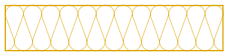
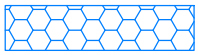
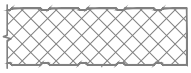
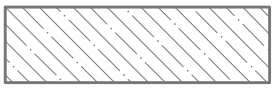
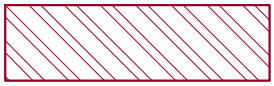
TECHNONICOL

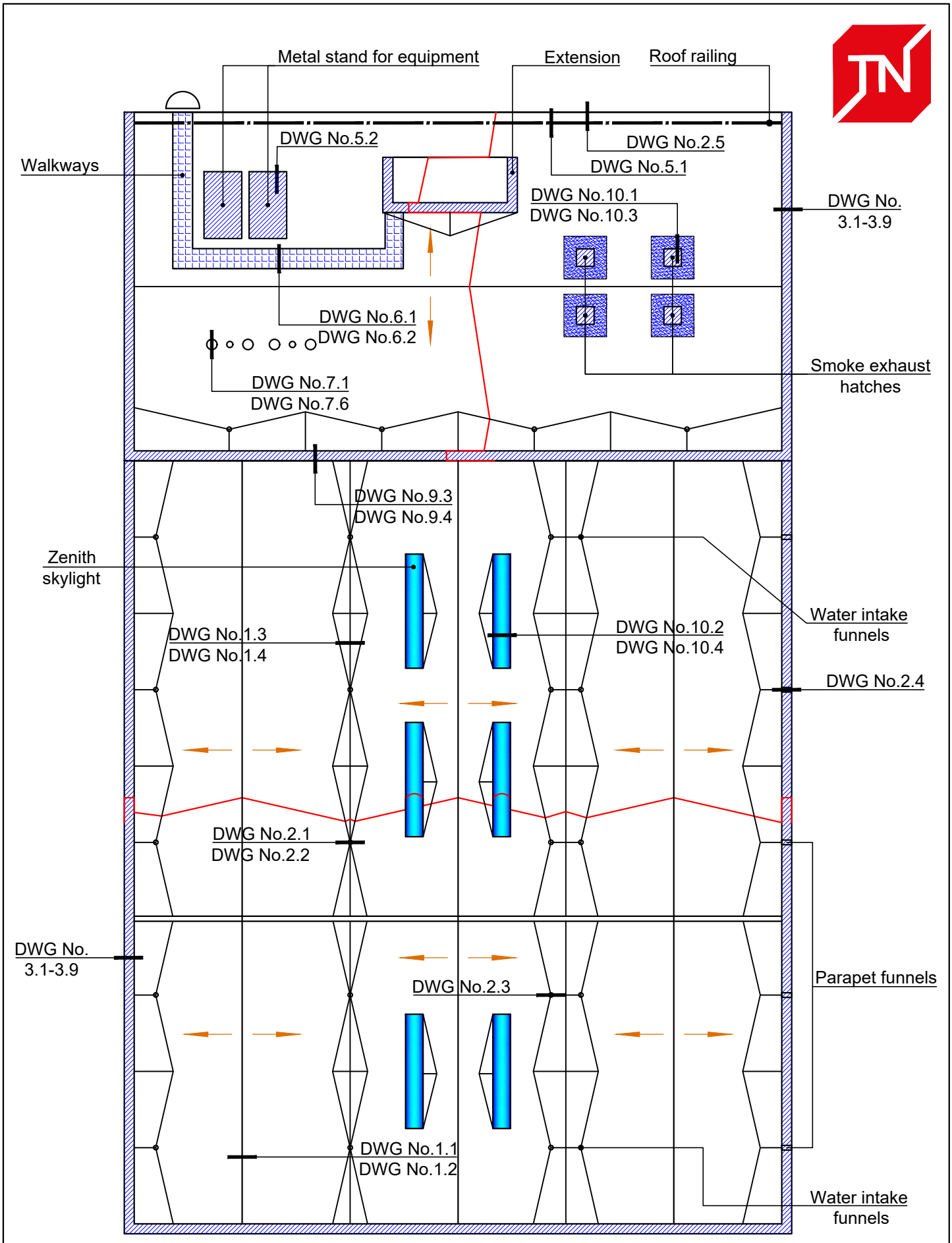
TECHNICAL SOLUTIONS FOR ARRANGEMENT OF JUNCTIONS IN FLAT ROOFS WITH WATERPROOFING LAYER MADE OF SINGLE-PLY PVC MEMBRANE ON CORRUGATED STEEL SHEET BASE

