraPly™ TPO</b>		System All	<b>UT - WS - 10</b>
	T-joints at 4 T-crossing Membranes		Not to scale	10/2022
				EMEA & Asia




## 5.2 Base tie-ins

T-BT-1	Base tie-in using plates fastened to deck
T-BT-2	Base tie-in using plates fastened to upstand
T-BT-3	Base tie-in using plates fastened to upstand with existing cant
T-BT-4	Base tie-in at inside corner using HD seam plates
T-BT-5	Base tie-in at inside corner using non-Elevate plates
T-BT-6	Base tie-in at outside corner using HD seam plates
T-BT-7	Base tie-in at outside corner using non-Elevate plates
T-BT-8	Base tie-in with TPO induction welding plates

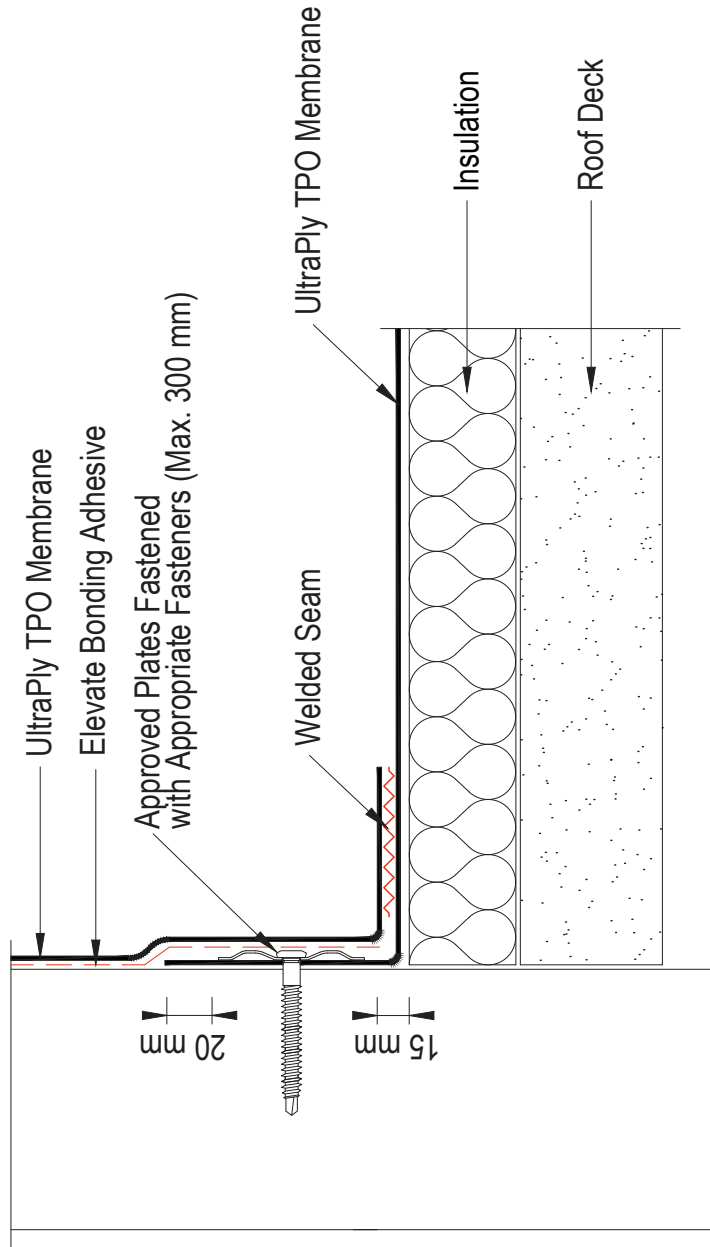
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	<b>UltraPly™ TPO</b> Base Tie-In using Plates Fastened to Deck	System	UT - BT - 1
		All	10/2022
		Not to scale	EMEA & Asia

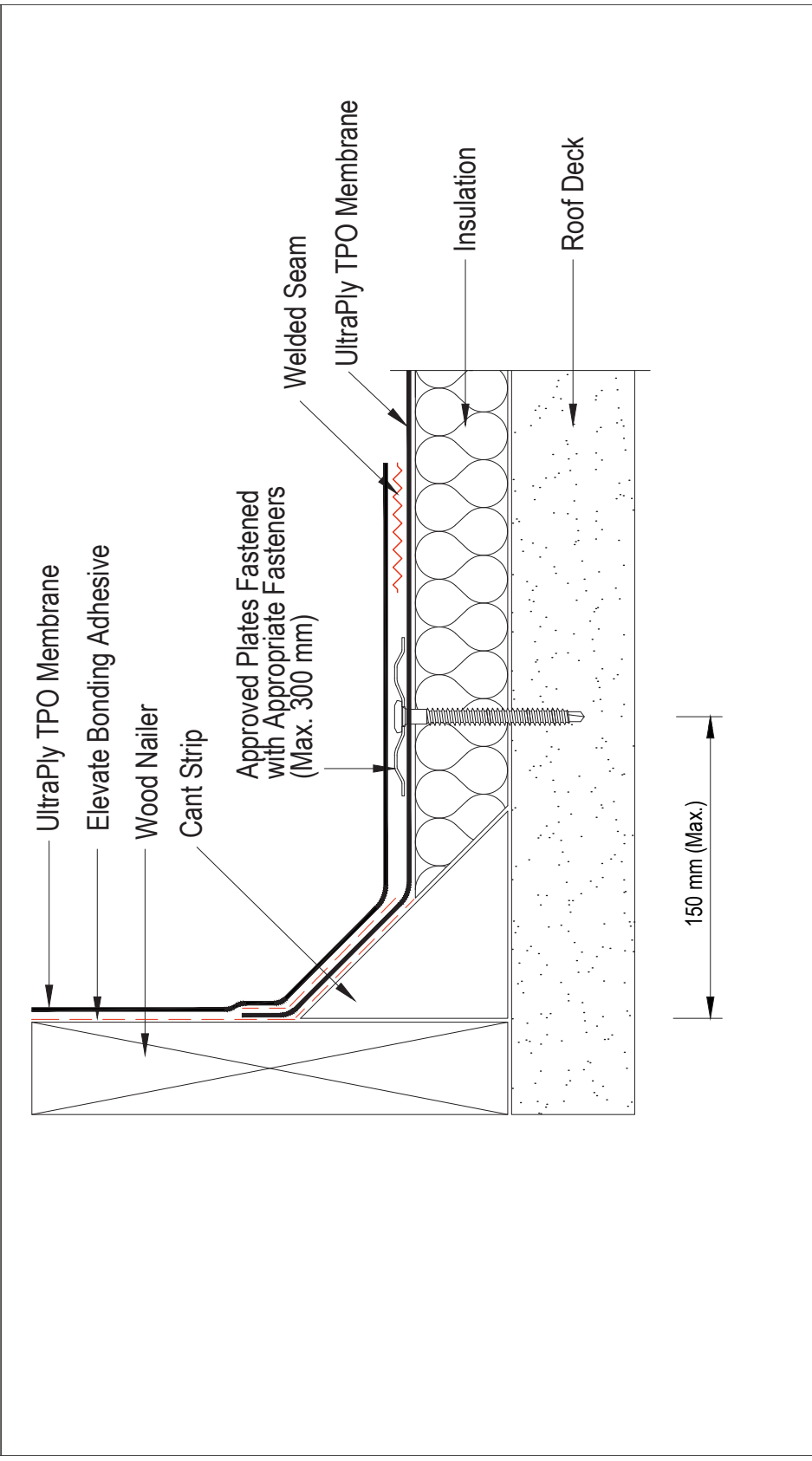



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	<b>UltraPly™ TPO</b> Base Tie-In using Plates Fastened to Upstand		System All	UT - BT - 2
			Not to scale	10/2022
				EMEA & Asia

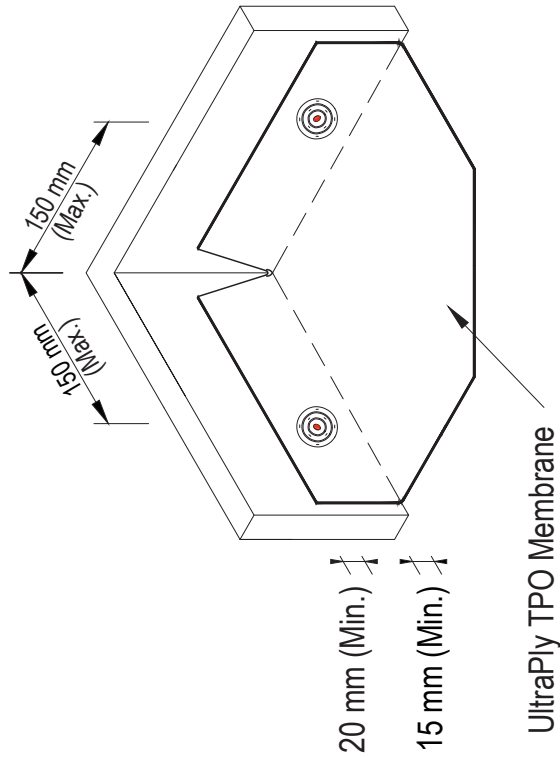
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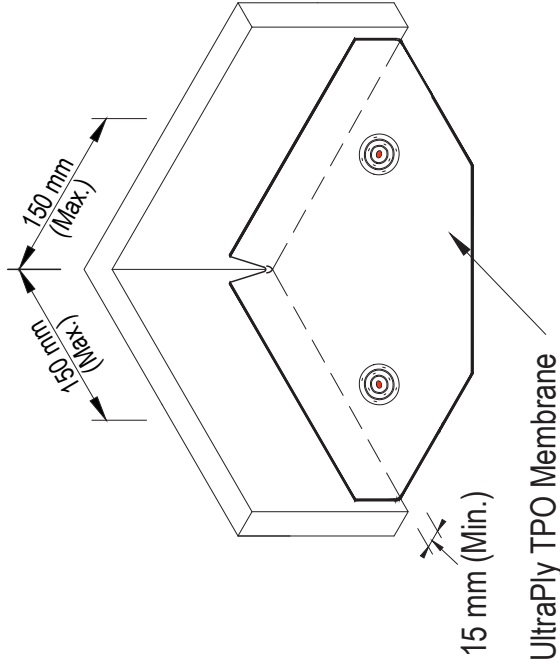
	<b>UltraPly™ TPO</b> Base Tie-In using plates at Upstand with Existing Cant		System All	UT - BT - 3
			Not to scale	10/2022
				EMEA & Asia

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### Wall / Upstand Attachment



### Roof Deck Attachment

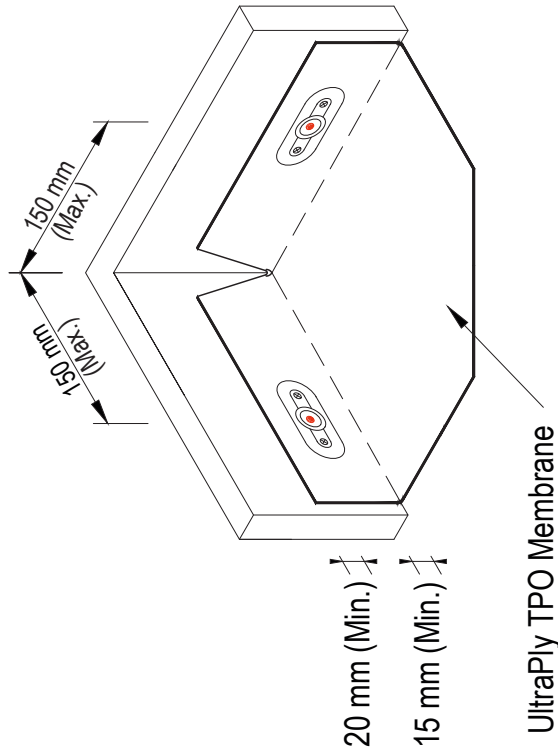


Note: Base Flashings and Terminations are not shown for clarity.  
Refer to appropriate Termination & Base Tie-In details.

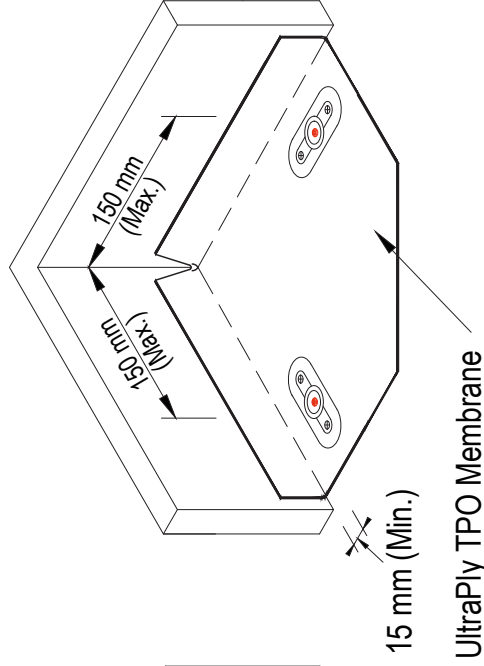
	<b>UltraPly™ TPO</b> Base Tie-In at Inside Corner using HD Seam Plates	System All	UT - BT - 4
		Not to scale	10/2022
			EMEA & Asia

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### Wall / Upstand Attachment



### Roof Deck Attachment

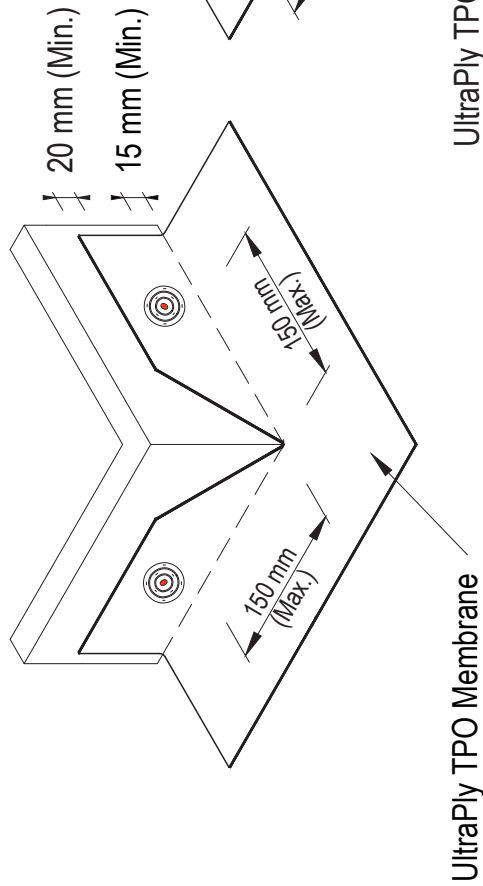


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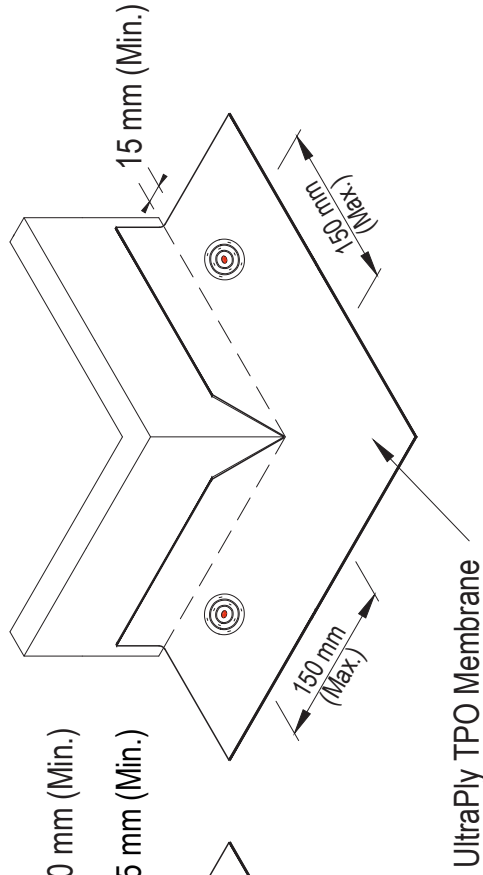
	<b>UltraPly™ TPO</b>		System	UT - BT - 5
	Base Tie-In at Inside Corner using non-Elevate Plates		All	10/2022
			Not to scale	EMEA & Asia

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**Wall / Upstand Attachment**



**Roof Deck Attachment**

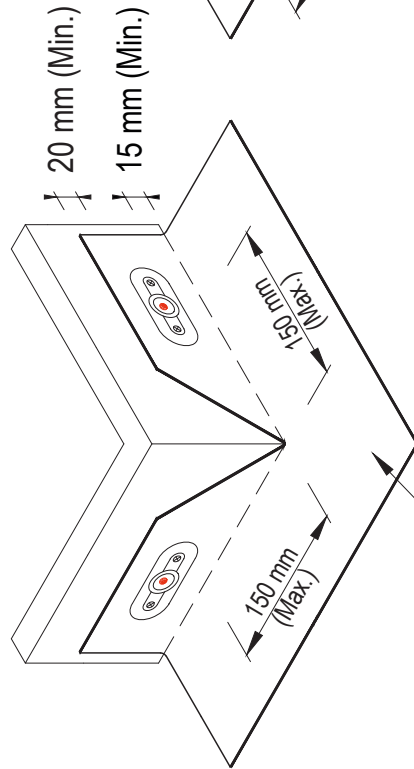


Note: Base Flashings and Terminations are not shown for clarity.  
Refer to appropriate Termination & Base Tie-In details.

	<b>UltraPly™ TPO</b>	System All	UT - BT - 6
	Base Tie-In at Outside Corner using HD Seam Plates	Not to scale	10/2022
			EMEA & Asia

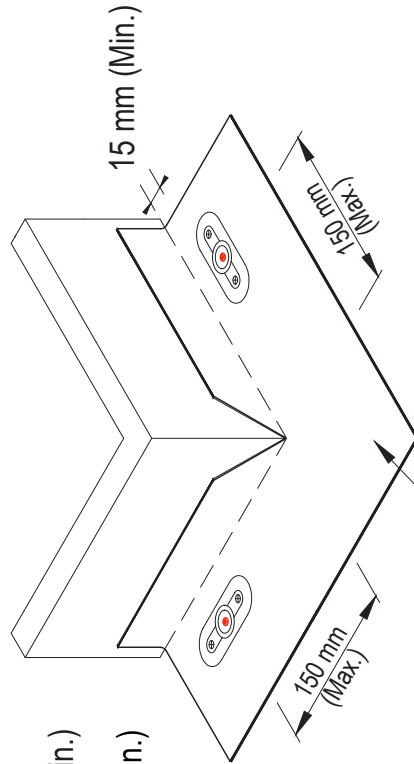
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### Wall / Upstand Attachment



UltraPly TPO Membrane

### Roof Deck Attachment

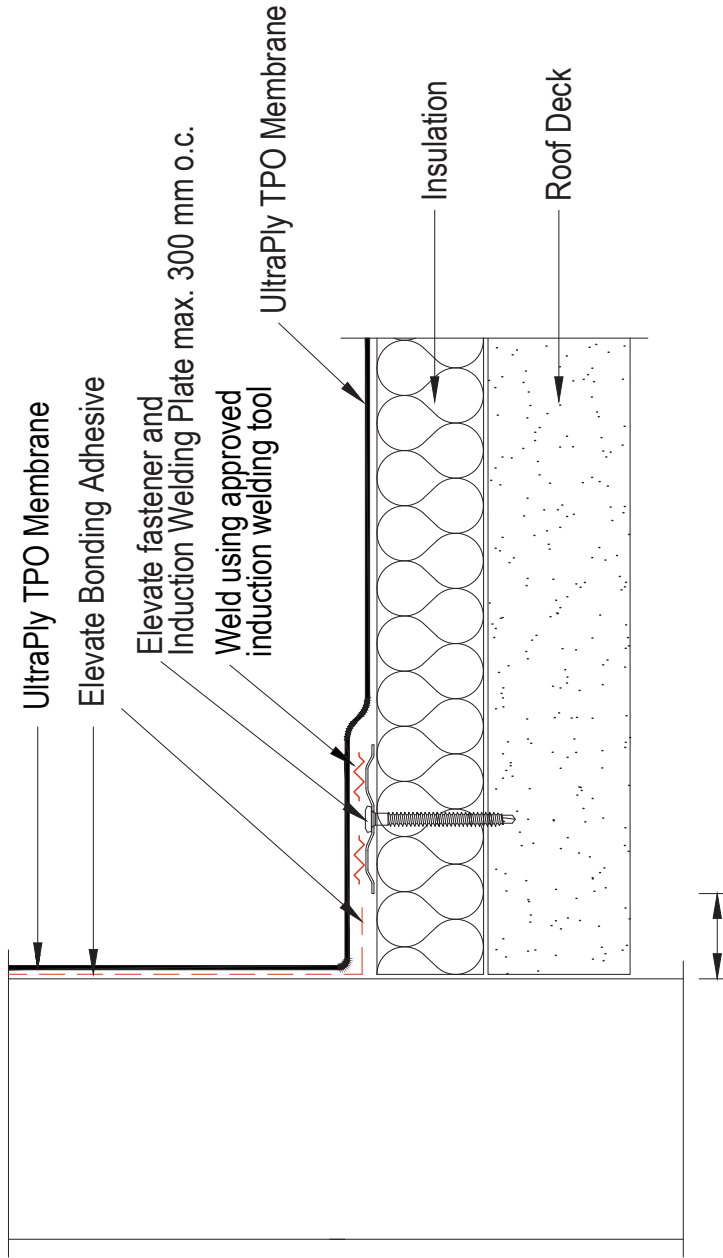


UltraPly TPO Membrane

Note: Base Flashings and Terminations are not shown for clarity.  
Refer to appropriate Termination & Base Tie-In details.

