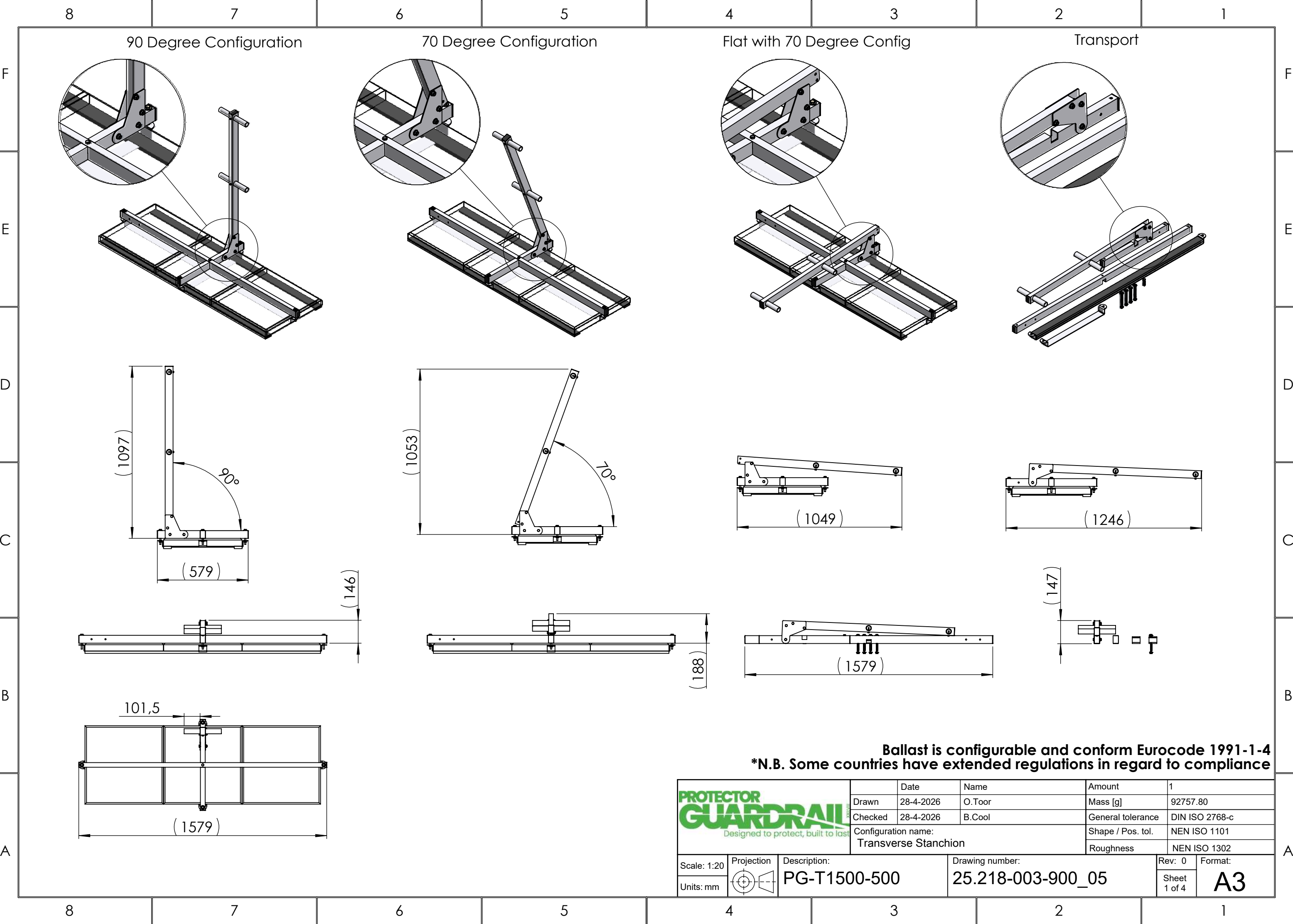




Ballast is configurable and conform Eurocode 1991-1-4
***N.B. Some countries have extended regulations in regard to compliance**



PROTECTOR GUARDRAIL Designed to protect, built to last	Date		Name	Amount	1		
	Drawn	28-4-2026	O.Toor	Mass [g]	92757.80		
	Checked	28-4-2026	B.Cool	General tolerance	DIN ISO 2768-c		
	Configuration name: Transverse Stanchion			Shape / Pos. tol.	NEN ISO 1101		
				Roughness	NEN ISO 1302		
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Units: mm						Sheet 1 of 4	