TN_ROOF_PVC_STEEL_SMART_EN

SYMBOLS

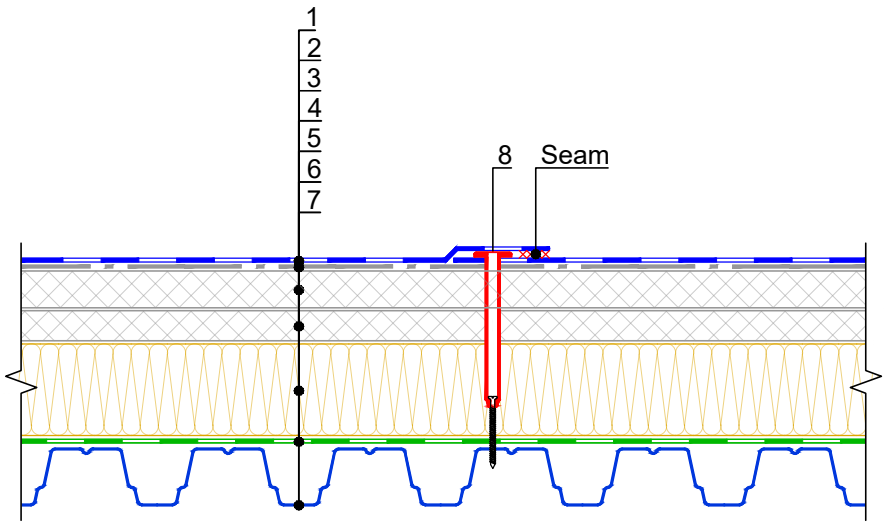
Layout	Description
	Vapor barrier
	Insulation (Stone wool)
	Separation layer (Geotextile)
	Waterproofing
	Insulation (PIR)
	Seam
	Clamping rail
	Edge rail
	Sealant
	Sandwich panel
	Reinforced concrete structure
	Brick construction (block construction)
	Insulation (XPS)
	System (Material Set)
	Plywood

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Symbols	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.



				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	Scheme of labeling of system details	DWG No.	REV.

DWG No.
01 - 2021.05



1 **Polyester reinforced PVC membrane LOGICROOF V-RP**

2 **Glass fiber**

3 **XPS boards TECHNONICOL CARBON PROF**

4 **XPS boards TECHNONICOL CARBON PROF SLOPE**

5 **Stone wool boards**

6 Vapor barrier - **bitumen-polymer self-adhesive membrane VAPORSTOP CA500**
Alternative: **bitumen-polymer self-adhesive membrane VAPORSTOP CA1000**

7 Corrugated steel sheet

8 Telescopic fastener

* PVC membrane should always be fixed with mechanical anchors
** The vapor barrier joints are sealed and it is bonded to the base either partially (in stripes or dots) or over the entire contact area
*** The layer of mineral wool can be excluded if necessary, provided it does not contradict national building codes

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Structure of roofing solutions	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No.	REV.