	<b>UltraPly™ TPO</b>	System All	UT - BT - 7
	Base Tie-In at Outside Corner using non-Elevate Plates	Not to scale	10/2022
			EMEA & Asia

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Induction Welding Plate must be at least 25 mm away from angle-change but not more than 150 mm

	<b>UltraPly™ TPO</b>	System All	UT - BT - 8
	<b>Base Tie-In with Induction Welding Plates</b> (Field membrane continues flashing upstand)	Not to scale	10/2022
			EMEA & Asia

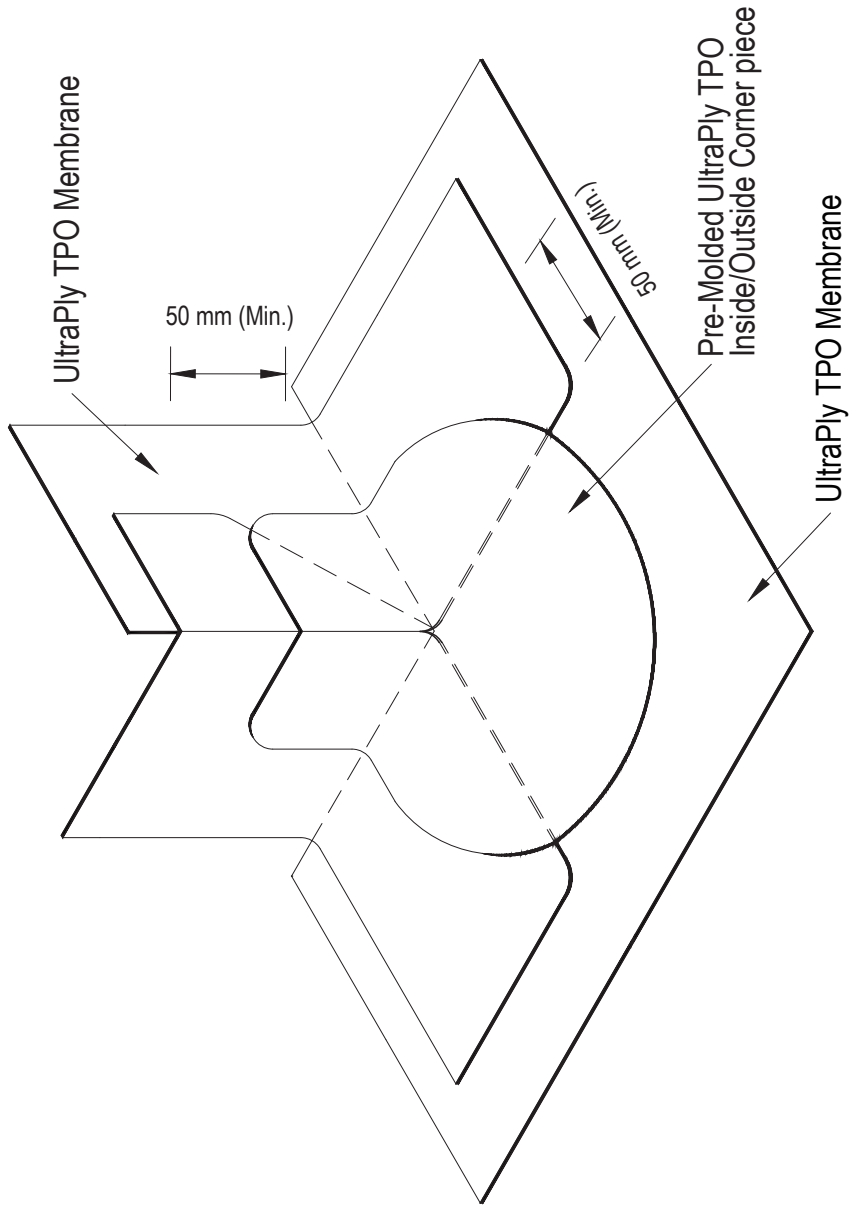




## 5.3 Corners

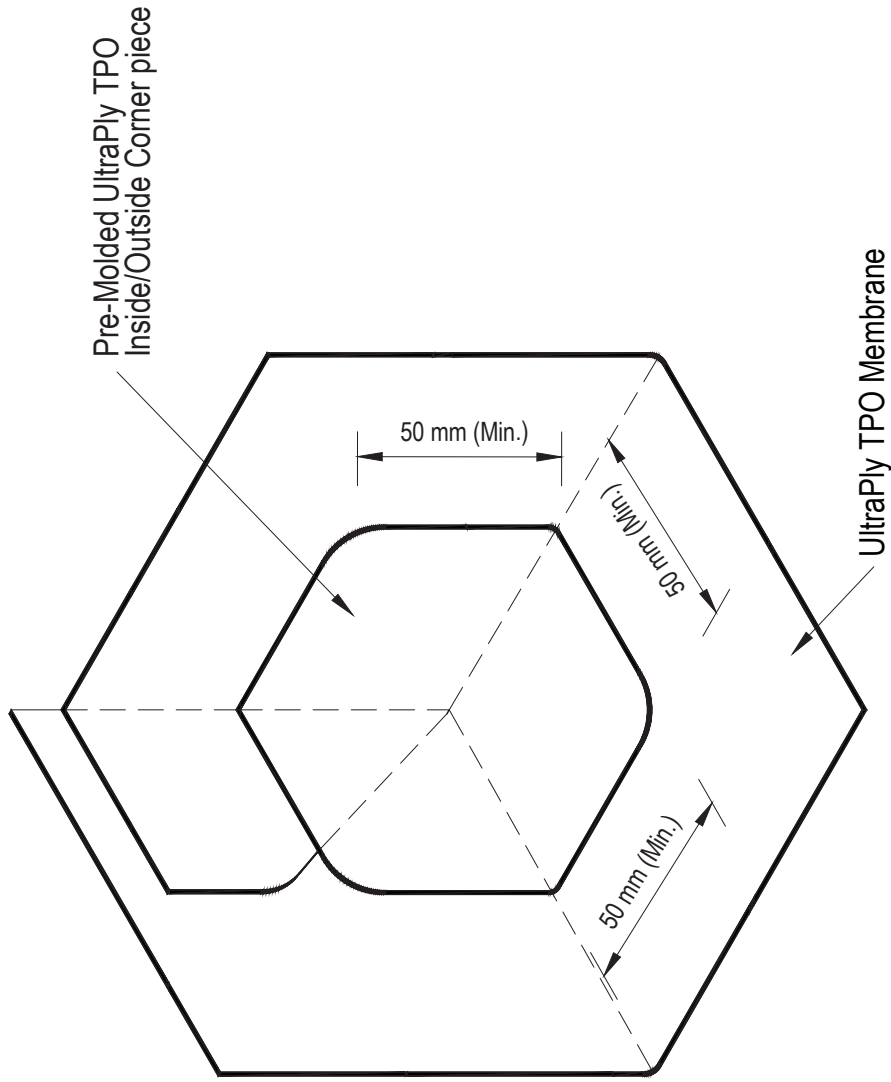
- T-C-1      Outside corner using pre-molded UltraPly TPO corner piece
- T-C-2      Inside corner using pre-molded UltraPly TPO corner piece
- T-C-3      Inside corner with continuous wall flashing using pre-molded UltraPly TPO corner piece
- T-C-4      Field-fabricated inside corner with continuous wall flashing
- T-C-5      Field-fabricated inside corner
- T-C-6      Field-fabricated outside corner
- T-C-7      Field-fabricated outside corner with reinforcement patch

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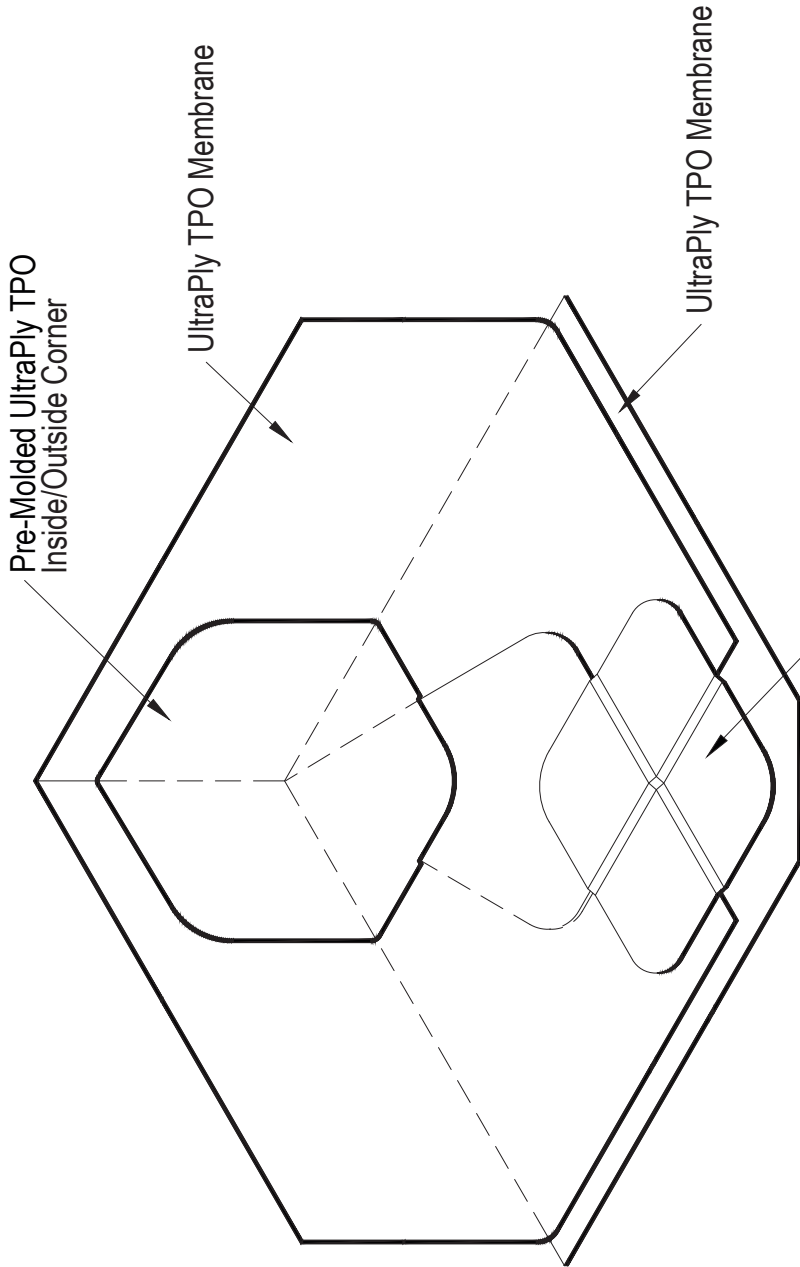
	<b>UltraPly™ TPO</b>	System All	<b>UT - C - 1</b>
	Outside Corner using Pre-Molded UltraPly TPO corner piece	Not to scale	10/2022
			EMEA & Asia

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	<b>UltraPly™ TPO</b> Inside Corner using Pre-Molded UltraPly TPO corner piece	System All	<b>UT - C - 2</b>
		Not to scale	10/2022
			EMEA & Asia

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### UltraPly™ TPO

Inside Corner with Continuous Wall Flashing using Pre-Molded UltraPly TPO corner piece Base Tie-In using Plates Fastened to Upstand

System

All

Not to scale

UT - C - 3

10/2022

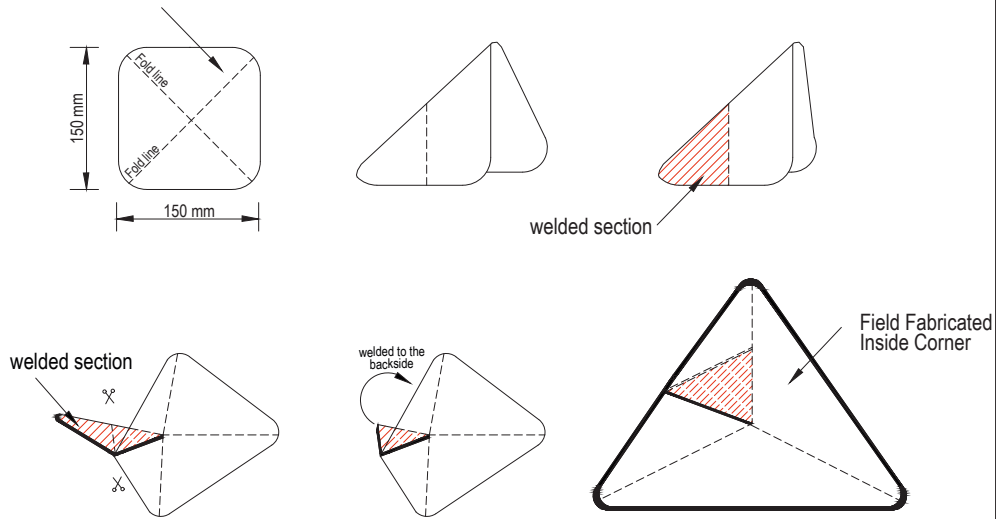
EMEA & Asia

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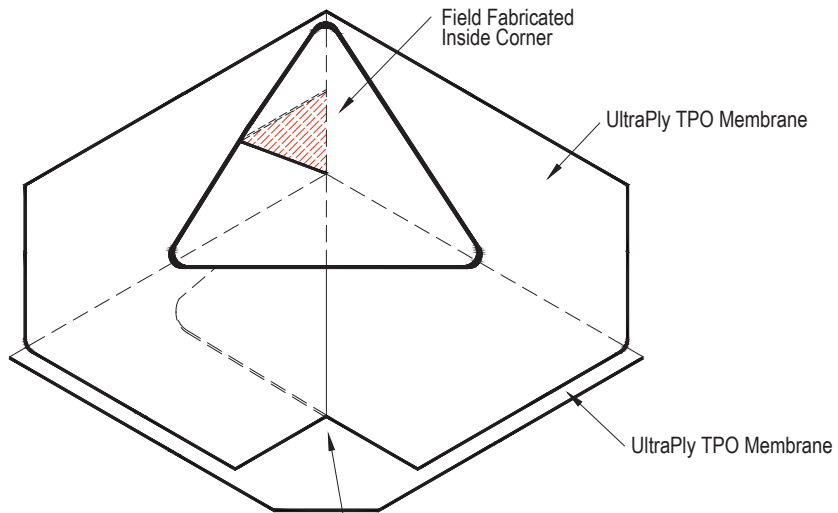
**STEP #1**

UltraPly TPO Unsupported Flashing to Field Fabricated Inside Corner

UltraPly TPO Unsupported Flashing



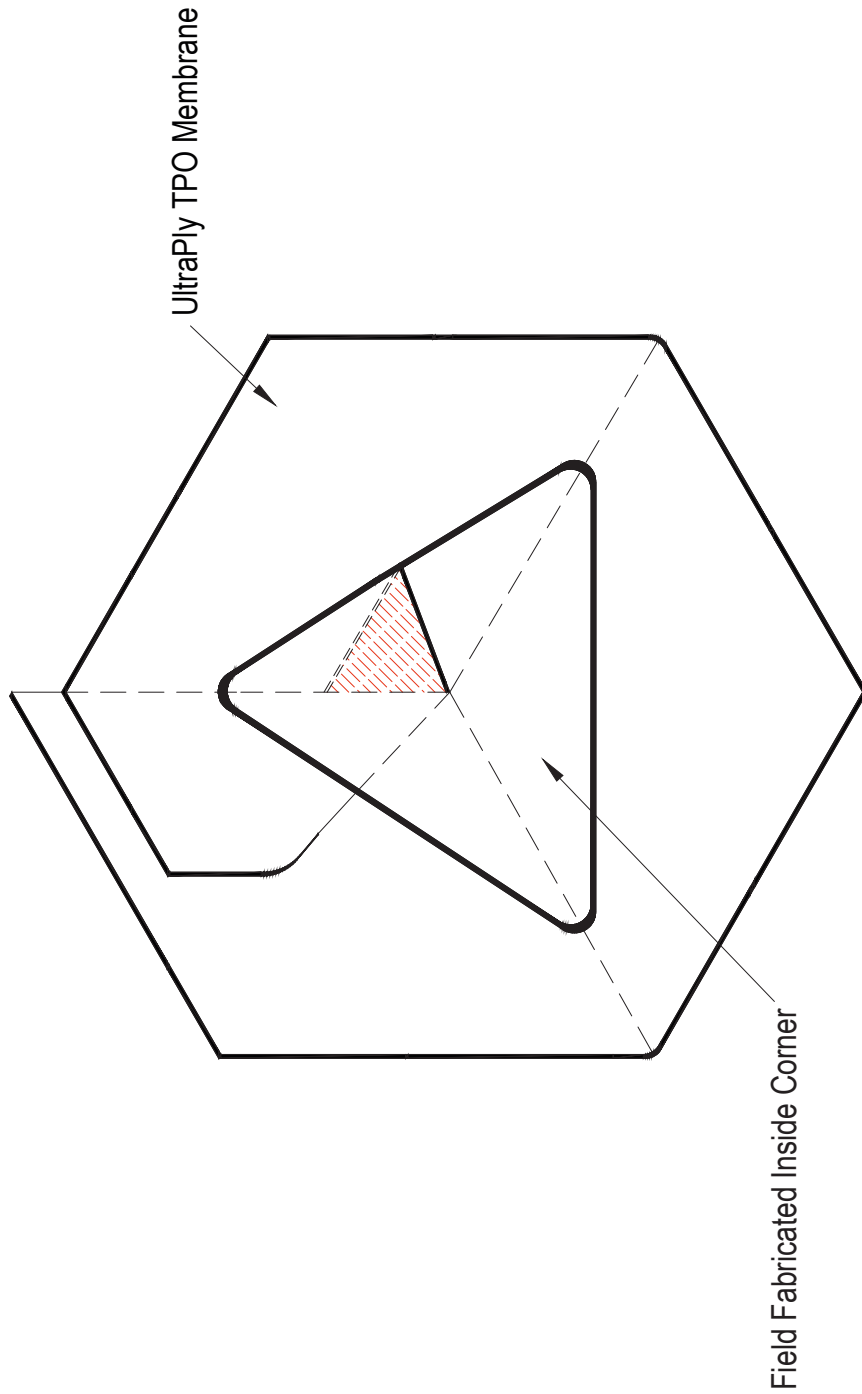
**STEP #2**



Note: UltraPly TPO Unsupported Flashing (or T-joint cover) for membrane thickness of 1.5mm or more

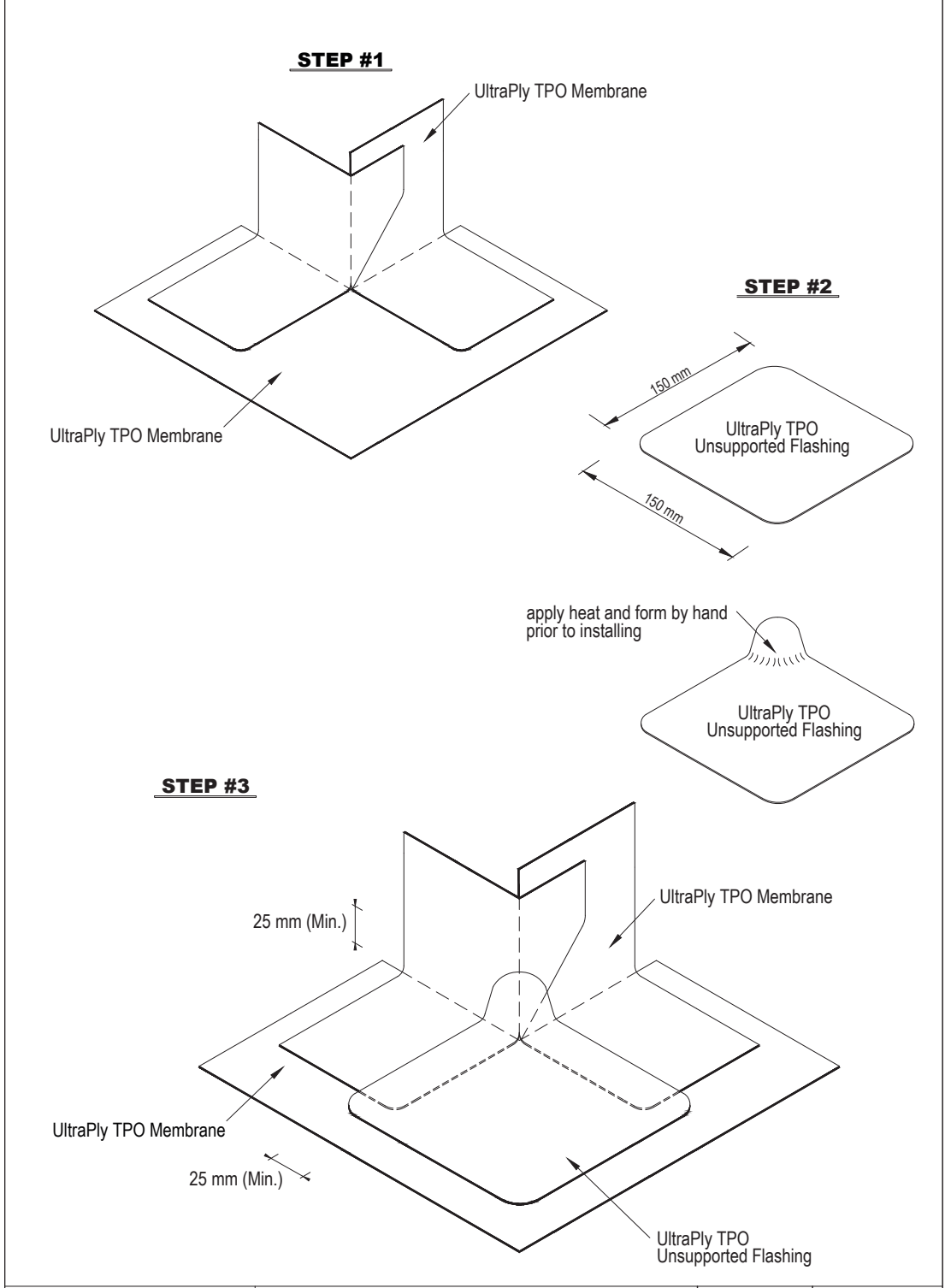
	UltraPly™ TPO	System All	UT - C - 4
	Field Fabricated Inside Corner with Continuous Wall Flashing	Not to scale	10/2022 EMEA & Asia