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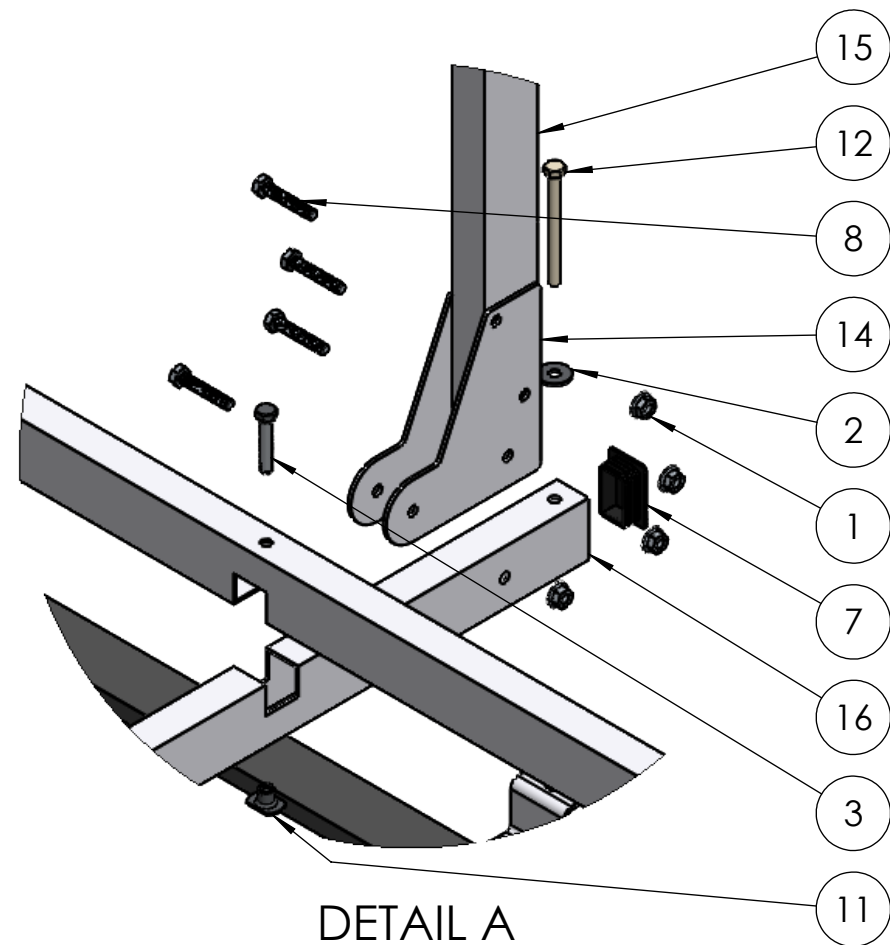
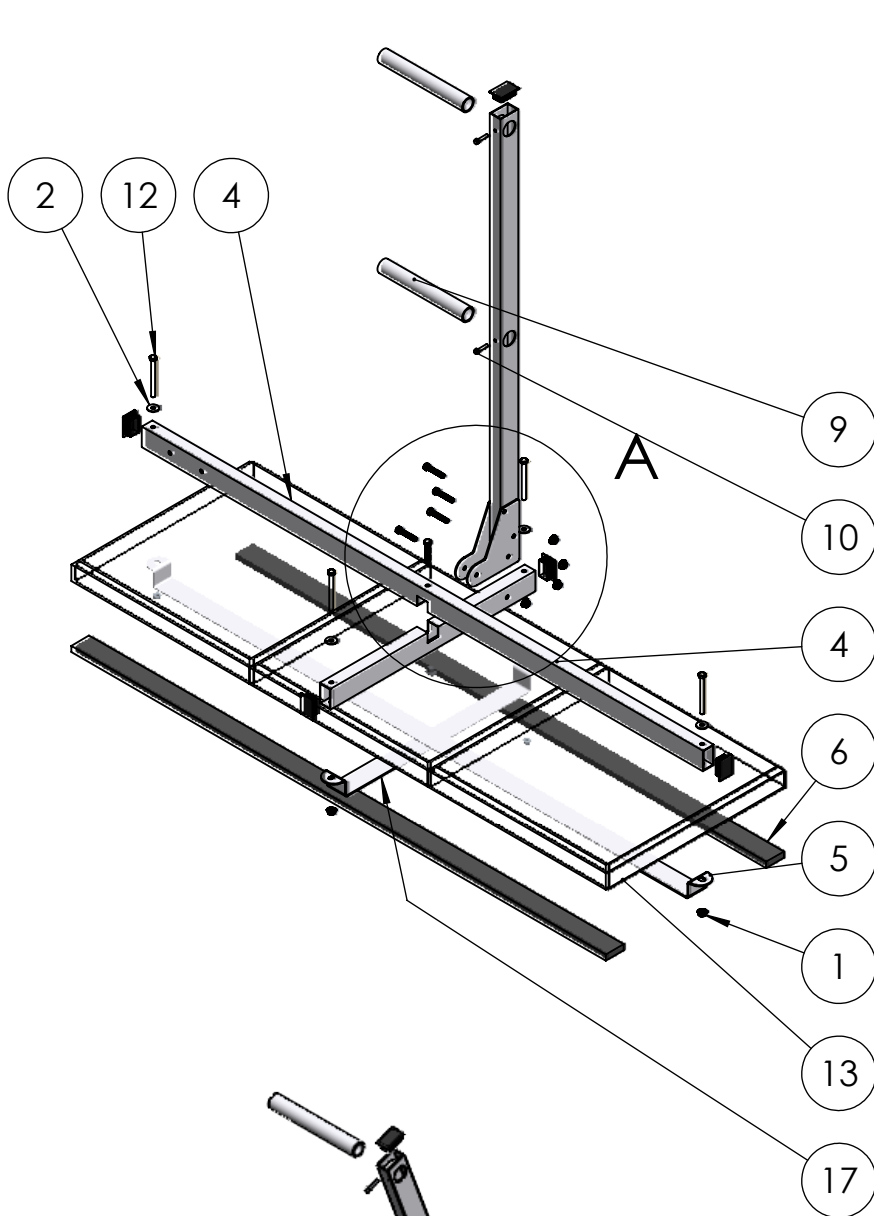
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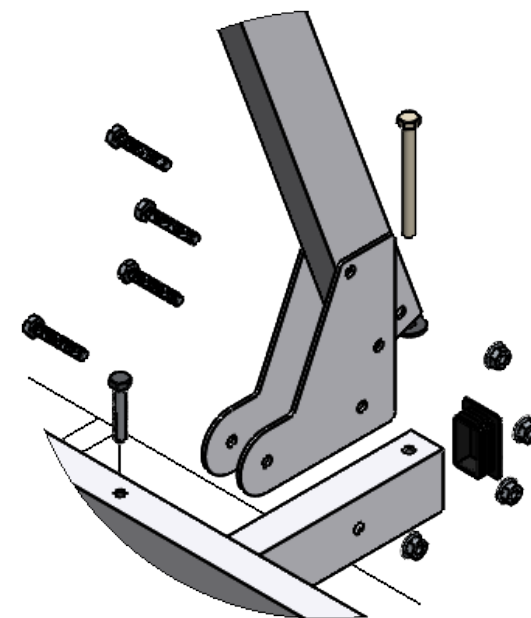