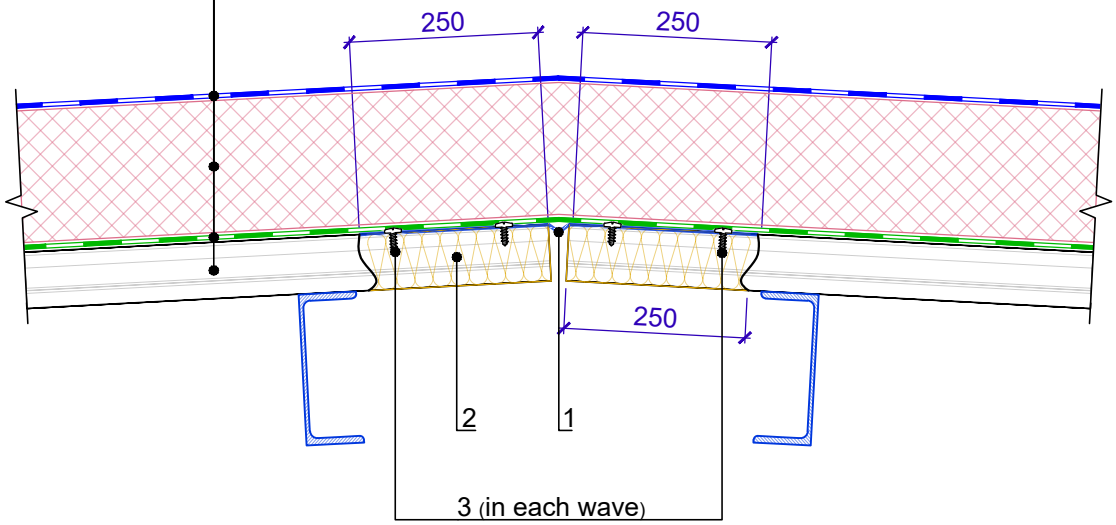
TN_ROOF_PVC_STEEL_SMART_EN

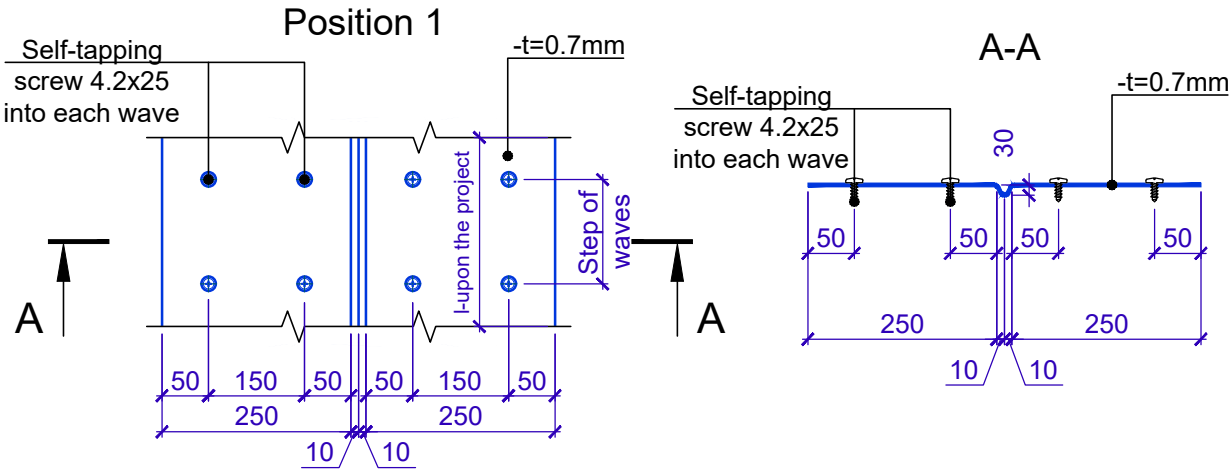
Register of drawings for ridge and valley construction

№	Name	DWG No.
1.1	Ridge construction arrangement (corrugation direction along the slope)	1.1
1.2	Ridge construction arrangement (corrugation direction across the slope)	1.2
1.3	Valley construction arrangement (corrugation direction along the slope)	1.3
1.4	Valley construction arrangement (corrugation direction across the slope)	1.4

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **1.1 - 2021.05**

LOGICROOF V-RP
System components (see DWG No.01)
VAPORSTOP CA500
Corrugated steel sheet