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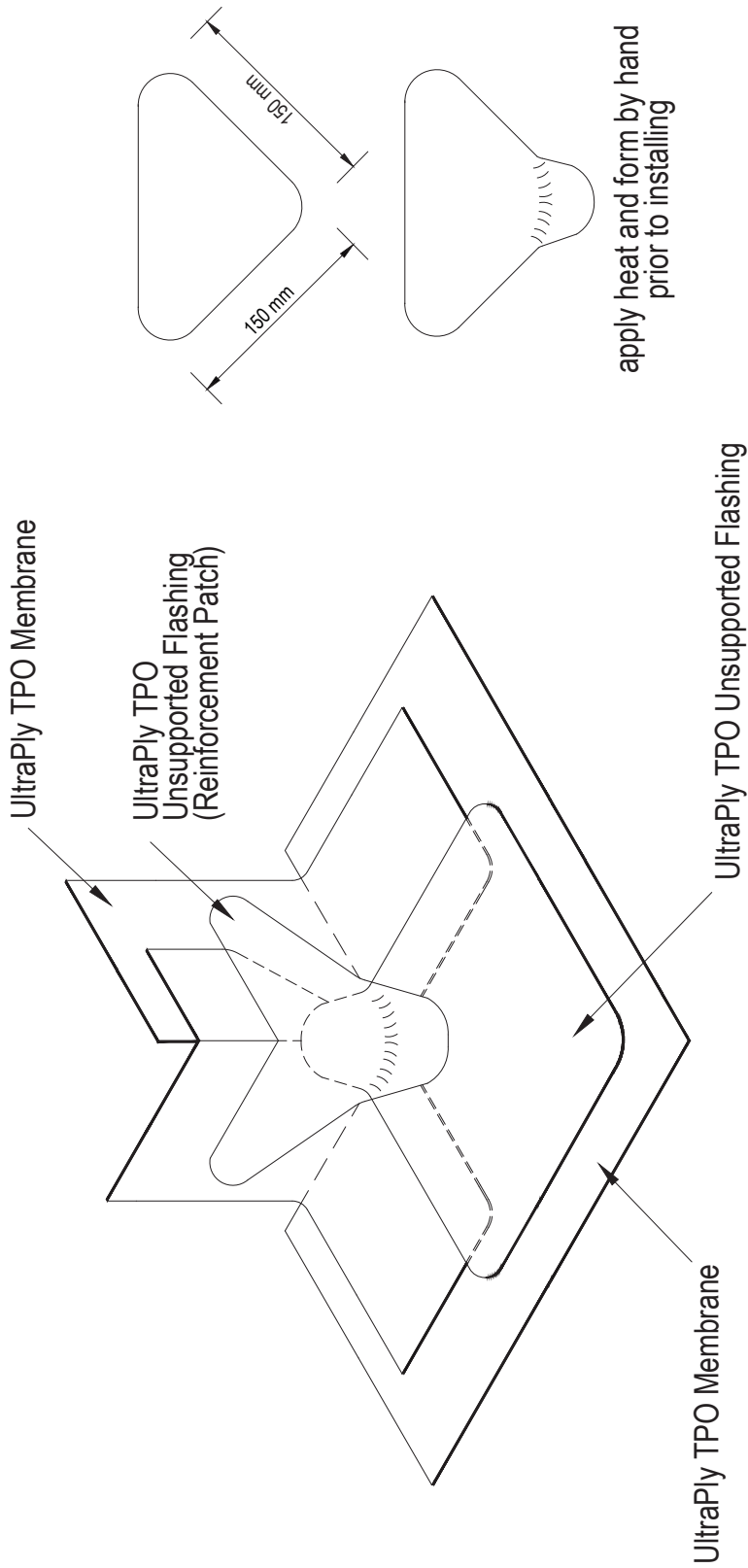
	<b>UltraPly™ TPO</b> Field Fabricated Inside Corner		System All	UT - C - 5
			Not to scale	10/2022
				EMEA & Asia

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	UltraPly™ TPO	System All	<b>UT - C - 6</b>
	Field Fabricated Outside Corner	Not to scale	10/2022 EMEA & Asia

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	<b>UltraPly™ TPO</b> Field Fabricated Outside Corner with Reinforcement Patch		System All	UT - C - 7
			Not to scale	10/2022
				EMEA & Asia

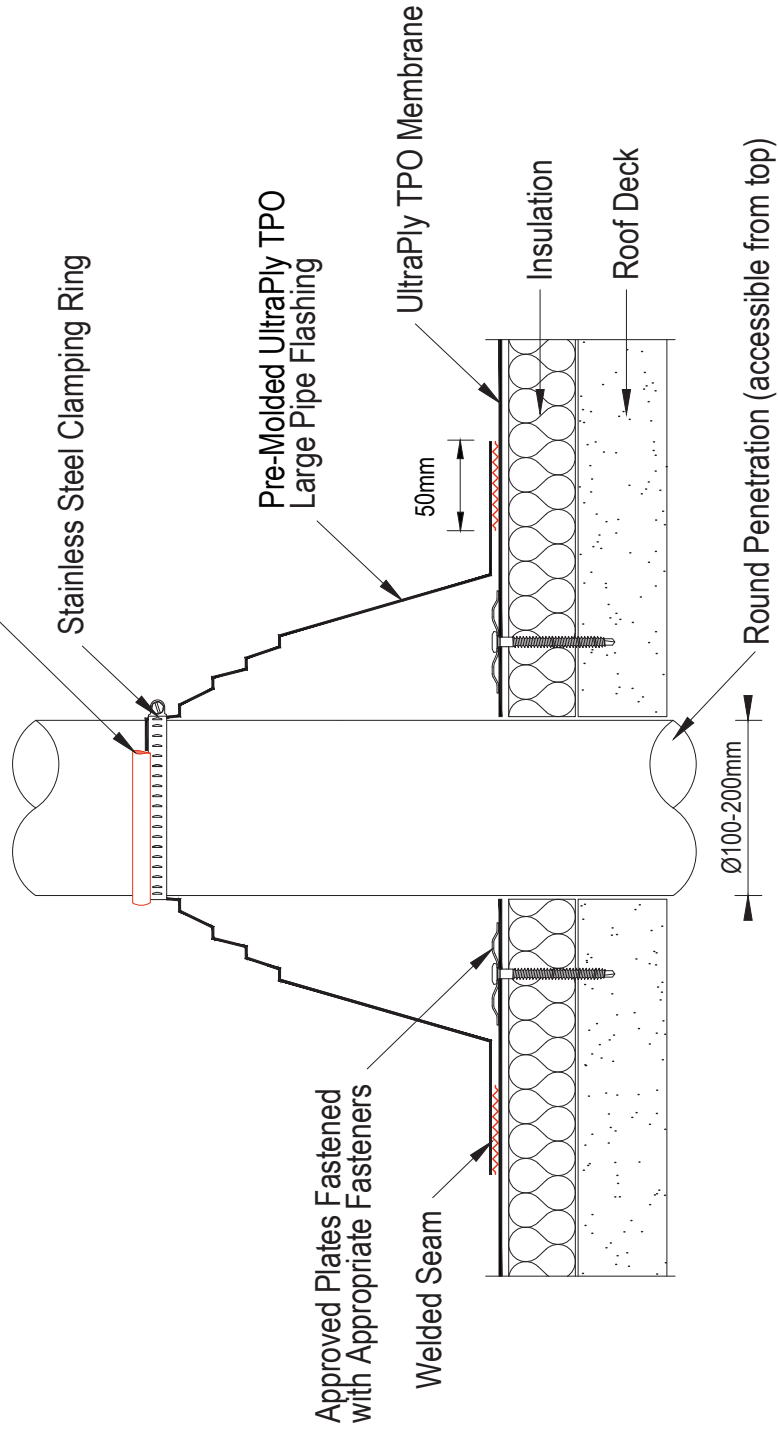



## 5.4 Penetrations

T-P-1	Penetration with UltraPly TPO Pipe Flashing
T-P-2	Penetration with UltraPly TPO Universal Pipe flashing
T-P-3	Penetration with UltraPly TPO Unsupported Flashing
T-P-4	Penetration with UltraPly TPO Unsupported Flashing (alternative method)
T-P-5	Hot pipe penetration
T-P-6	Penetration using TPO Penetration Pocket Kit
T-P-7	Penetration pocket using UltraPly TPO Coated Metal
T-P-8	Membrane securement layout at penetration (target patch)
T-P-9	Membrane securement layout at penetration (cover strips)

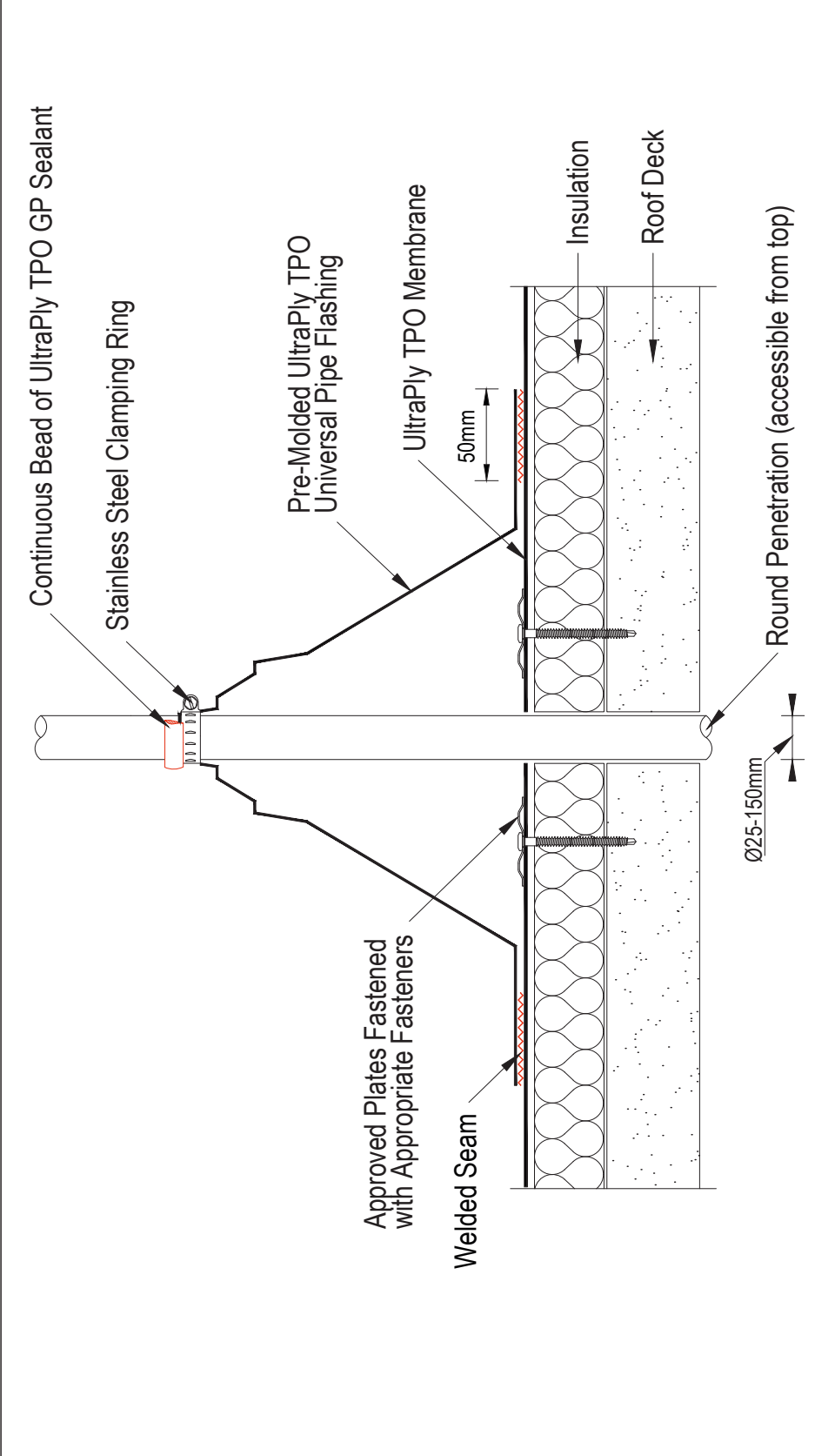
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**Continuous Bead of UltraPly TPO GP Sealant**



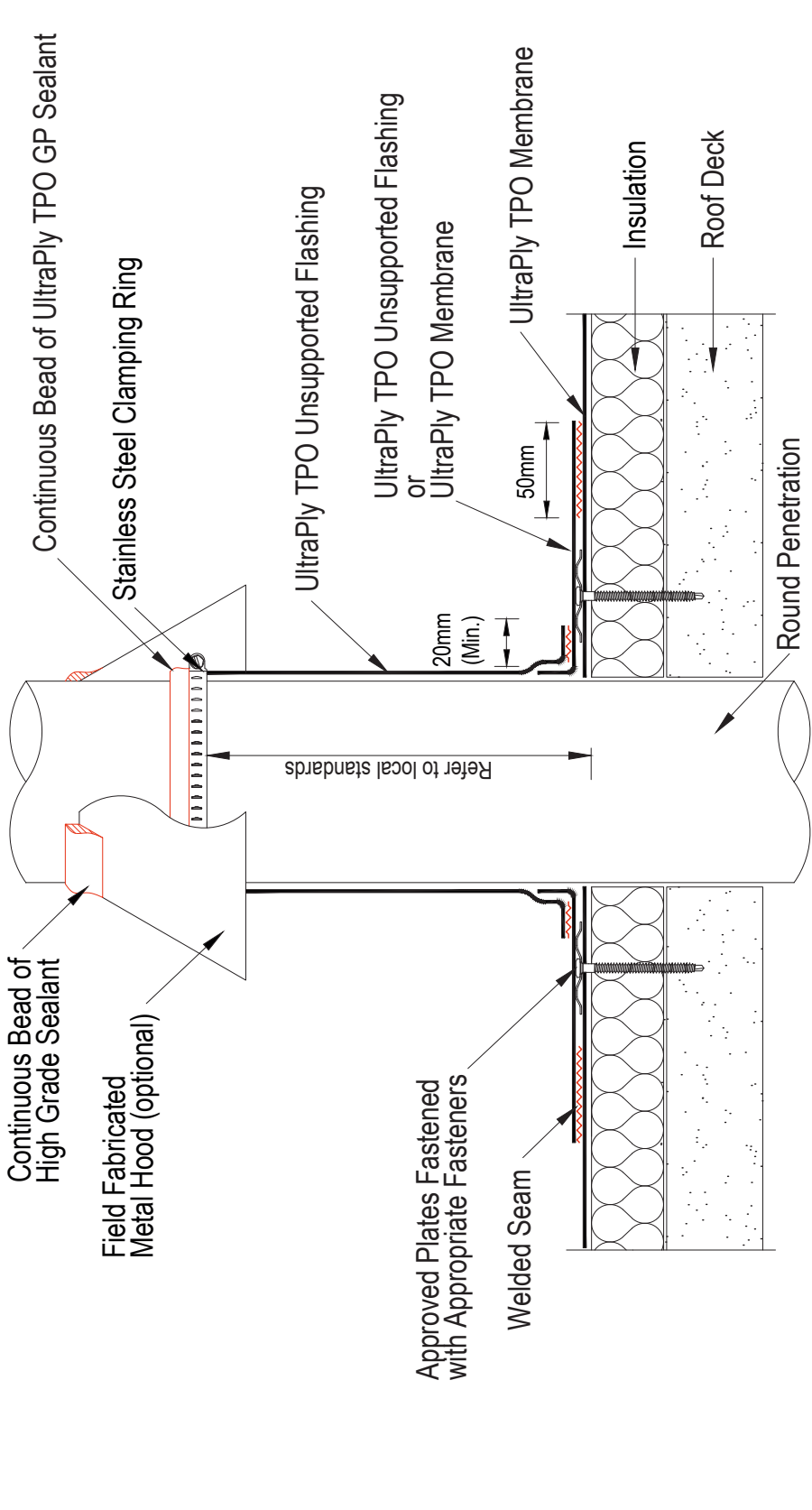
	<b>UltraPly™ TPO</b> Penetration with UltraPly TPO Large Pipe Flashing	System All	<b>UT - P - 1</b>
		Not to scale	10/2022
			EMEA & Asia

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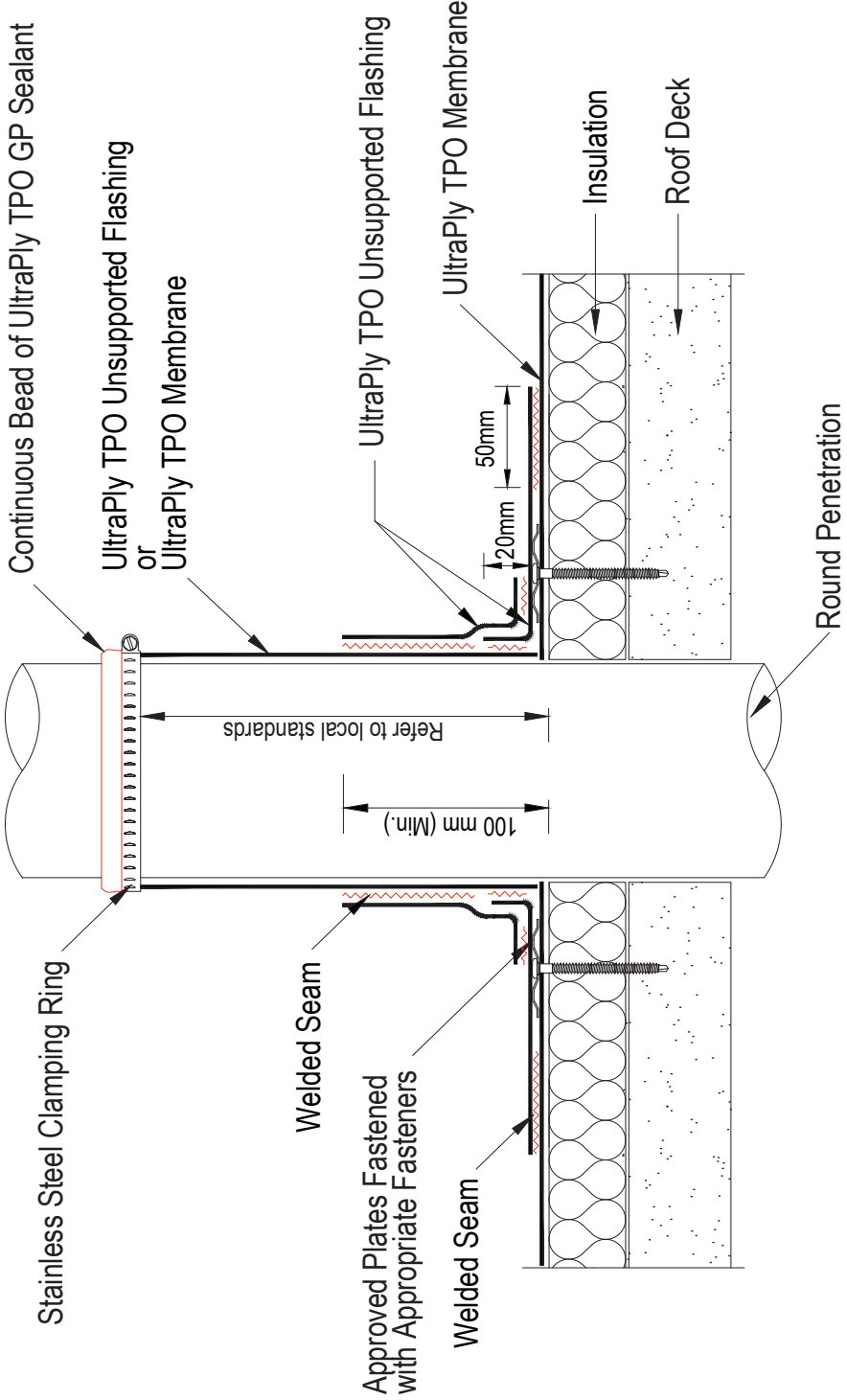
	<b>UltraPly™ TPO</b> Penetration with UltraPly TPO Universal Pipe Flashing	System All	<b>UT - P - 2</b>
		Not to scale	10/2022
			EMEA & Asia