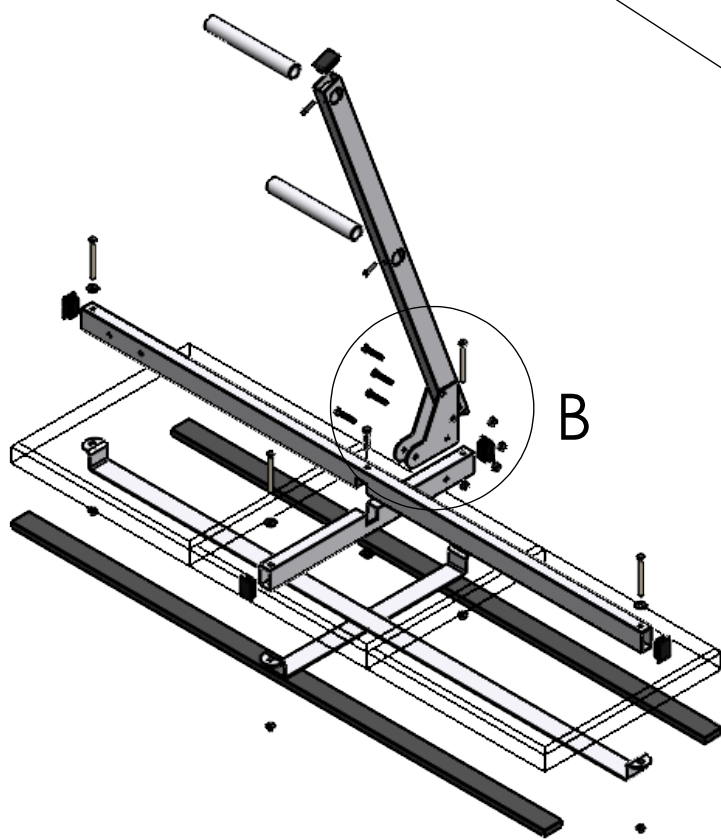
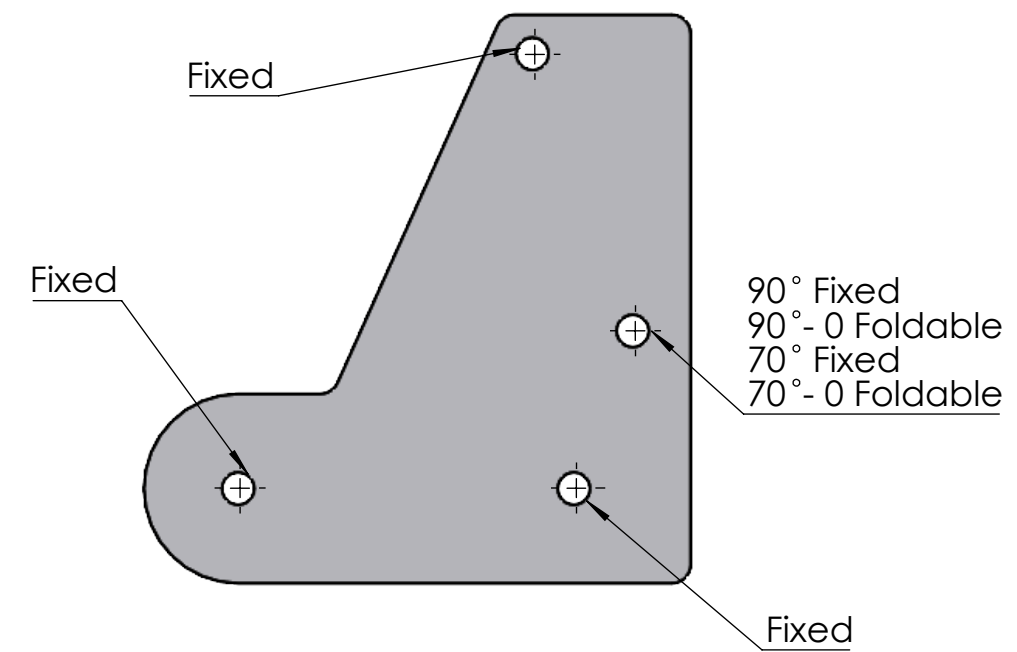
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DETAIL A
SCALE 1 : 5
DETAIL A SHOWS BOLT POSITIONS
FOR 90° CONFIGURATION