Specification of detail DWG No. 1.1 - 2021.05

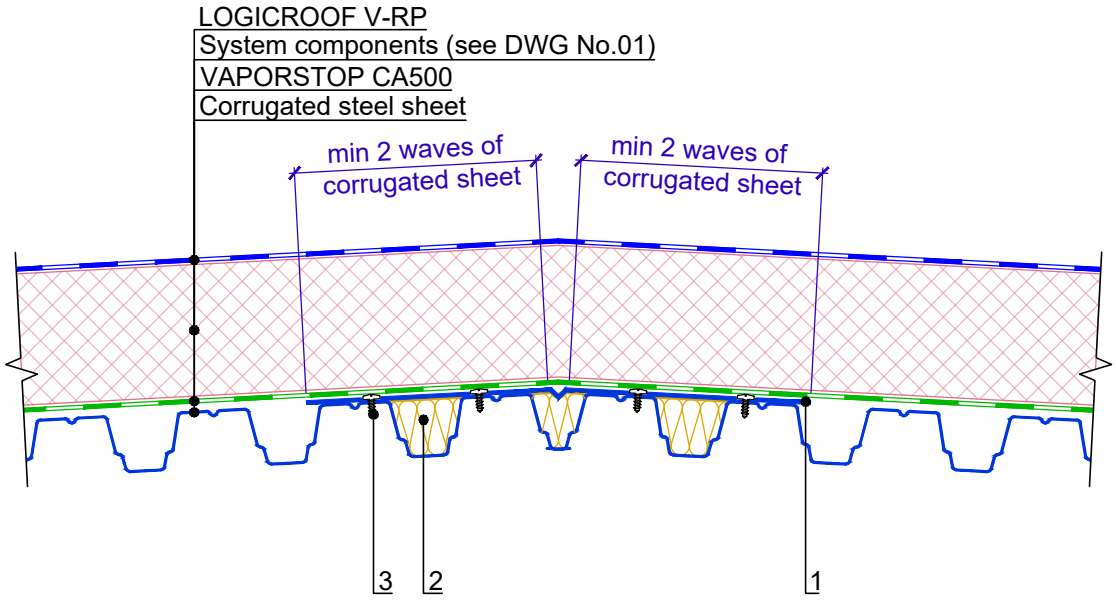
Position	Name	Consumption on 1 l. m.	Unit	Note
1	Galvanized steel compensator min 0.7 mm	1.0	m	
2	Stone wool	upon the project	m^3	
3	Self-tapping screw 4.2x25 with pressure pad	upon the project	pcs.	