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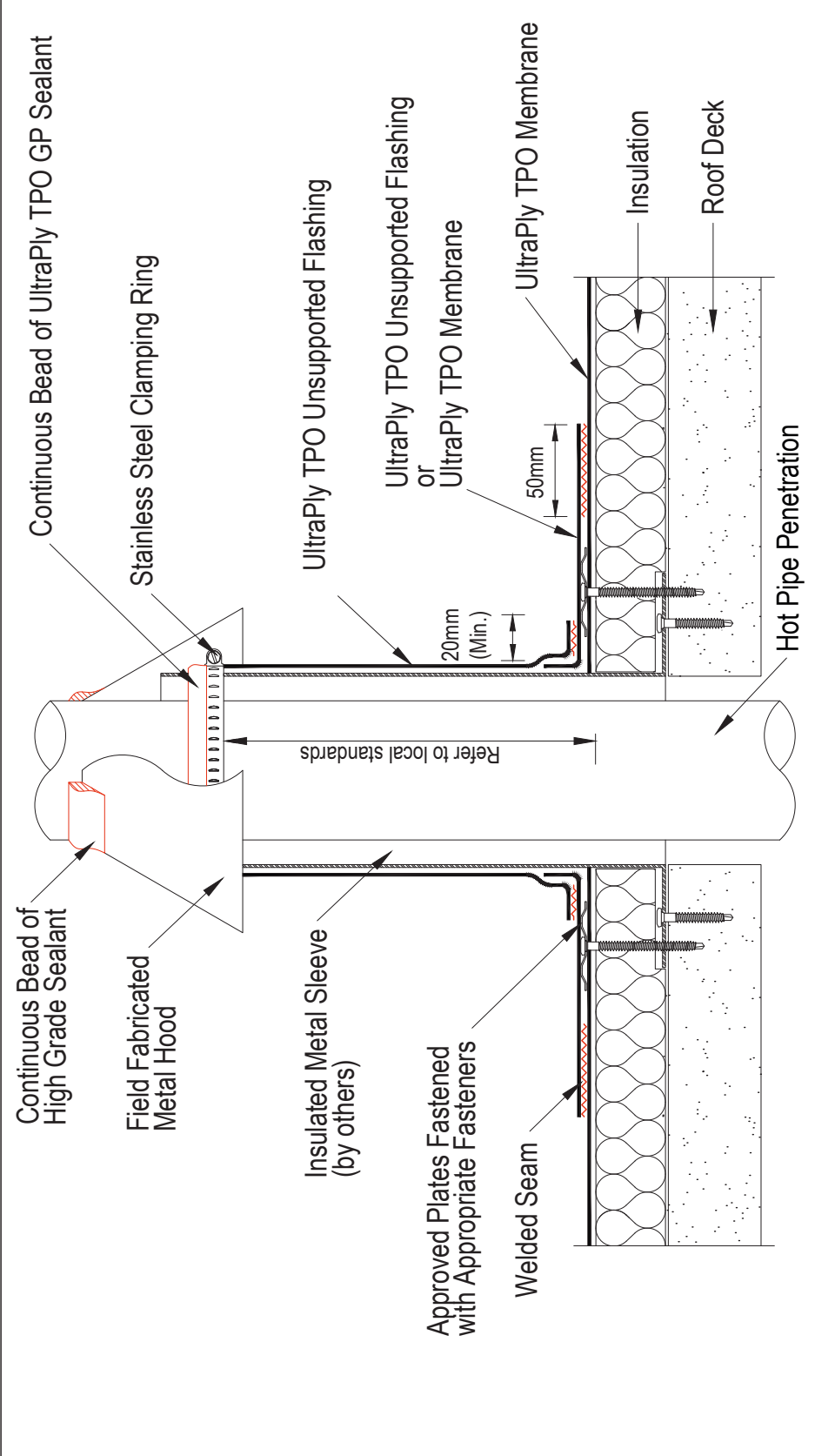
	<b>UltraPly™ TPO</b> Penetration with UltraPly TPO Unsupported Flashing		System All	<b>UT - P - 3</b> 10/2022 EMEA & Asia
			Not to scale	

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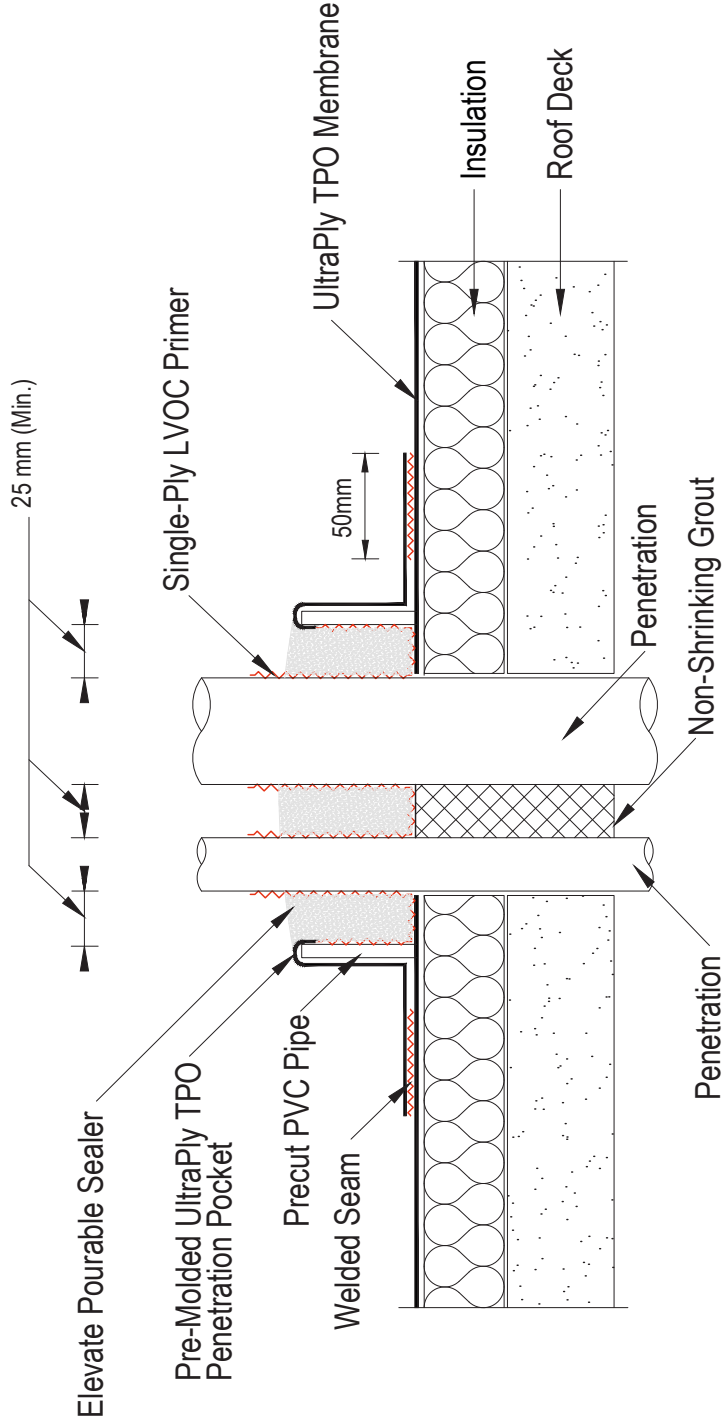
	<b>UltraPly™ TPO</b> Penetration with UltraPly TPO Unsupported Flashing (Alternative method)		System All	UT - P - 4
			Not to scale	10/2022
				EMEA & Asia

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	<b>UltraPly™ TPO</b> Hot Pipe Penetration		System All	UT - P - 5
	Hot Pipe Penetration		Not to scale	10/2022
				EMEA & Asia

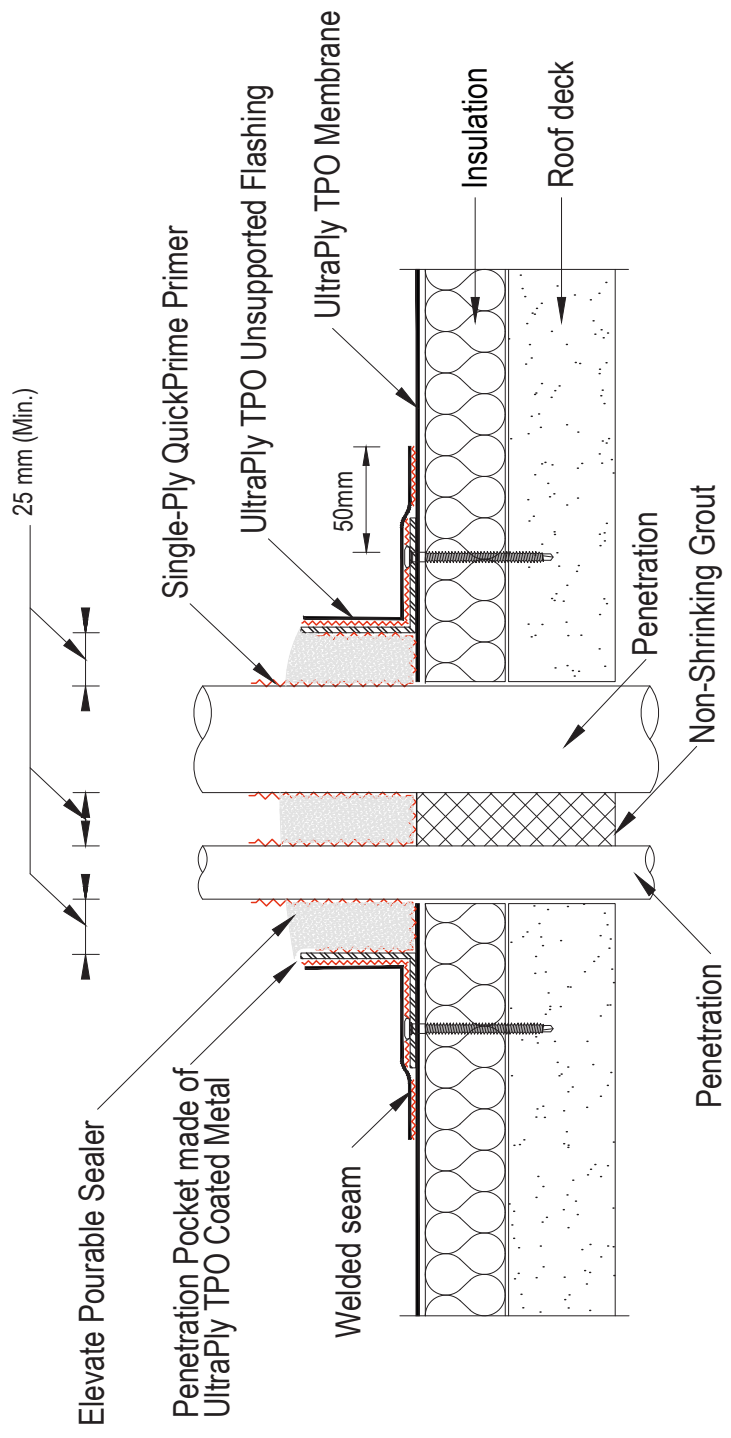
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Note: Refer to UT-P-8 Detail for appropriate base tie-in.

	<b>UltraPly™ TPO</b> Penetration using UltraPly TPO Penetration Pocket Kit	System	<b>UT - P - 6</b>
		All	10/2022
		Not to scale	EMEA & Asia

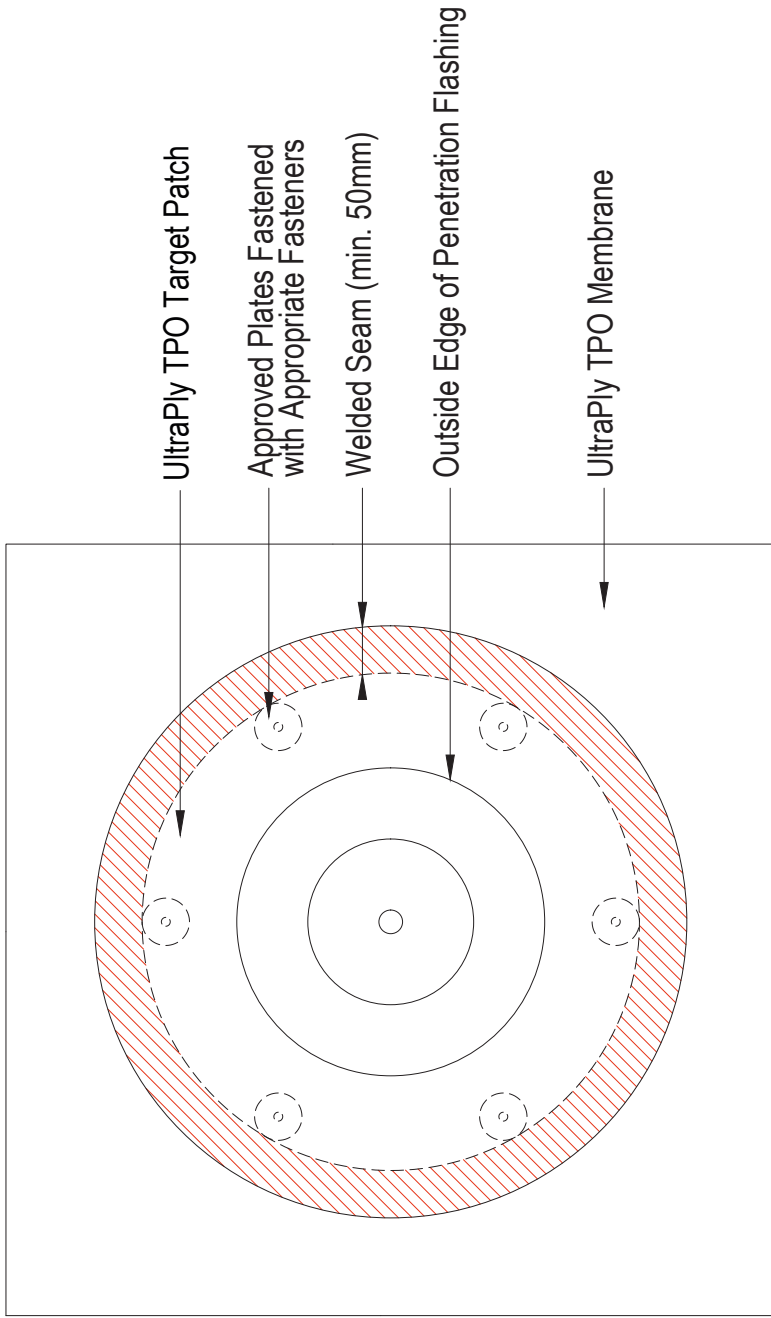
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	<b>UltraPly™ TPO</b> Penetration Pocket using UltraPly TPO Coated Metal	System	UT - P - 7
		All	10/2022
		Not to scale	EMEA & Asia



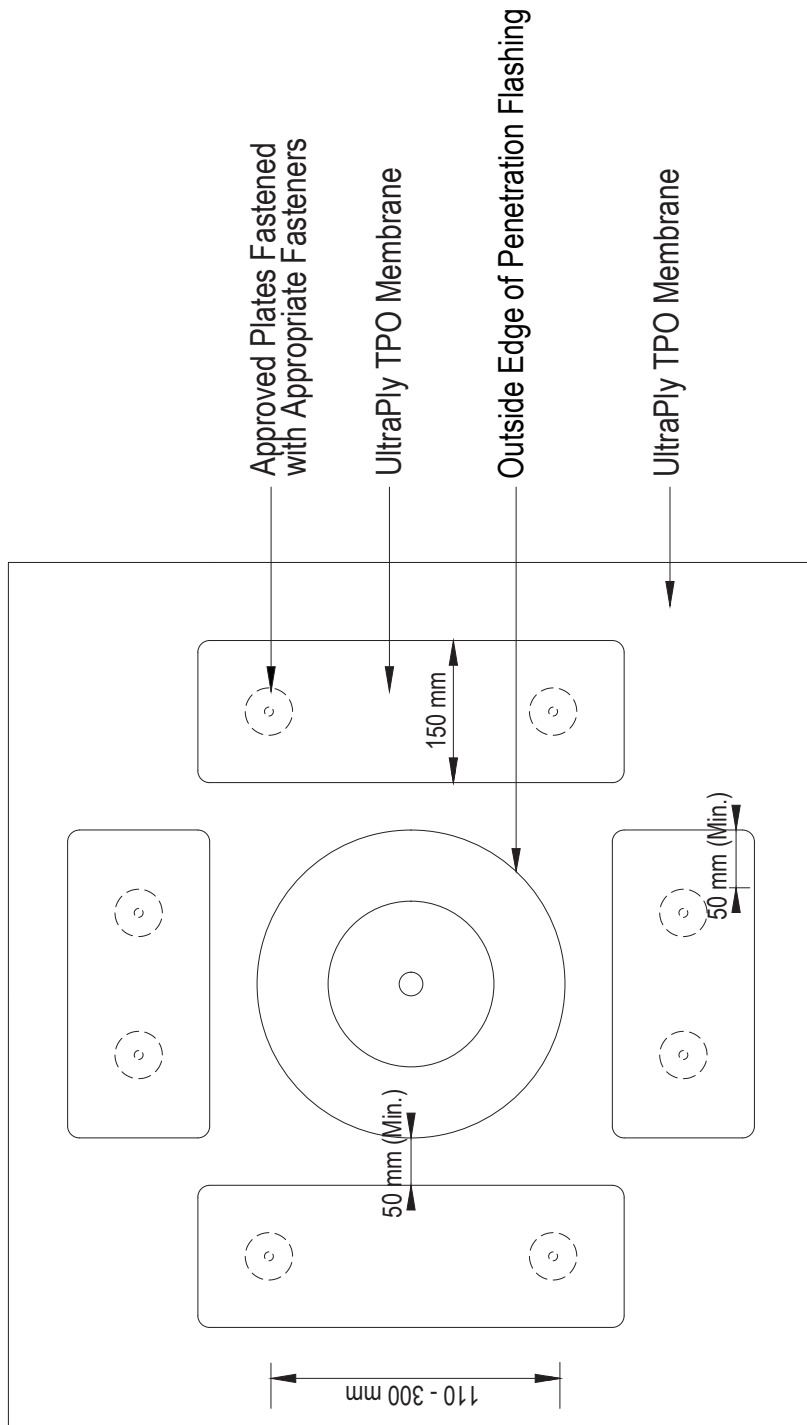
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Note: All cut membrane edges with exposed scrim must be sealed with Cut Edge Sealant.

	<b>UltraPly™ TPO</b>		<b>UT - P - 8</b>
	Membrane Securement Layout at Penetration (Target Patch)		System All
	Not to scale		10/2022 EMEA & Asia

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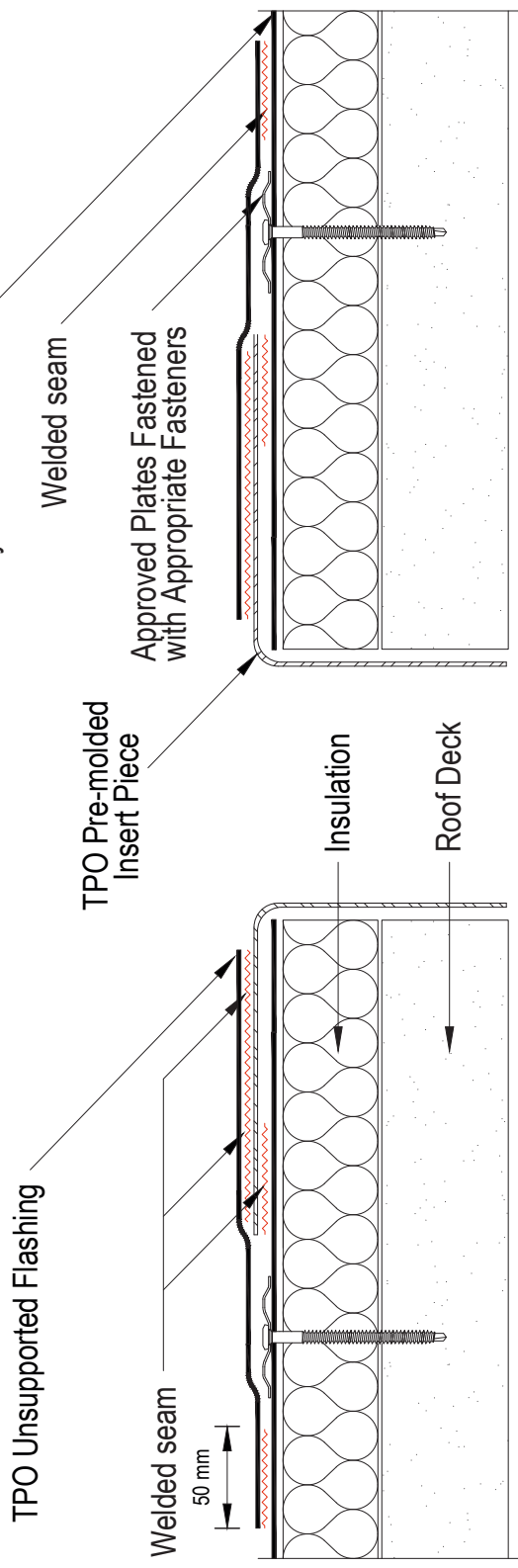
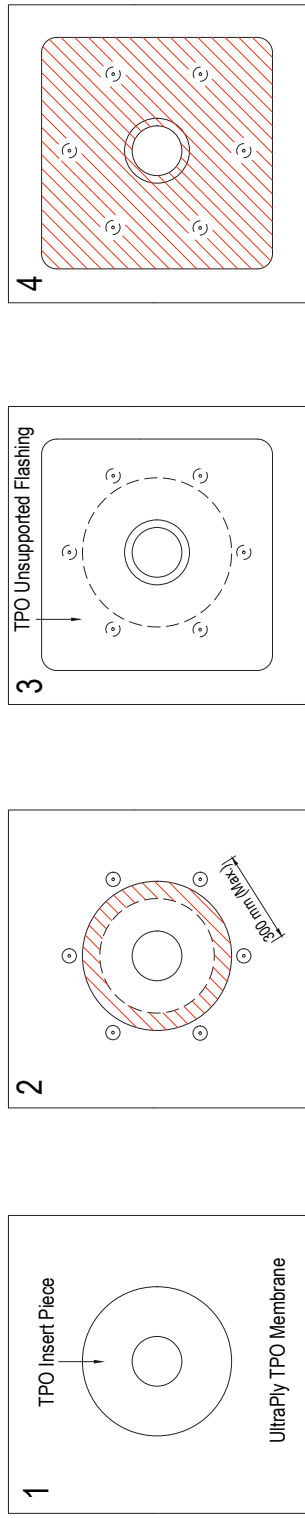
Note: All cut membrane edges with exposed scrim must be sealed with Cut Edge Sealant.