DETAIL B
SCALE 1 : 5
DETAIL B SHOWS BOLT POSITIONS
FOR 70° CONFIGURATION

Ballast is configurable and conform Eurocode 1991-1-4
***N.B. Some countries have extended regulations in regard to compliance**

ITEM	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
1	DIN 6923.M8	FLANGED HEX NUT M8	STAINLESS STEEL, 304	8
2	D228.WASH.M8.30.1.5	LARGE WASHER 3XD M8	STAINLESS STEEL, 304	4
3	DIN 933.M8x45	HEX BOLT M8X45	STAINLESS STEEL, 304	1
4	D228.HBB.XB.1579(1575)	BOX FLAT T2 1575	6060-T6	1
5	D228.BRS.1645 (1578)	TILE-RETAINING STRIP T2 1500-NARROW	6060-T6	1
6	D228.BS.1500.50.15	TILE SUPPORT PAD 1500X50X15	POLYURETHANE (11671)	2
7	D228.C50.30	INSERTION CAP 50x30	ABS	5
8	DIN 933.M8x45	HEX BOLT M8X45	STAINLESS STEEL, 304	4
9	D228.CT.33x3x190(237)	COUPLING SLEEVE	6060-T6	2
10	D228.SDS.5.5x31	LONG SELF-DRILLING SCREW-SX 5.5X31	STAINLESS STEEL, 304	2
11	Art. 9060-WS 9060	WELD NUT M8 D26-H11	STAINLESS STEEL, 304	1
12	DIN 933.M8x90	HEXAGON BOLT M8X90	STAINLESS STEEL, 304	4
14	D228.SCP.150.150.25	CORNER CONNECTOR	6060-T6	2
15	D228.VBB.1045	OPRIGHT BOX SECTION T2	6060-T6	1
16	D228.HBB.TB.575	HORIZONTAL BOX BEAM T BASE 582	6060-T6	1
17	D228.BRS.575	BALLAST RETAINING STRIP	6060-T6	1

PROTECTOR GUARDRAIL Designed to protect, built to last		Date	Name	Amount	1		
		Drawn	28-4-2026	O.Toor	Mass [g]	92757.80	
		Checked	28-4-2026	B.Cool	General tolerance	DIN ISO 2768-c	
		Configuration name:			Shape / Pos. tol.	NEN ISO 1101	
		Transverse Stanchion			Roughness	NEN ISO 1302	
Scale: 1:15	Projection	Description:		Drawing number:		Rev: 0	Format:
Units: mm		PG-T1500-500		25.218-003-900_05		Sheet 2 of 4	A3