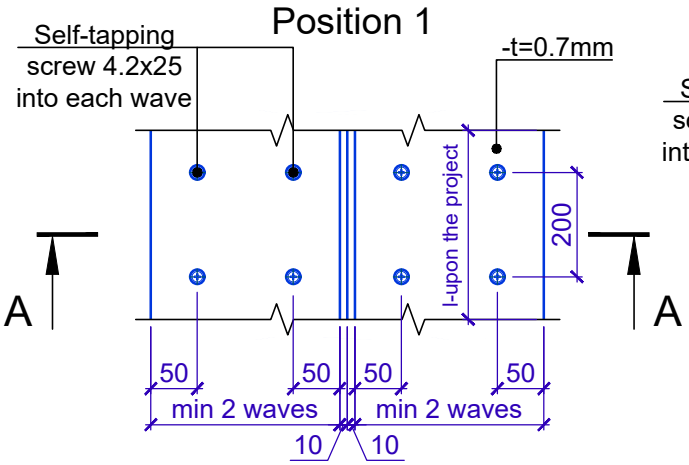
Notes

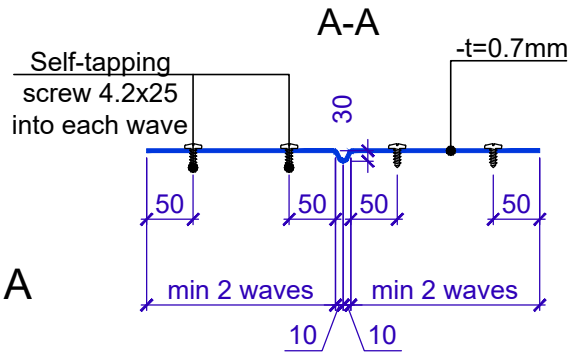
1. The volume of insulation (pos. 2) for the inserts of corrugated sheet depends on the type of corrugated sheet used in the project.
2. Fastening of the screws in every wave. Consumption depends on the type of corrugated sheet used in the project.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Ridge construction arrangement (corrugation direction along the slope)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **1.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **1.2 - 2021.05**







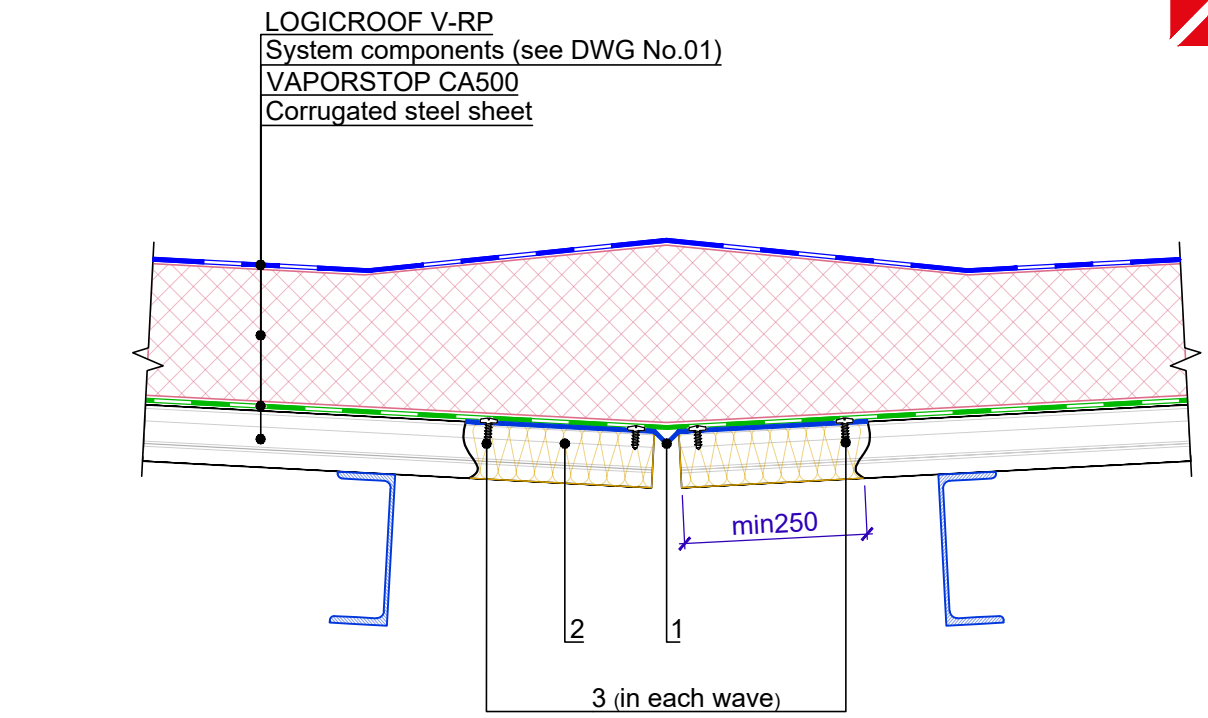
Specification of detail DWG No. 1.2 - 2021.05