	<b>UltraPly™ TPO</b> Membrane Securement Layout at Penetration (Cover Strips)		System All	<b>UT - P - 9</b> 10/2022 EMEA & Asia
			Not to scale	

## 5.5 Drains

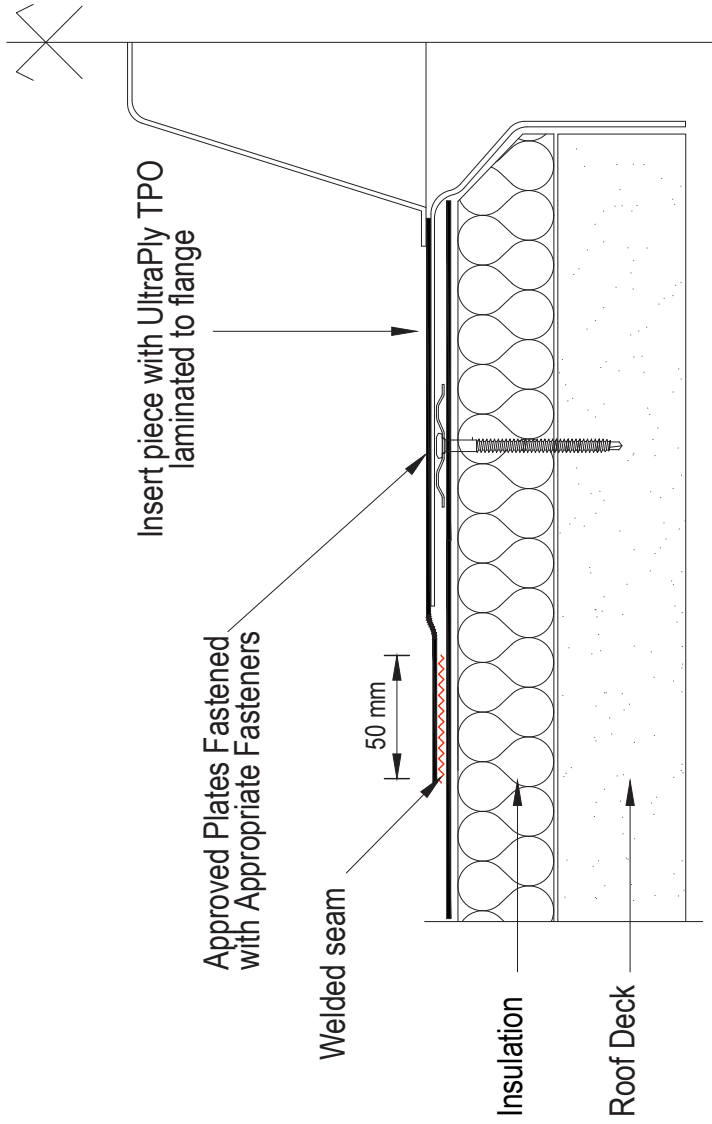
- T-D-1 Drain using TPO pre-molded insert piece
- T-D-2 Drain using insert piece with UltraPly TPO membrane laminated to flange
- T-D-3 Drain with clamping ring
- T-D-4 TPO pre-molded scupper

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	<b>UltraPly™ TPO</b> Drain using TPO Pre-molded Insert Piece		System All	UT - D - 1
			Not to scale	10/2022 EMEA & Asia

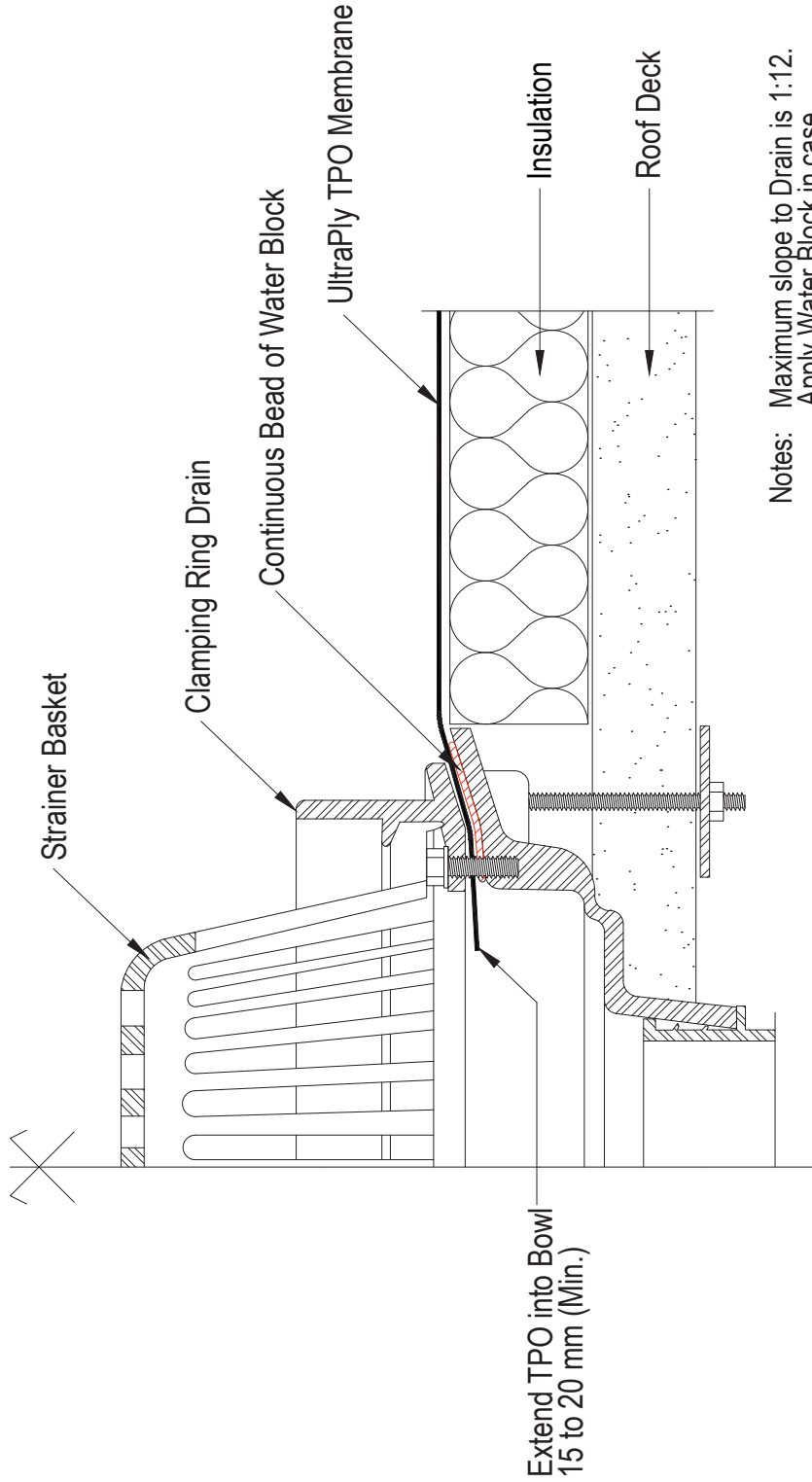
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Note: All cut membrane edges with exposed scrim must be sealed with Cut Edge Sealant.

	<b>UltraPly™ TPO</b> Drain using Insert piece with UltraPly TPO laminated to flange		System All	<b>UT - D - 2</b> 10/2022 EMEA & Asia
			Not to scale	

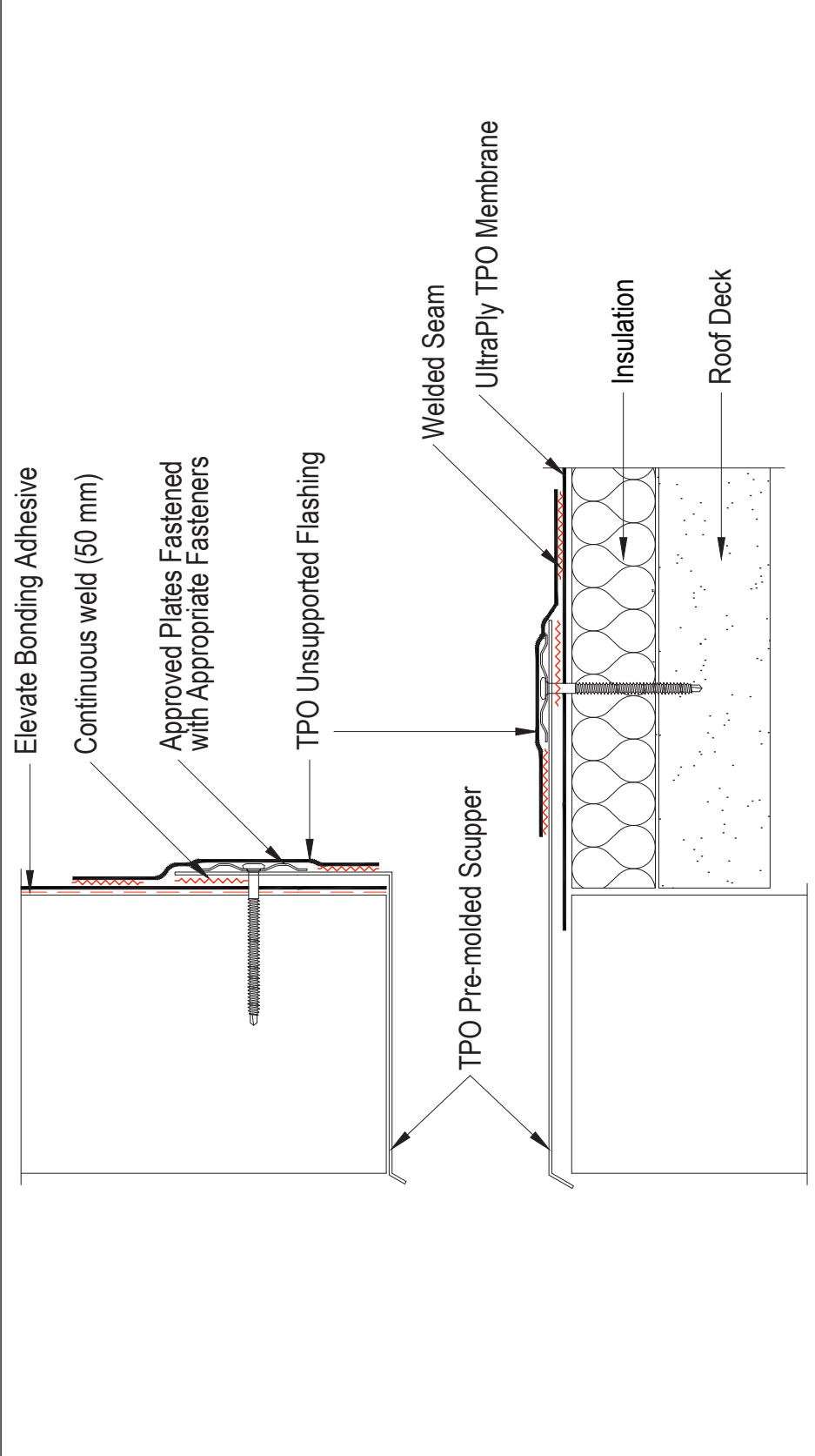
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Notes: Maximum slope to Drain is 1:12.  
Apply Water Block in case clamping system is used without rubber rings

	<b>UltraPly™ TPO</b>		System	<b>UT - D - 3</b>
	Drain with Clamping Ring		All	10/2022
			Not to scale	

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	UltraPly™ TPO		System All	UT - D - 4
	TPO Pre-molded Scupper		Not to scale	10/2022
				EMEA & Asia

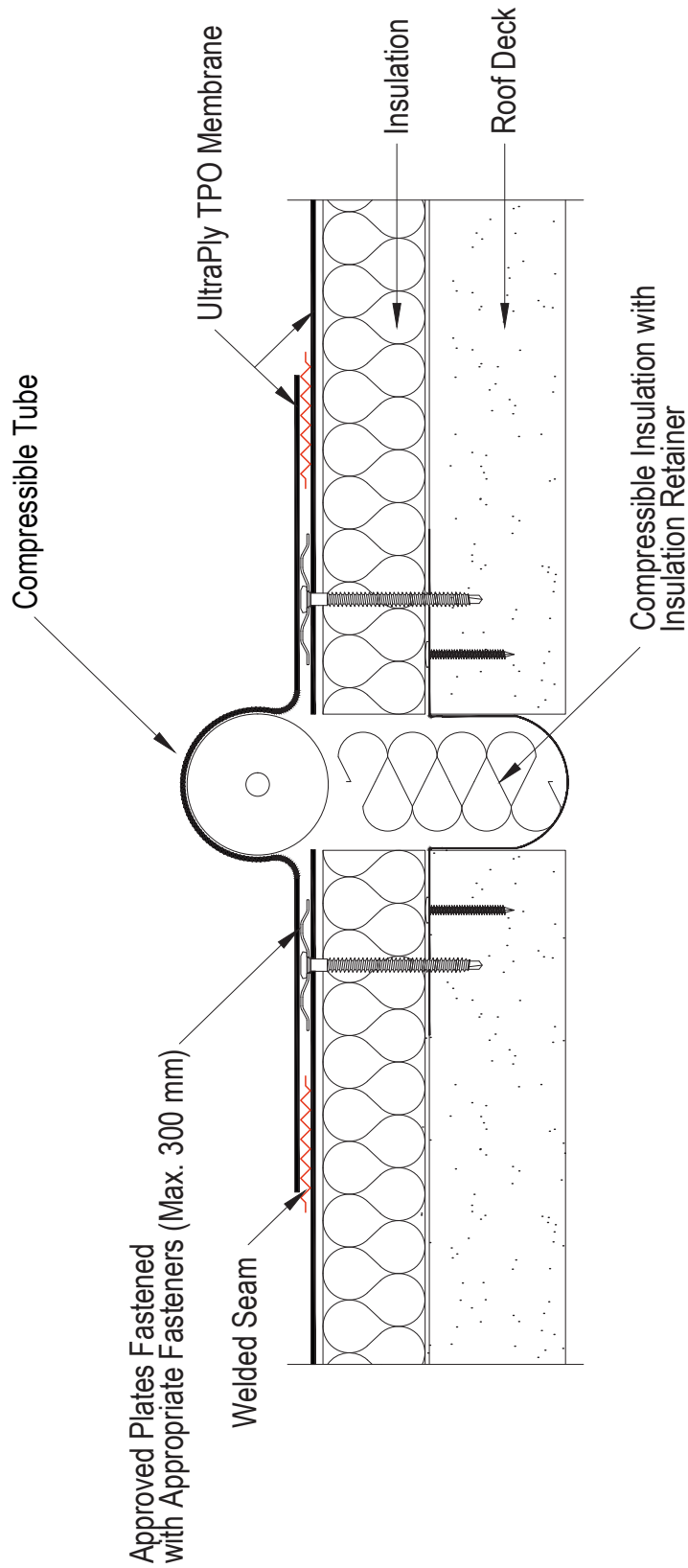




## 5.6 Expansion joints

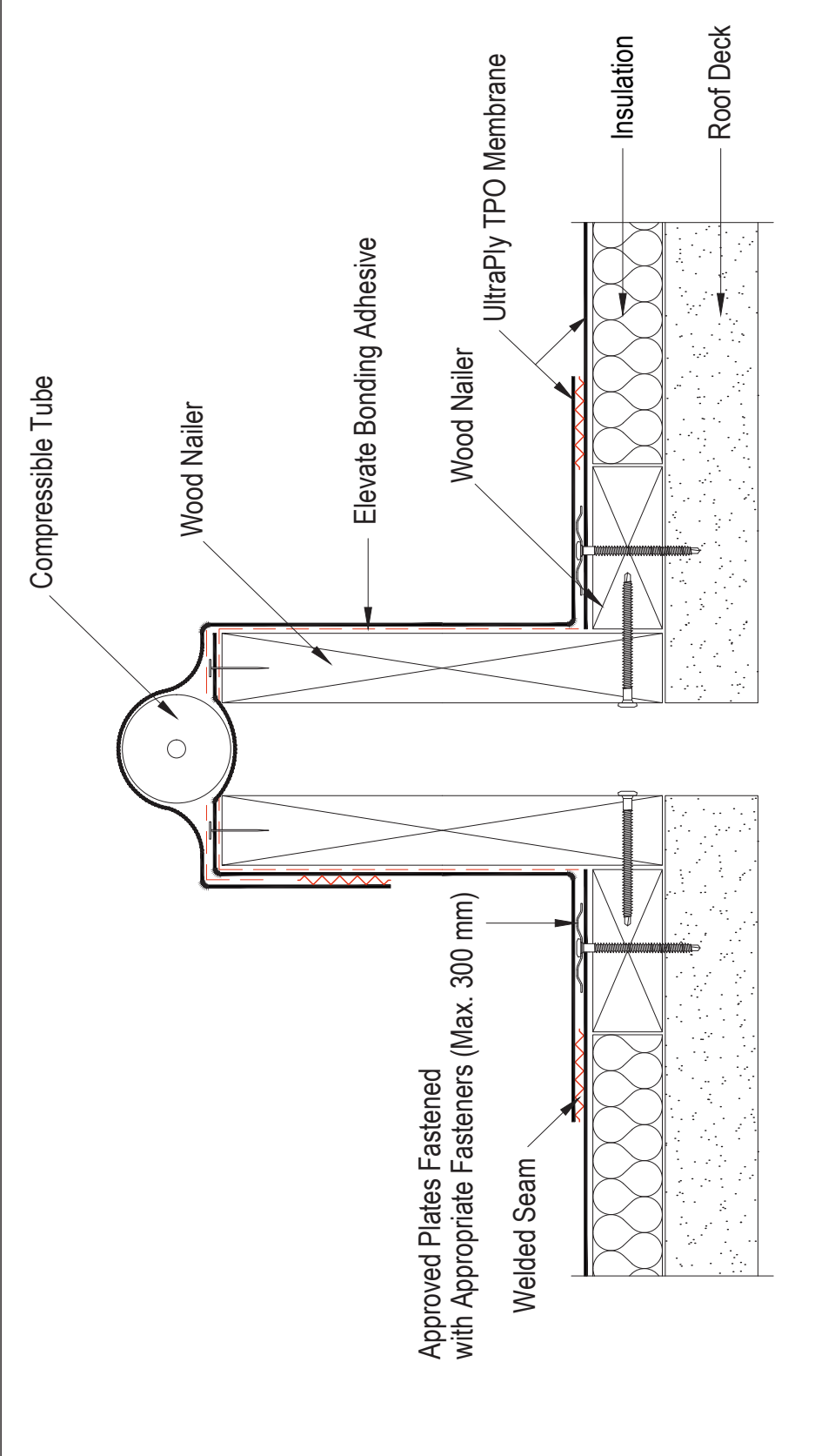
T-E-1	Flat expansion joint
T-E-2	Raised expansion joint
T-E-3	Raised expansion joint with metal joint cover
T-E-4	Wall expansion joint