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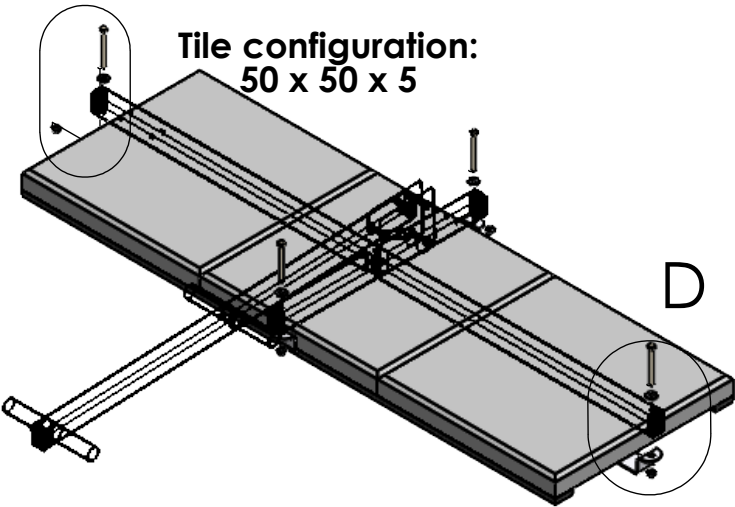
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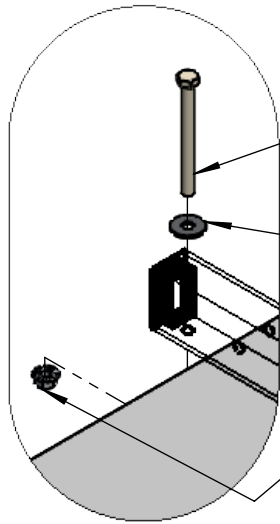
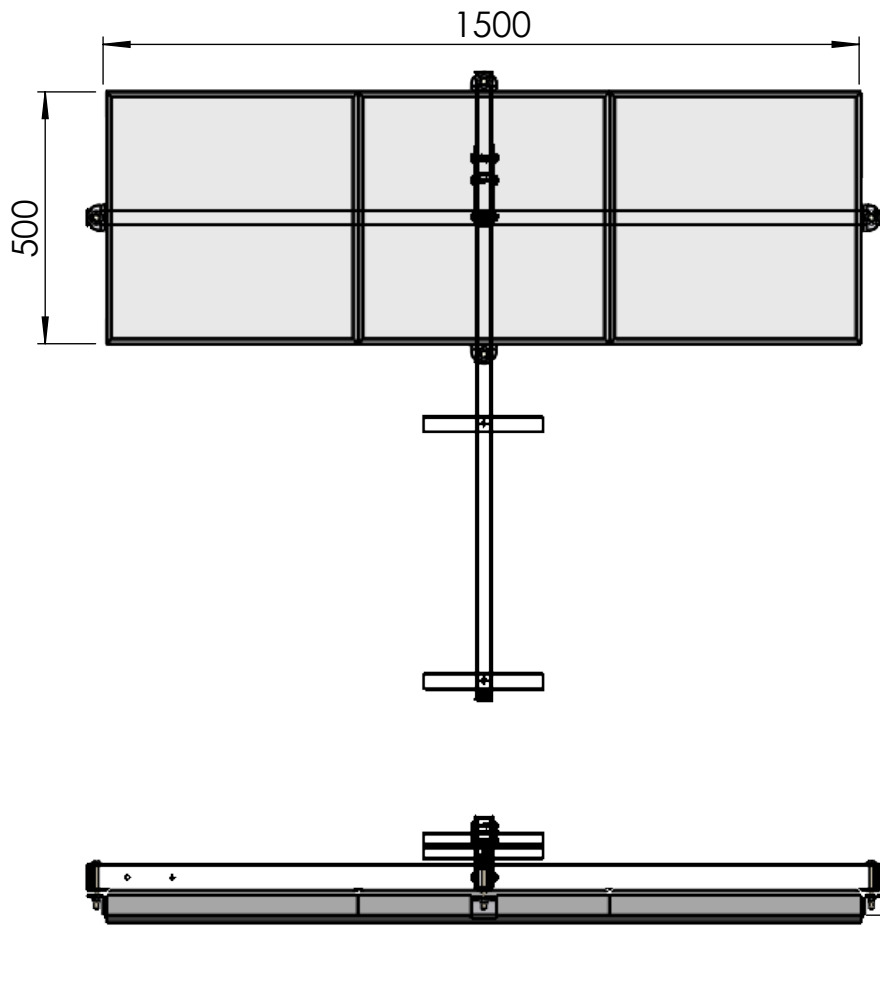
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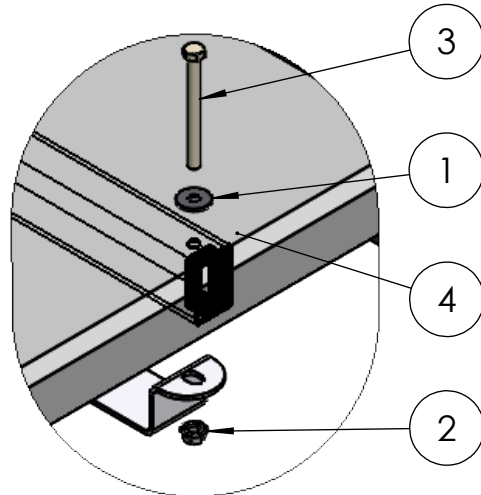