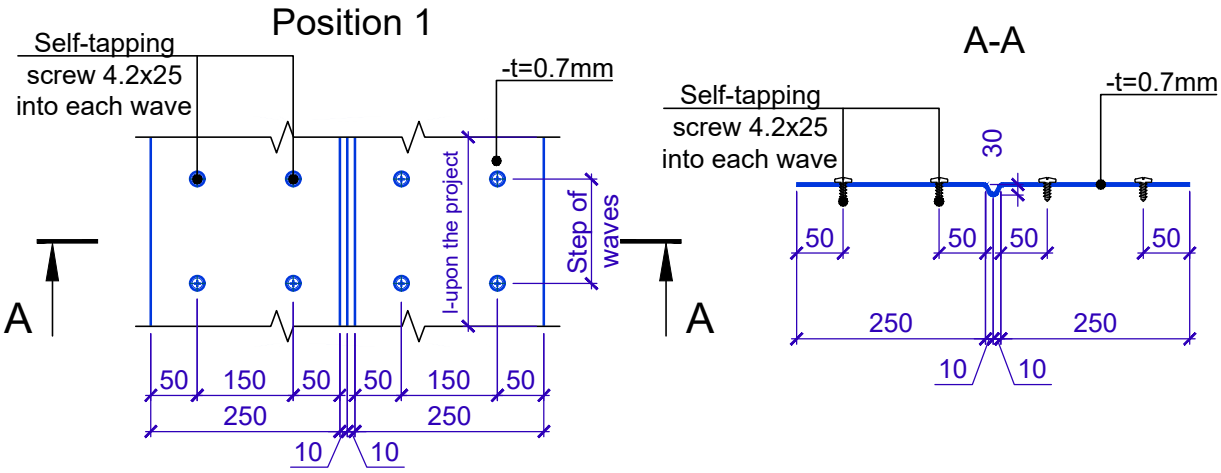
Position	Name	Consumption on 1 l. m.	Unit	Note
1	Galvanized steel compensator min 0.7 mm	1.0	m	
2	Stone wool	upon the project	m^3	
3	Self-tapping screw 4.2x25 with pressure pad	upon the project	pcs.	

Notes

1. The volume of insulation (pos. 2) for the inserts of corrugated sheet depends on the type of corrugated sheet used in the project.
2. The step of the self-tapping screws must be 200 mm along the ridge in 2 rows.
3. When laying the profiled sheet in the ridge zone without a gap (a sheet with an inflection over the ridge line), it is allowed not to install the compensator from the galvanized steel, and not to fill the corrugation of the corrugated sheet.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Ridge construction arrangement (corrugation direction across the slope)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **1.2 - 2021.05**	REV.





Specification of detail DWG No. 1.3 - 2021.05

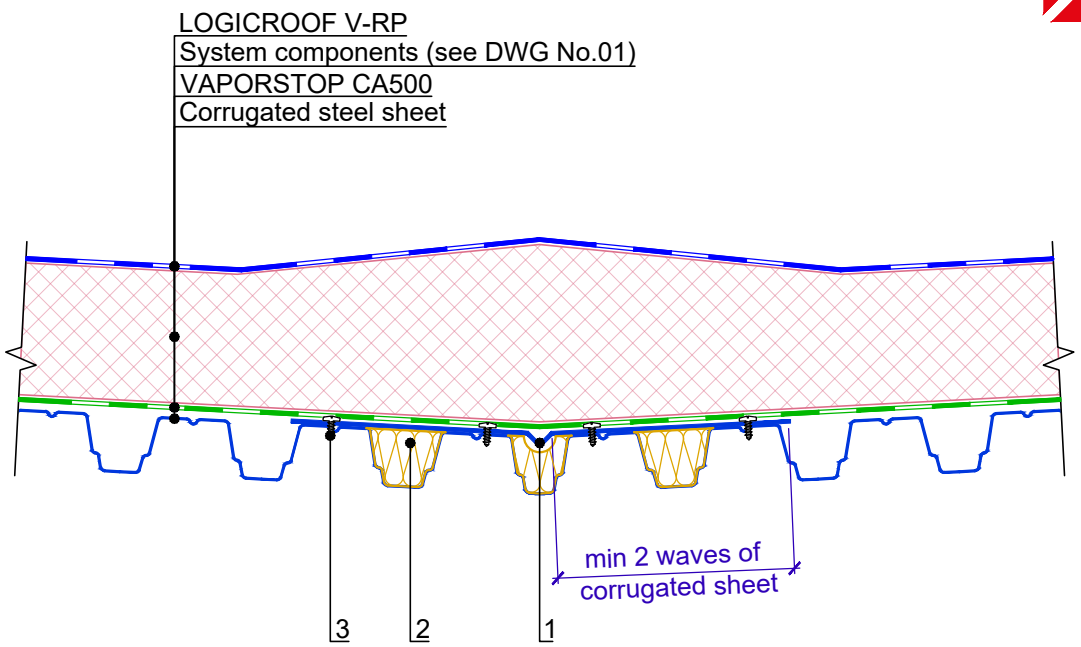
Position	Name	Consumption on 1 l. m.	Unit	Note
1	Galvanized steel compensator min 0.7 mm	1.0	m	
2	Stone wool	upon the project	m^3	
3	Self-tapping screw 4.2x25 with pressure pad	upon the project	pcs.	