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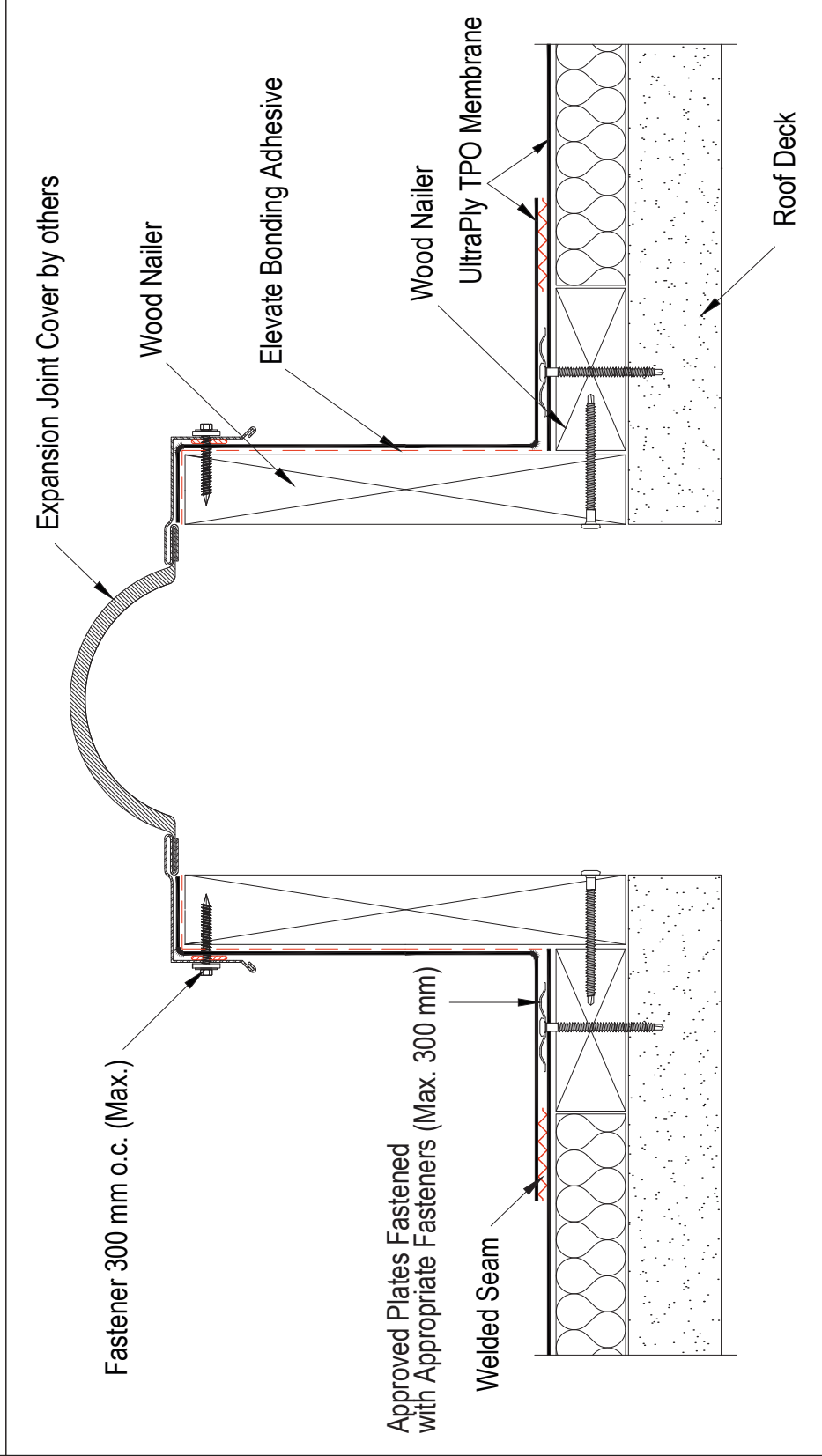
	<b>UltraPly™ TPO</b> Flat Expansion Joint	System All	<b>UT - E - 1</b>
		Not to scale	10/2022
			EMEA & Asia

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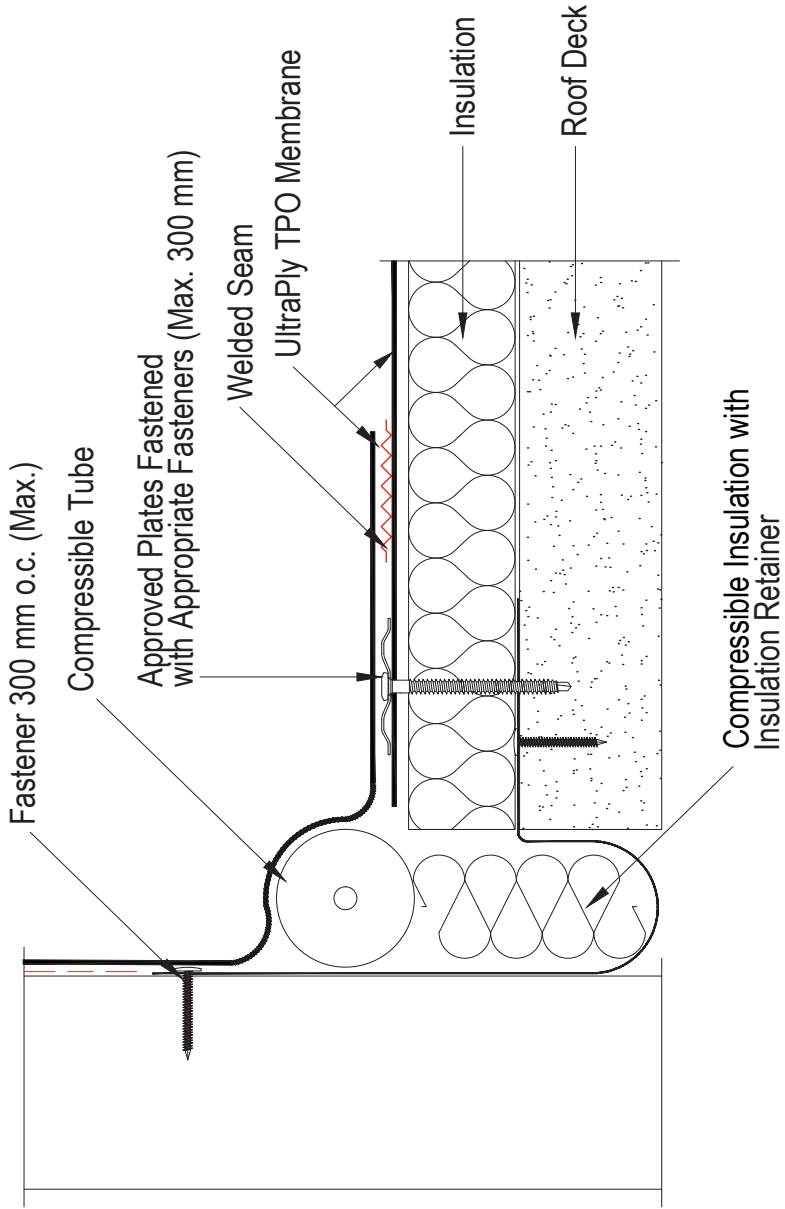
	<b>UltraPly™ TPO</b> Raised Expansion Joint		System All	<b>UT - E - 2</b> 10/2022 EMEA & Asia
			Not to scale	

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	<b>UltraPly™ TPO</b> Raised Expansion Joint with Metal Joint Cover		System All	UT - E - 3
			Not to scale	10/2022 EMEA & Asia

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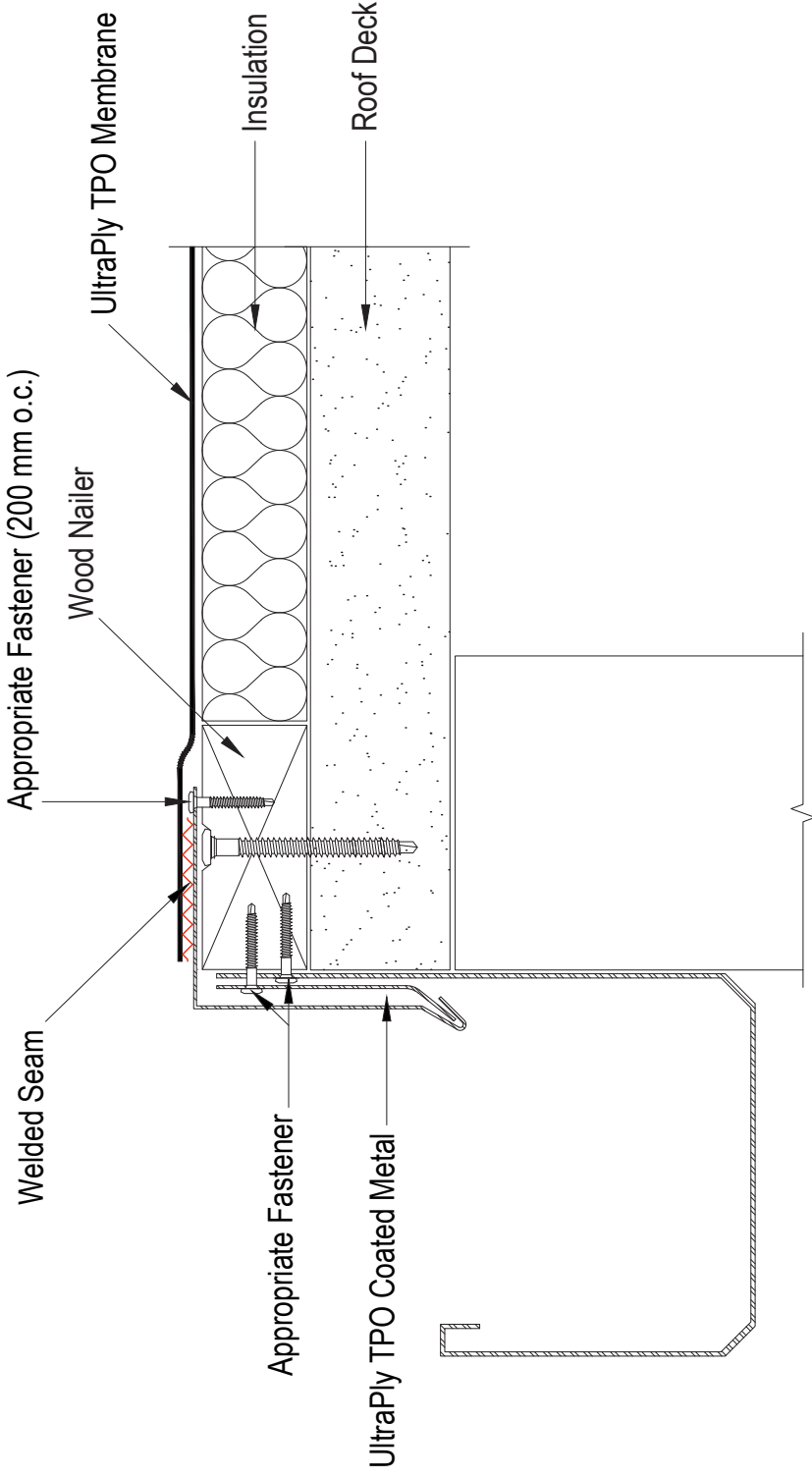
	UltraPly™ TPO		System All	UT - E - 4
	Wall Expansion Joint		Not to scale	10/2022
				EMEA & Asia



## 5.7 Roof edges

T-RE-1	Roof edge gutter using profile of UltraPly TPO Coated Metal
T-RE-2	Roof edge using profile of UltraPly TPO Coated Metal
T-RE-3	Joint between profiles of UltraPly TPO Coated Metal
T-RE-4	Roof edge with edge profile
T-RE-5	Alternative roof edge with edge profile
T-RE-6	Roof edge using TPO QuickSeam Flashing

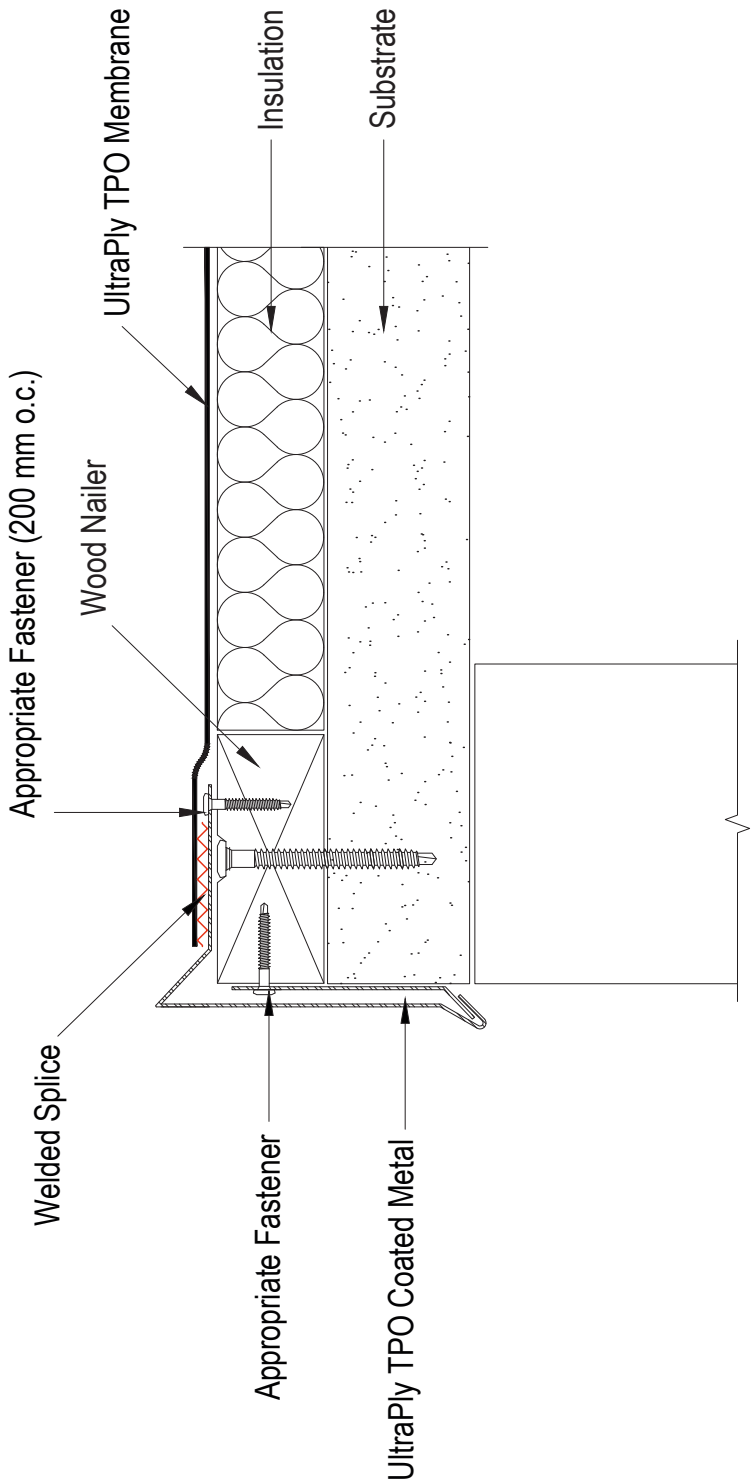
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	<b>UltraPly™ TPO</b> Roof Edge Gutter using profile of UltraPly TPO Coated Metal		System All	UT - RE - 1
			Not to scale	10/2022
				EMEA & Asia



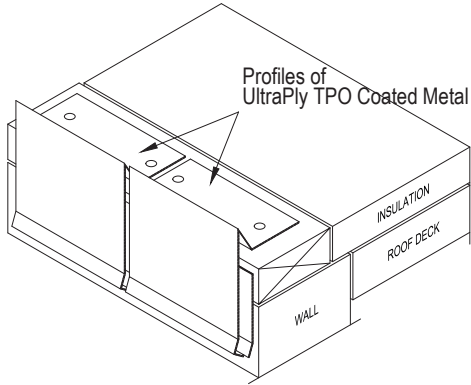
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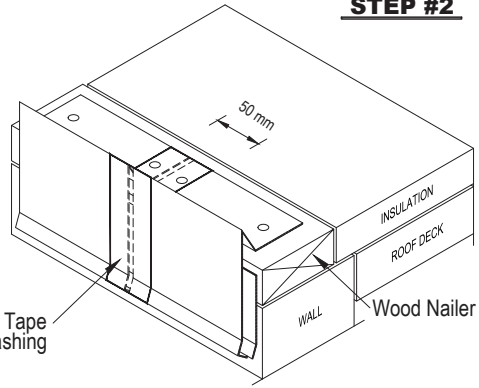
	<b>UltraPly™ TPO</b> Roof Edge with UltraPly TPO Coated Metal		System All	UT - RE - 2
			Not to scale	10/2022
				EMEA & Asia

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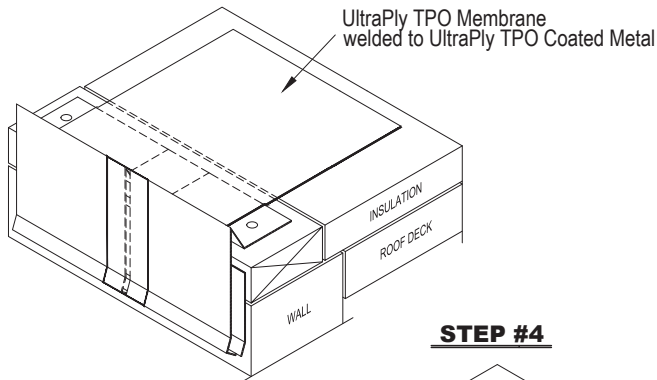
**STEP #1**