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DETAIL C
SCALE 1 : 5



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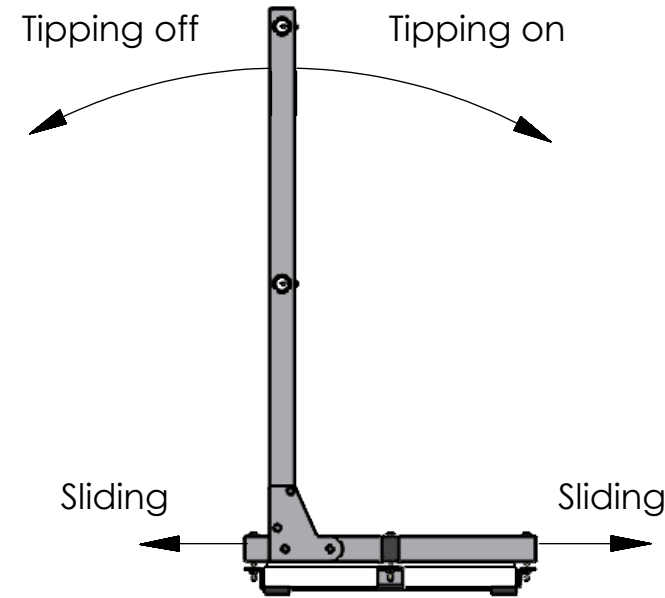
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DETAIL D
SCALE 1 : 5

Declaration of Performance - on/off - sliding					
Stanchion type	Counterweight system	Stanchion distance	Max q_onroof_safe (N/m2)	Max q_offroof_safe (N/m2)	Max q_sliding_safe (N/m2)
1500T-500	50x50x5	3m	445	439	1206
1500T-500	50x50x5	4m	359	347	974

Declaration of Performance - Applied local load					
Stanchion type	Counterweight system	Stanchion distance	Applied local load per stanchion (kN)	Applied average distributed load (kN/m)	Applied Pressure on surface (N/cm2)
1500T-500	50x50x5	3m	0,92	0,23	0,31
1500T-500	50x50x5	4m	0,93	0,23	0,31



Declaration of Performance (tipping on/off roof & sliding)

The DOP calculation demonstrates that the stanchion provides safe resistance against tipping on the roof and off the roof, with a maximum allowable on-roof load of $q_{onroof_safe} = X \text{ N/m}^2$, an off-roof load of $q_{offroof_safe} = Y \text{ N/m}^2$, and a maximum sliding resistance of $q_{sliding_safe} = Z \text{ N/m}^2$ for the selected configuration. Minor variations occur between the 90°, 70° and 0° stanchion orientations; however, the lowest (most limiting) performance values have been used to ensure a robust safety margin. Loads specified are desing values of the loads. A safety factor $\gamma M = 1,5$ is included in absence of national regulations.

Declaration of Performance (local load)

The DOP local load assessment confirms that the stanchion applies the following loads onto the roof: applied point load of A kN, an average distributed load of B kN/m and a surface pressure of C N/cm². Differences between the 90°, 70° and 0° stanchion positions are negligible, and the lowest (most limiting) performance value has been selected to guarantee a robust safety margin. Loads specified are characteristic loads. $\gamma M = 1,3$ applies in absence of national regulations.

ITEM	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
1	D228.WASH.M8.30.1.5	Large washer 3xD M8	Stainless Steel, 304	4
2	DIN 6923.M8	Flanged Hex Nut M8	Stainless Steel, 304	8
3	DIN 933.M8x90	Hexagon Bolt M8x90	Stainless Steel, 304	4
4	D228.BT.50.50.05	50x50x5	C30/37 Concrete, 2300 kg/m3	3

PROTECTOR GUARDRAIL Designed to protect, built to last		Date	Name	Amount	1		
		Drawn	28-4-2026	O.Toor	Mass [g]	92757.80	
		Checked	28-4-2026	B.Cool	General tolerance	DIN ISO 2768-c	
		Configuration name: Transverse Stanchion			Shape / Pos. tol.	NEN ISO 1101	
					Roughness	NEN ISO 1302	
Scale: 1:15		Description: PG-T1500-500		Drawing number: 25.218-003-900_05		Rev: 0	Format: A3
Units: mm						Sheet 3 of 4	

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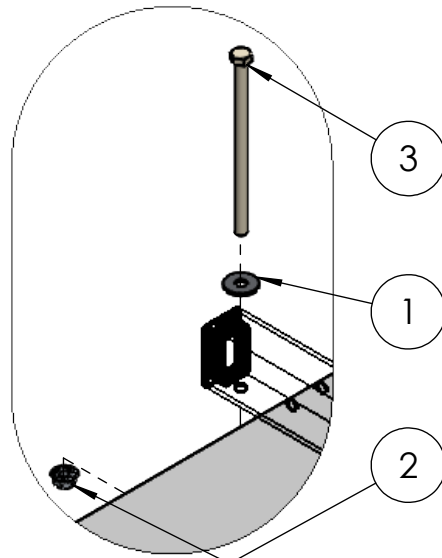
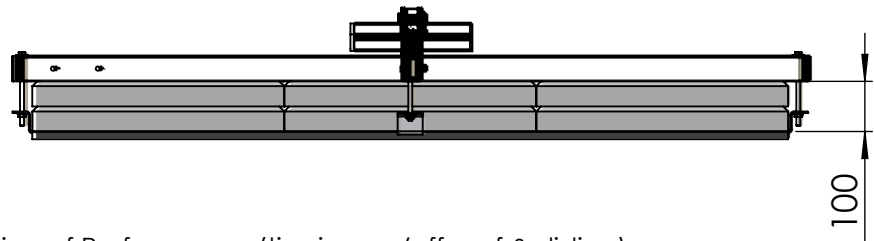
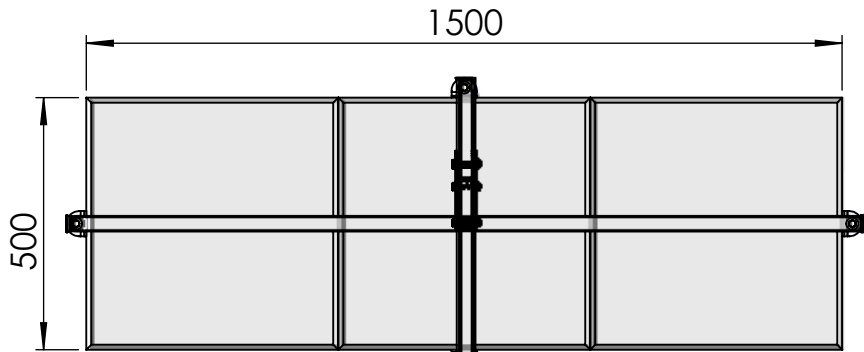
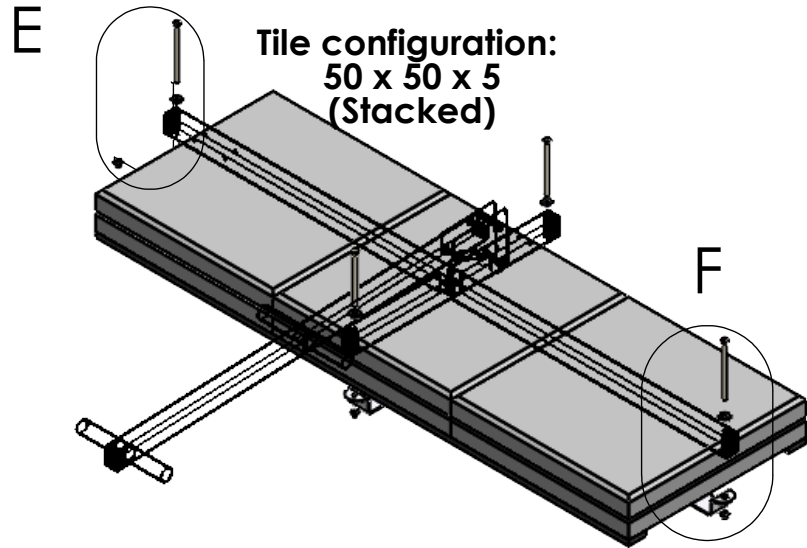
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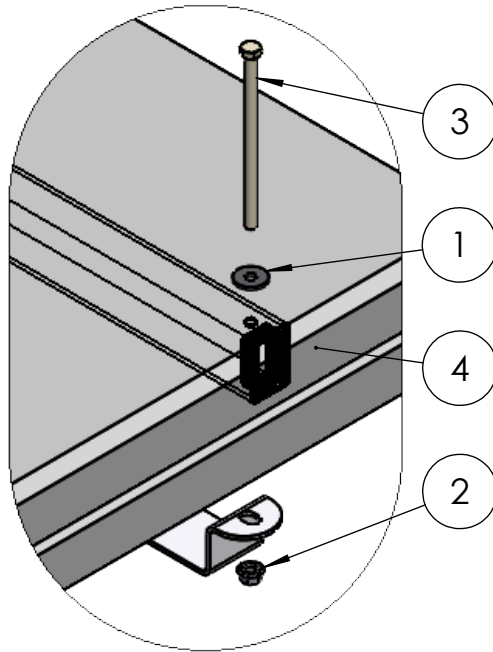
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DETAIL E
SCALE 1 : 5