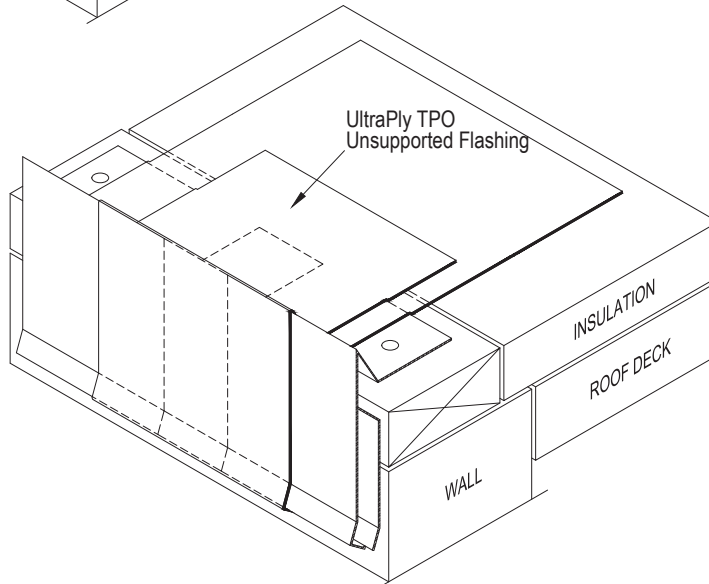
**STEP #2**



**STEP #3**



**STEP #4**



UltraPly™ TPO

Joint between profiles of  
UltraPly TPO Coated Metal

System  
All

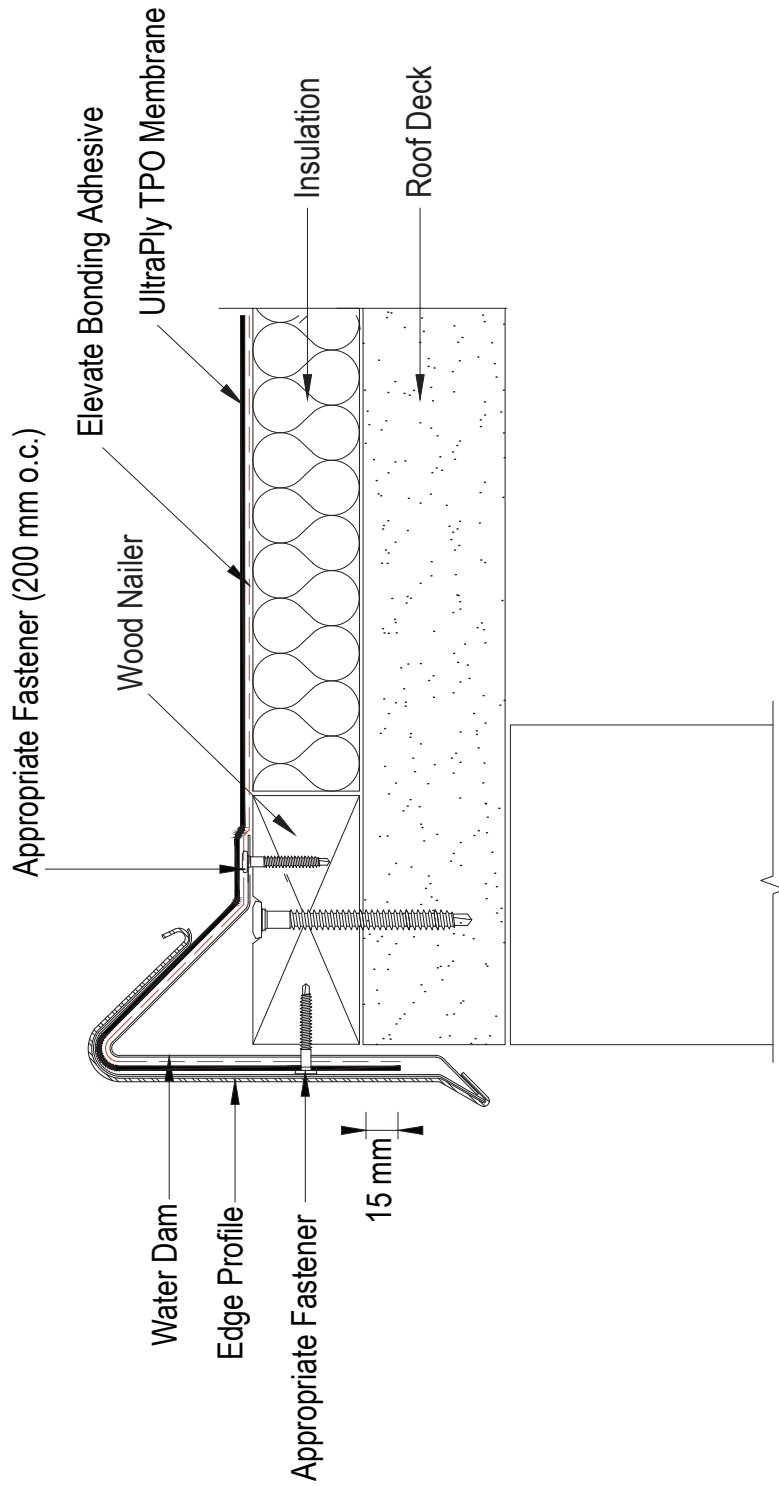
Not to scale

UT - RE - 3

10/2022

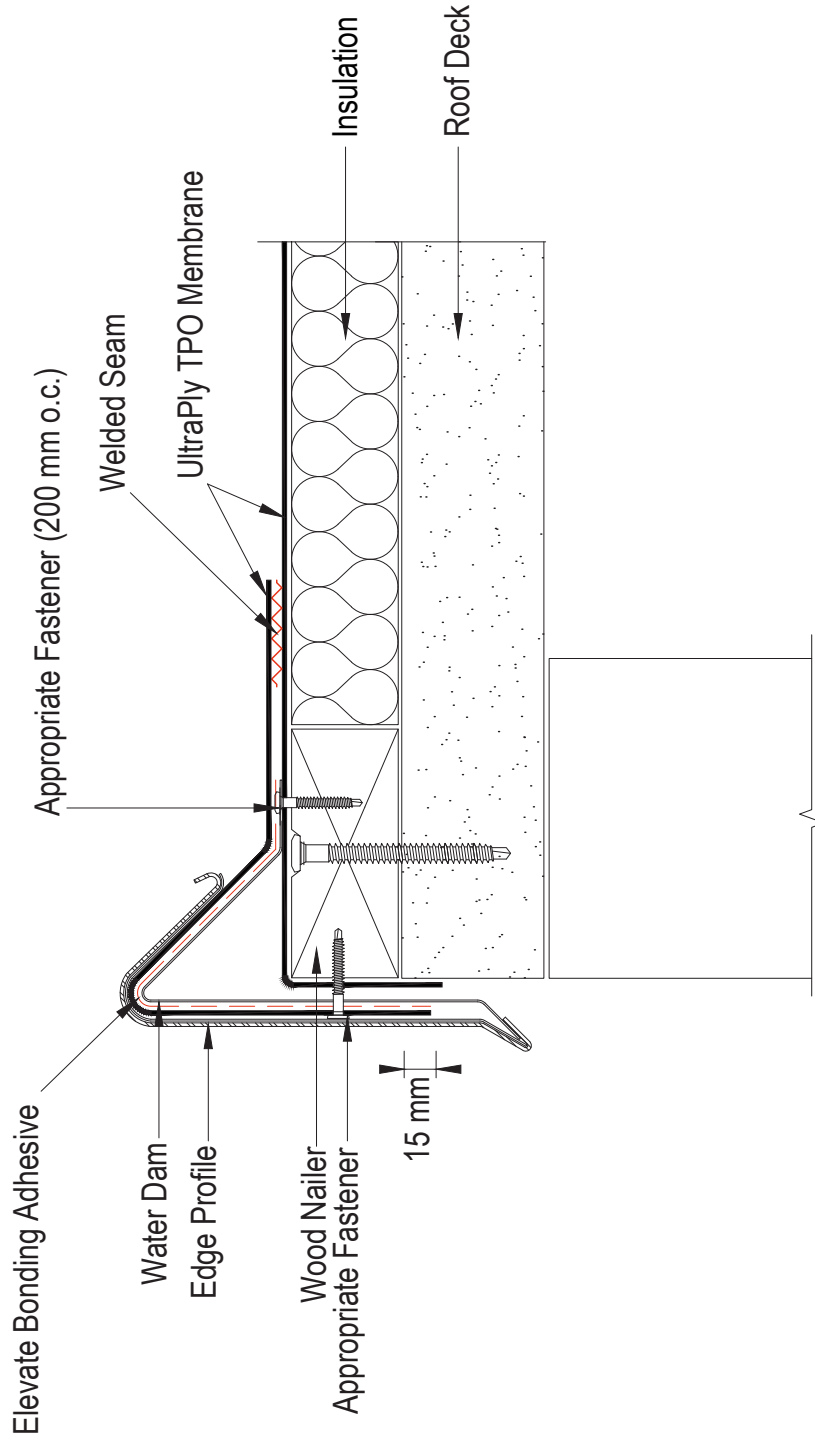
EMEA & Asia

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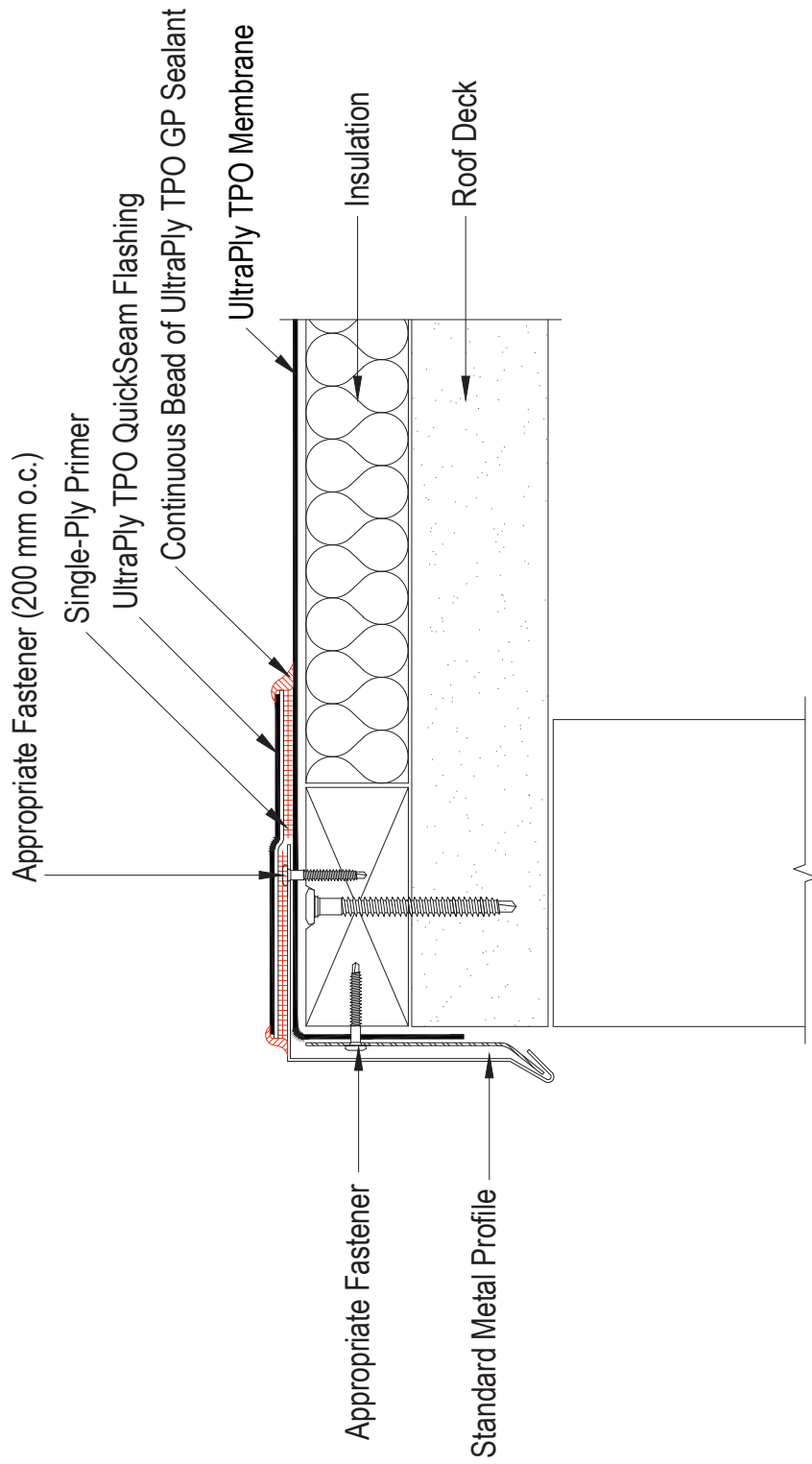
	<b>UltraPly™ TPO</b> Roof Edge with Edge Profile		System All	UT - RE - 4
			Not to scale	10/2022
				EMEA & Asia

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	<b>UltraPly™ TPO</b> Alternative Roof Edge with Edge Profile		System All	UT - RE - 5
			Not to scale	10/2022
				EMEA & Asia

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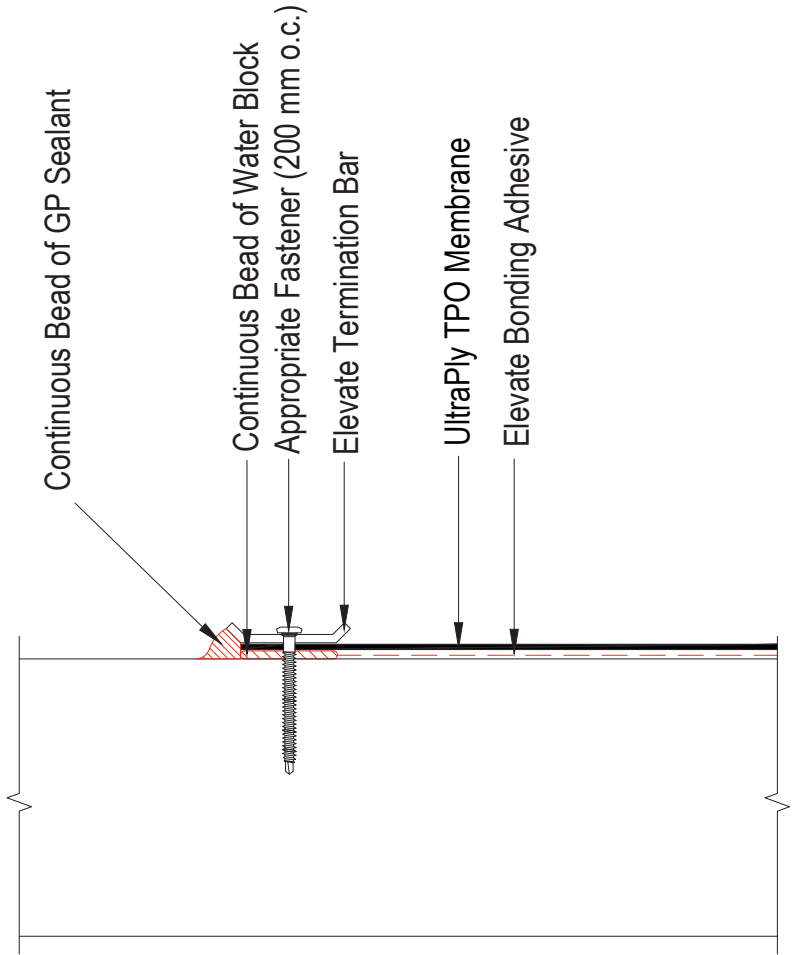
	<b>UltraPly™ TPO</b>		<b>System</b>	<b>UT - RE - 6</b>
	Roof Edge using UltraPly TPO QuickSeam Flashing		All	10/2022
			Not to scale	EMEA & Asia




## 5.8 Wall terminations

T-T-1	Termination bar
T-T-2	Termination bar at outside parapet wall
T-T-3	Coping stone
T-T-4	Metal coping
T-T-5	Counterflashing
T-T-6	Termination bar – elevation change
T-T-7	Termination bar at joint in precast concrete panel
T-T-8	Termination bar at wall expansion joint
T-T-9	Monotrim profile
T-T-10	Intermediate attachment at wall flashing

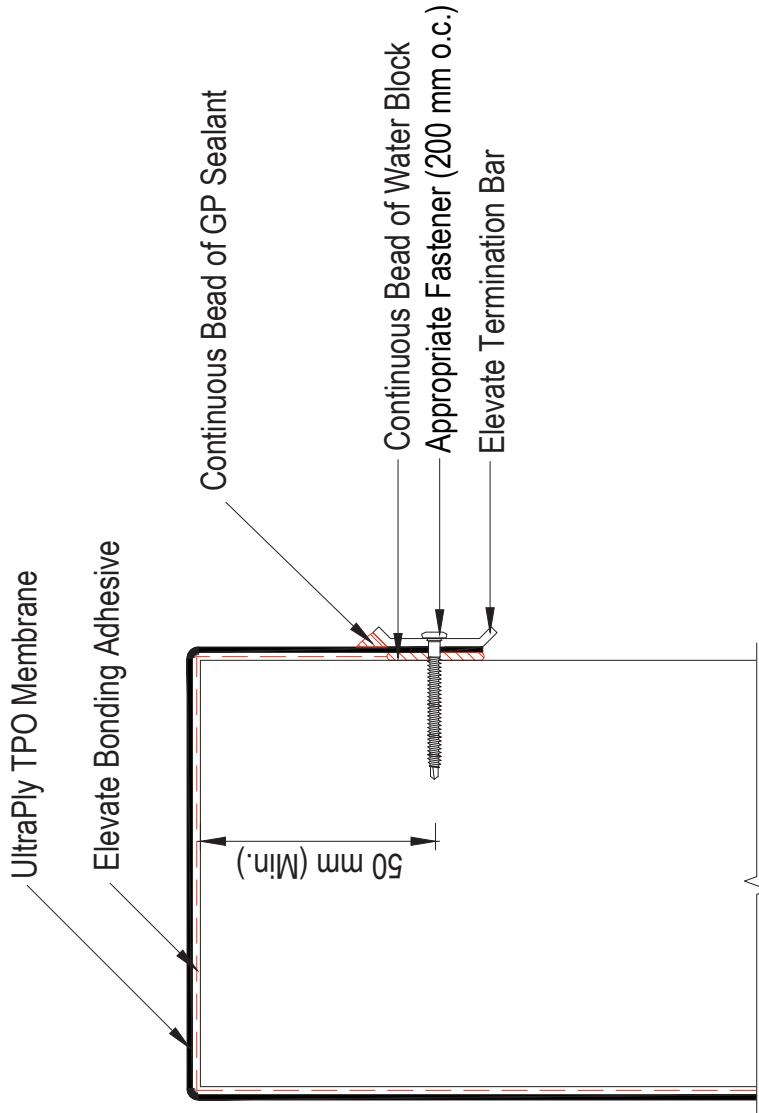
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	<b>UltraPly™ TPO</b> Termination Bar		System All	<b>UT - T - 1</b> 10/2022 EMEA & Asia
			Not to scale	

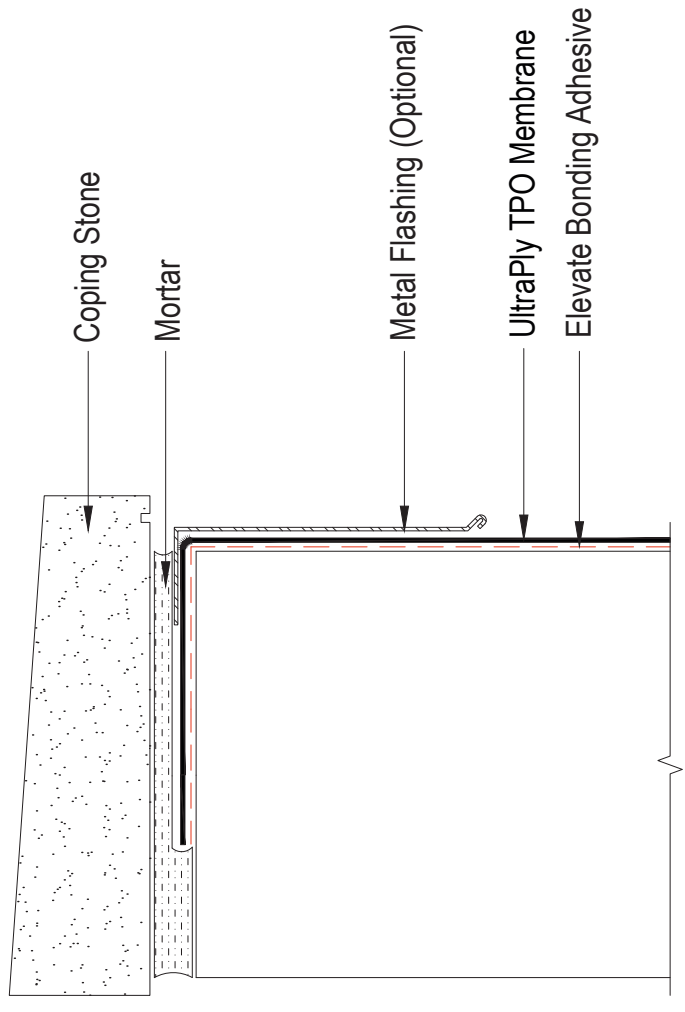



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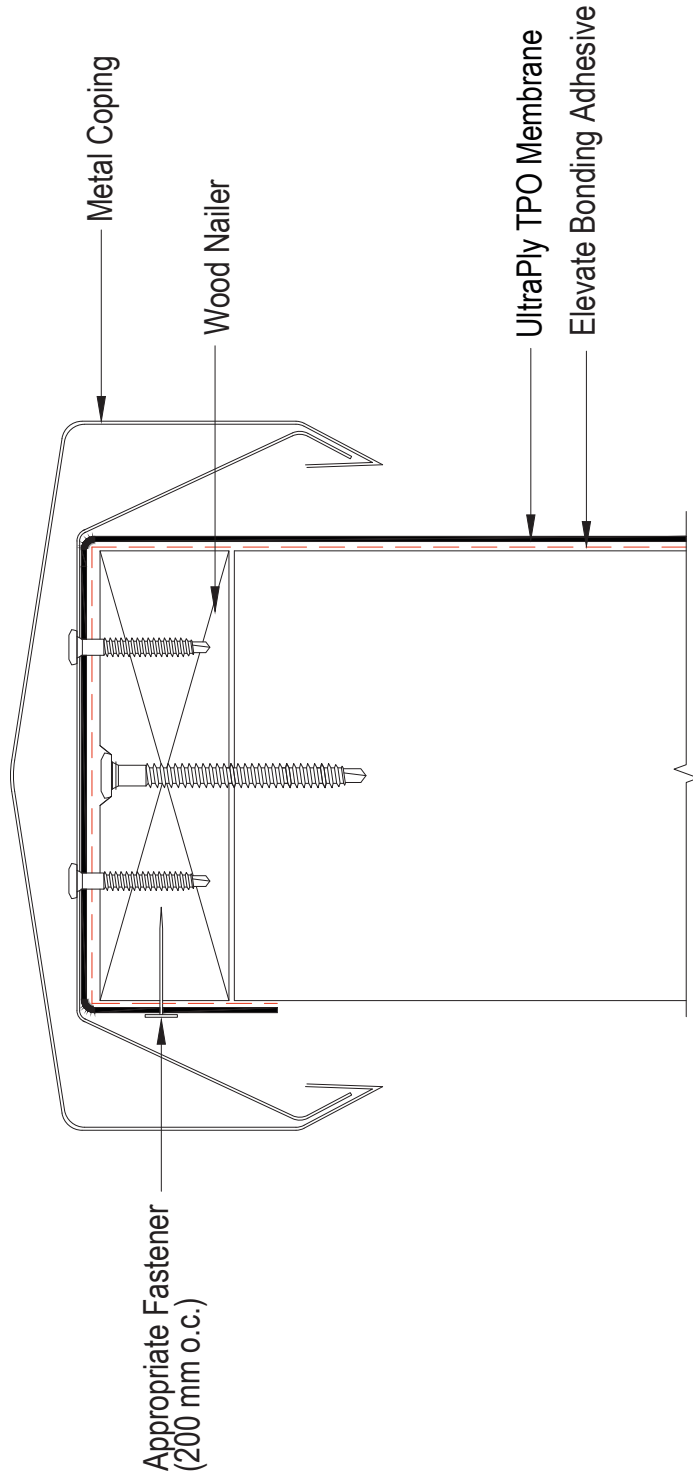
	<b>UltraPly™ TPO</b> Termination Bar at outside parapet wall		System All	<b>UT - T - 2</b>
			Not to scale	10/2022
				EMEA & Asia