DETAIL F
SCALE 1 : 5

Declaration of Performance (tipping on/off roof & sliding)

The DOP calculation demonstrates that the stanchion provides safe resistance against tipping on the roof and off the roof, with a maximum allowable on-roof load of $q_{onroof_safe} = X \text{ N/m}^2$, an off-roof load of $q_{offroof_safe} = Y \text{ N/m}^2$, and a maximum sliding resistance of $q_{sliding_safe} = Z \text{ N/m}^2$ for the selected configuration.

Minor variations occur between the 90°, 70° and 0° stanchion orientations; however, the lowest (most limiting) performance values have been used to ensure a robust safety margin.

Loads specified are desing values of the loads. A safety factor $\gamma_m = 1,5$ is included in absence of national regulations.

Declaration of Performance (local load)

The DOP local load assessment confirms that the stanchion applies the following loads onto the roof:

applied point load of A kN, an average distributed load of B kN/m and a surface pressure of C N/cm².

Differences between the 90°, 70° and 0° stanchion positions are negligible,

and the lowest (most limiting) performance value has been selected to guarantee a robust safety margin.

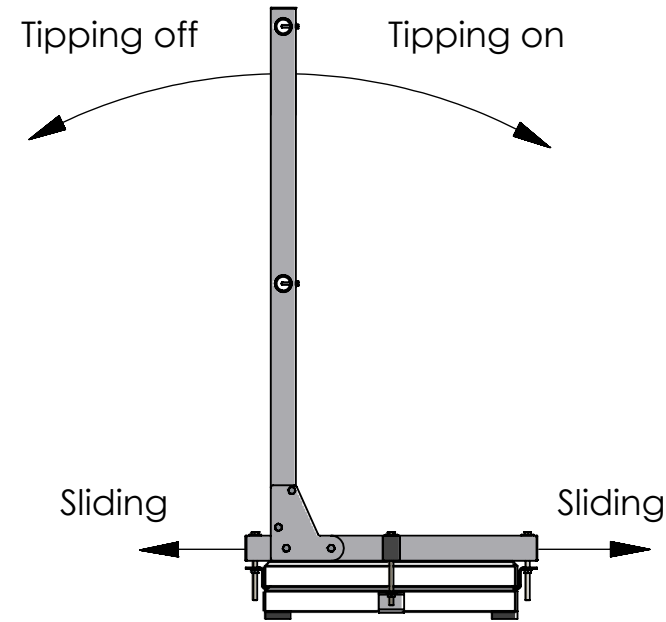
Loads specified are characteristic loads. $\gamma_m = 1,3$ applies in absence of national regulations.

Declaration of Performance - on/off - sliding

Stanchion type	Counterweight system	Stanchion distance	Max q_{onroof_safe} (N/m ²)	Max $q_{offroof_safe}$ (N/m ²)	Max $q_{sliding_safe}$ (N/m ²)
1500T-500	50x50x5 (stacked)	3m	842	836	2289
1500T-500	50x50x5 (stacked)	4m	671	660	1836

Declaration of Performance - Applied local load

Stanchion type	Counterweight system	Stanchion distance	Applied local load per stanchion (kN)	Applied average distributed load (kN/m)	Applied Pressure on surface (N/cm ²)
1500T-500	50x50x5 (stacked)	3m	1,75	0,44	0,58
1500T-500	50x50x5 (stacked)	4m	1,76	0,44	0,59



ITEM	PART NUMBER	DESCRIPTION	MATERIAL	QTY.
1	D228.WASH.M8.30.1.5	Flat washer 3xD M8	Stainless Steel, 304	4
2	DIN 6923.M8	Flanged Hex Nut M8	Stainless Steel, 304	4
3	DIN 933.M8x90	Hexagon Bolt M8x140	Stainless Steel, 304	2
4	D228.BT.50.50.05	50x50x5	C30/37 Concrete, 2300 kg/m ³	6



Scale: 1:15	Projection	Description: PG-T1500-500	Drawing number: 25.218-003-900_05	Rev: 0	Format: A3
Units: mm				Sheet 4 of 4	