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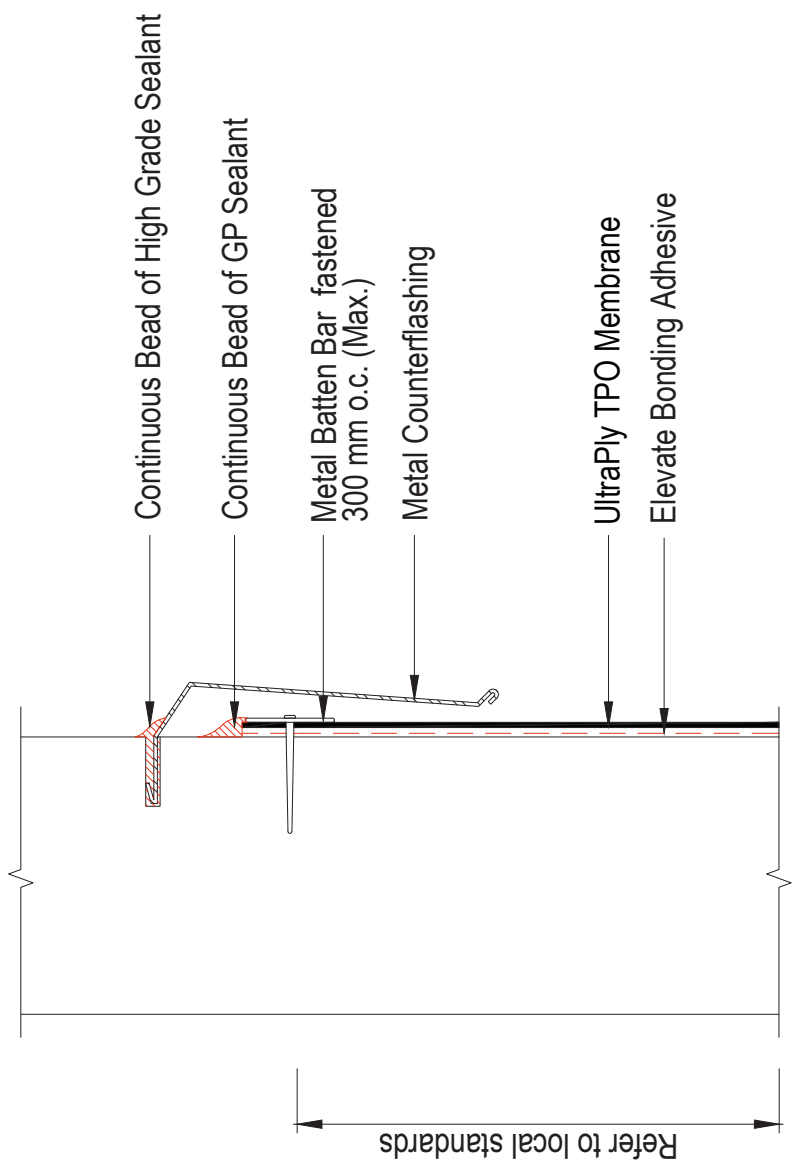
	<b>UltraPly™ TPO</b> Coping Stone		System All	<b>UT - T - 3</b>
			Not to scale	10/2022
				EMEA & Asia

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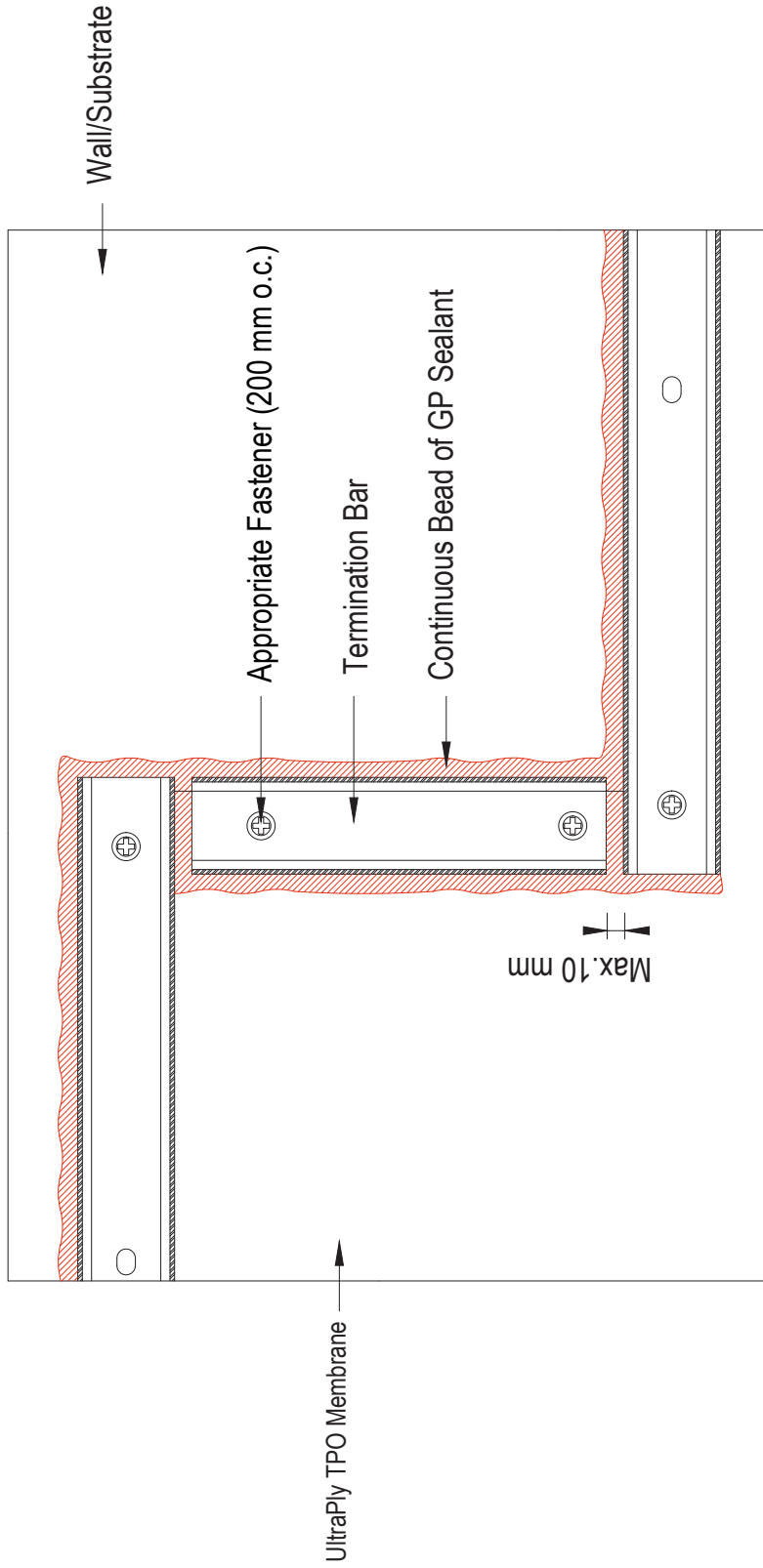
	<b>UltraPly™ TPO</b> Metal Coping		System All	<b>UT - T - 4</b>
			Not to scale	10/2022
				EMEA & Asia

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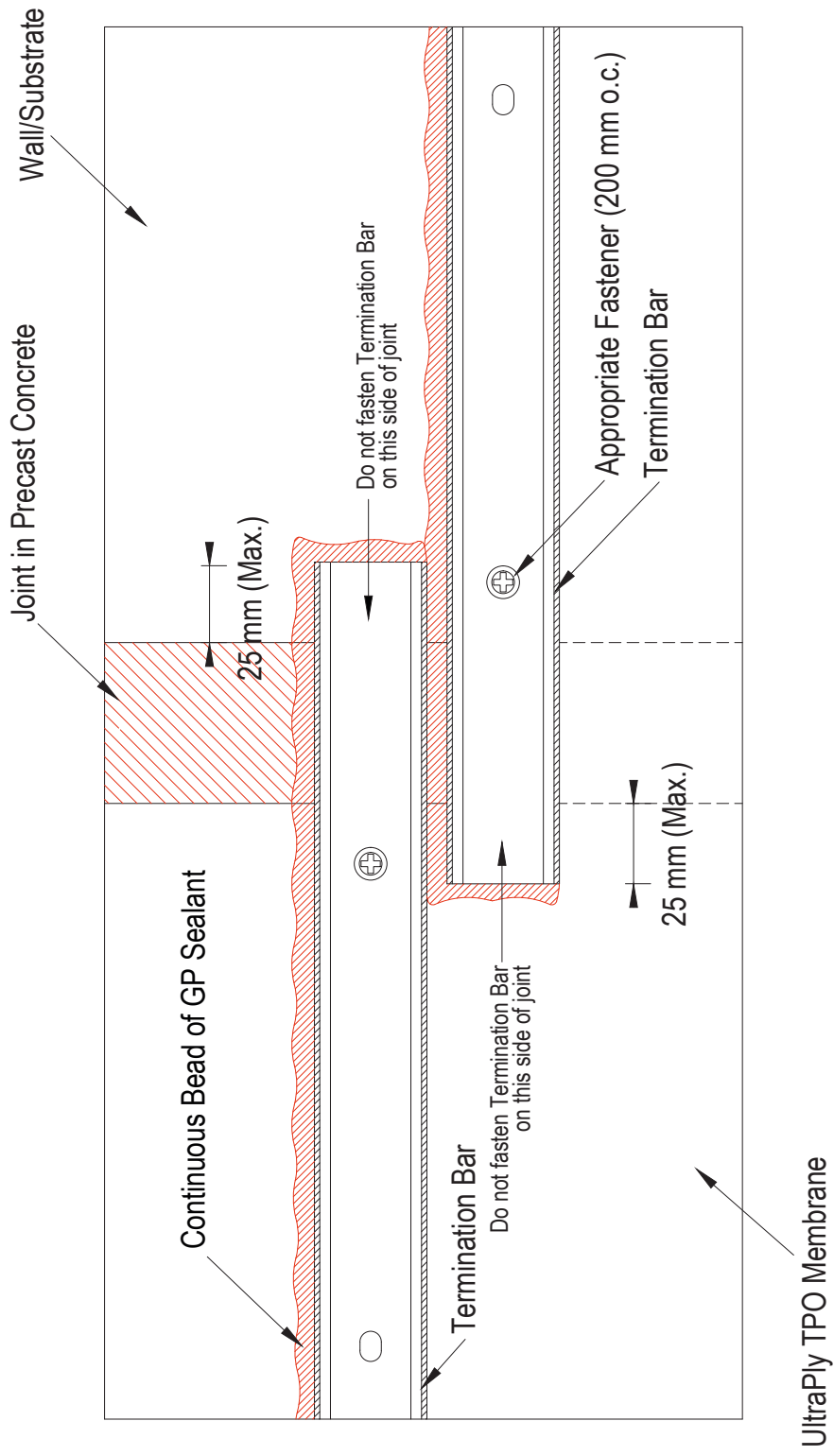
	UltraPly™ TPO Counterflashing		System All	UT - T - 5 10/2022 EMEA & Asia
			Not to scale	

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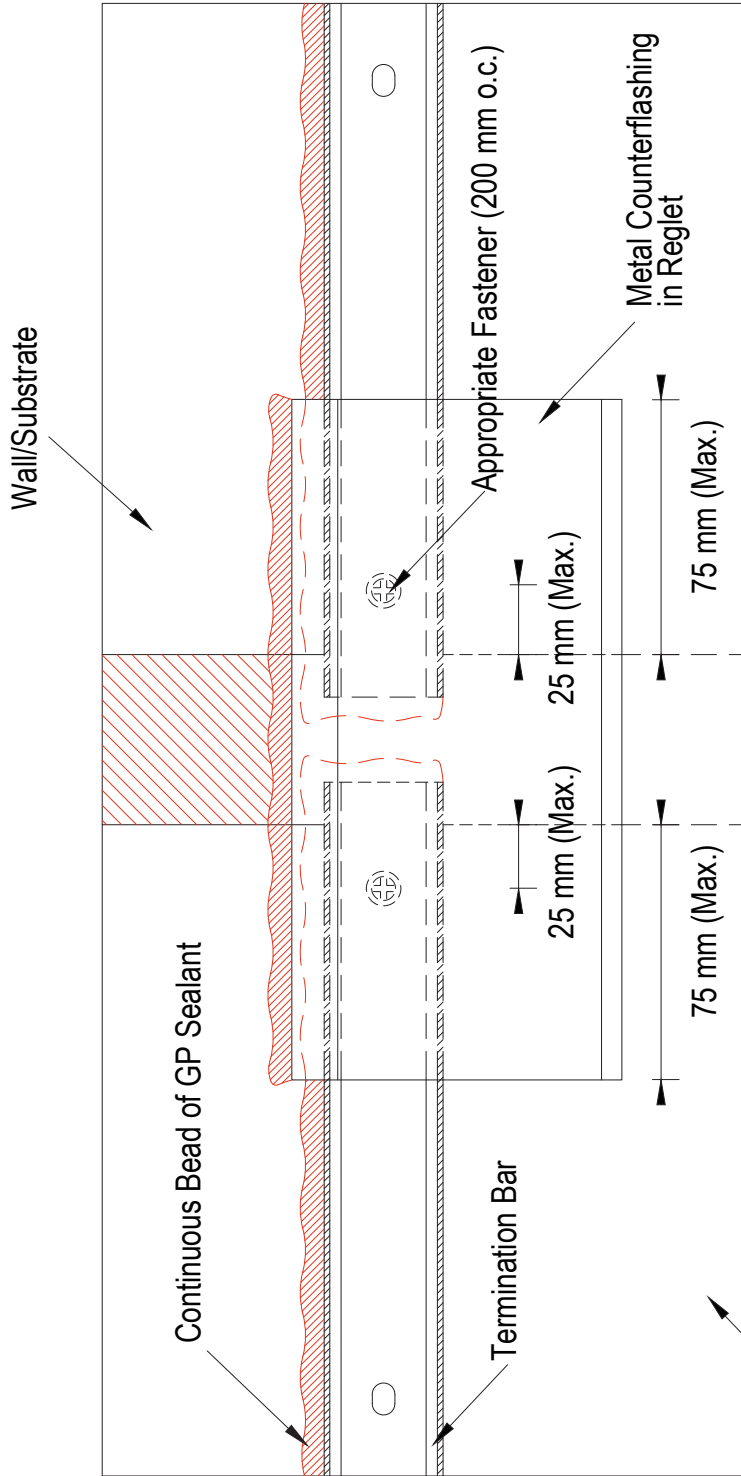
	<b>UltraPly™ TPO</b>	System All	<b>UT - T - 6</b>
	Termination Bar at Elevation change	Not to scale	10/2022 EMEA & Asia

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	<b>UltraPly™ TPO</b> Termination Bar at Joint in Precast Concrete Panel		System All	UT - T - 7
			Not to scale	10/2022
				EMEA & Asia

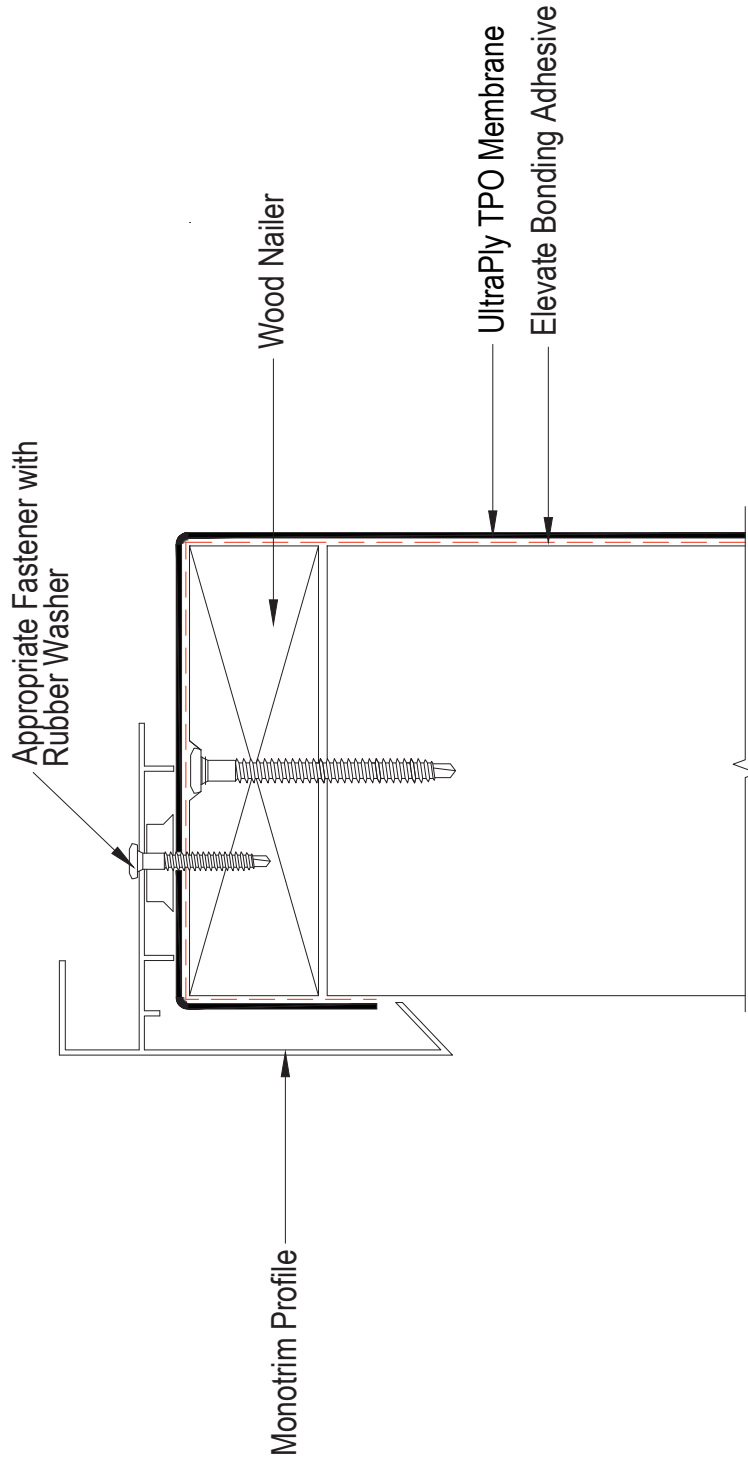
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UltraPly TPO Membrane

	UltraPly™ TPO		System	UT - T - 8
	Termination Bar at Wall Expansion Joint		All	10/2022
			Not to scale	EMEA & Asia

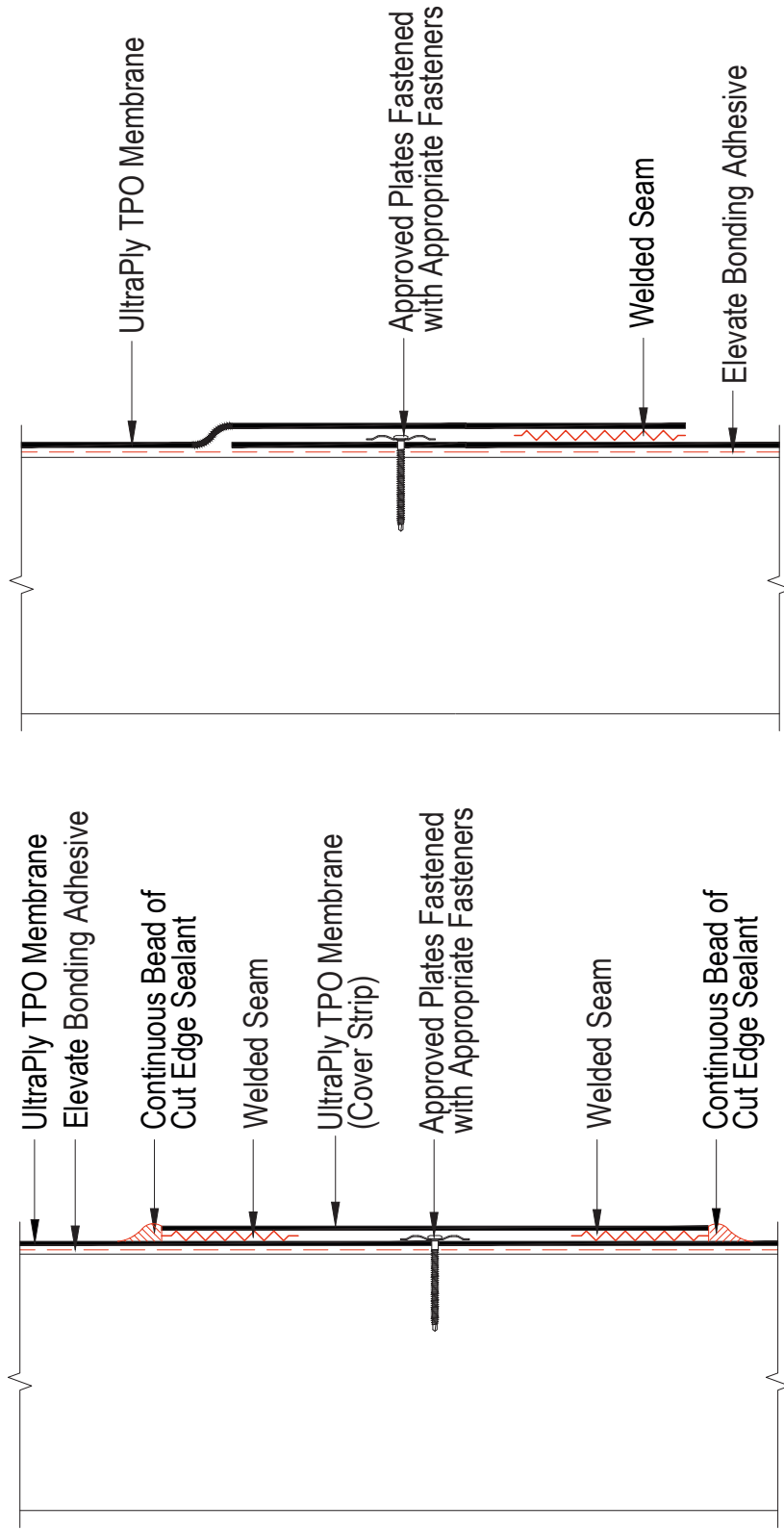
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	<b>UltraPly™ TPO</b>		System All	<b>UT - T - 9</b>
	Monotrim Profile			10/2022
			Not to scale	EMEA & Asia



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	<b>UltraPly™ TPO</b> Intermediate Attachment at Wall Flashing		System All	UT - T - 10
			Not to scale	10/2022
				EMEA & Asia