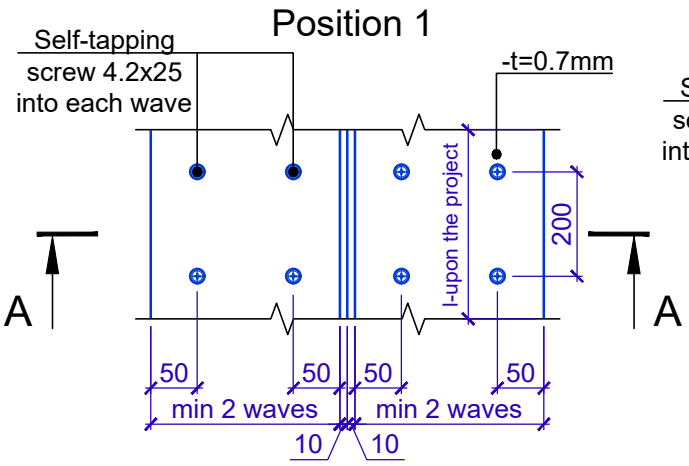
Notes

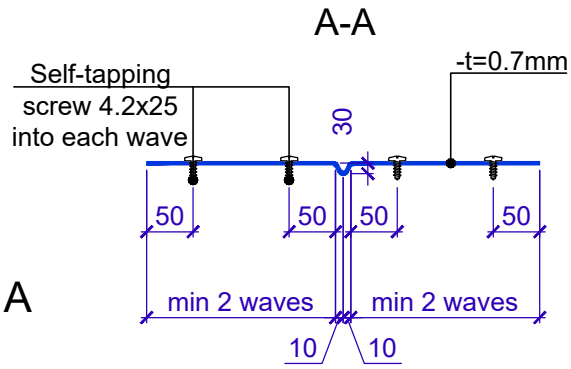
1. The volume of insulation (pos. 2) for the inserts of corrugated sheet depends on the type of corrugated sheet used in the project.
2. Fastening of the screws in every wave. Consumption depends on the type of corrugated sheet used in the project.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Valley construction arrangement (corrugation direction along the slope)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **1.3 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **1.4 - 2021.05**







Specification of detail DWG No. 1.4 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	Galvanized steel compensator min 0.7 mm	1.0	m	
2	Stone wool	upon the project	m^3	
3	Self-tapping screw 4.2x25 with pressure pad	upon the project	pcs.	

Notes

1. The volume of insulation (pos. 2) for the inserts of corrugated sheet depends on the type of corrugated sheet used in the project.
2. The step of the self-tapping screws must be 200 mm along the ridge in 2 rows.
3. When laying the profiled sheet in the ridge zone without a gap (a sheet with an inflection over the ridge line), it is allowed not to install the compensator from the galvanized steel, and not to fill the corrugation of the corrugated sheet.

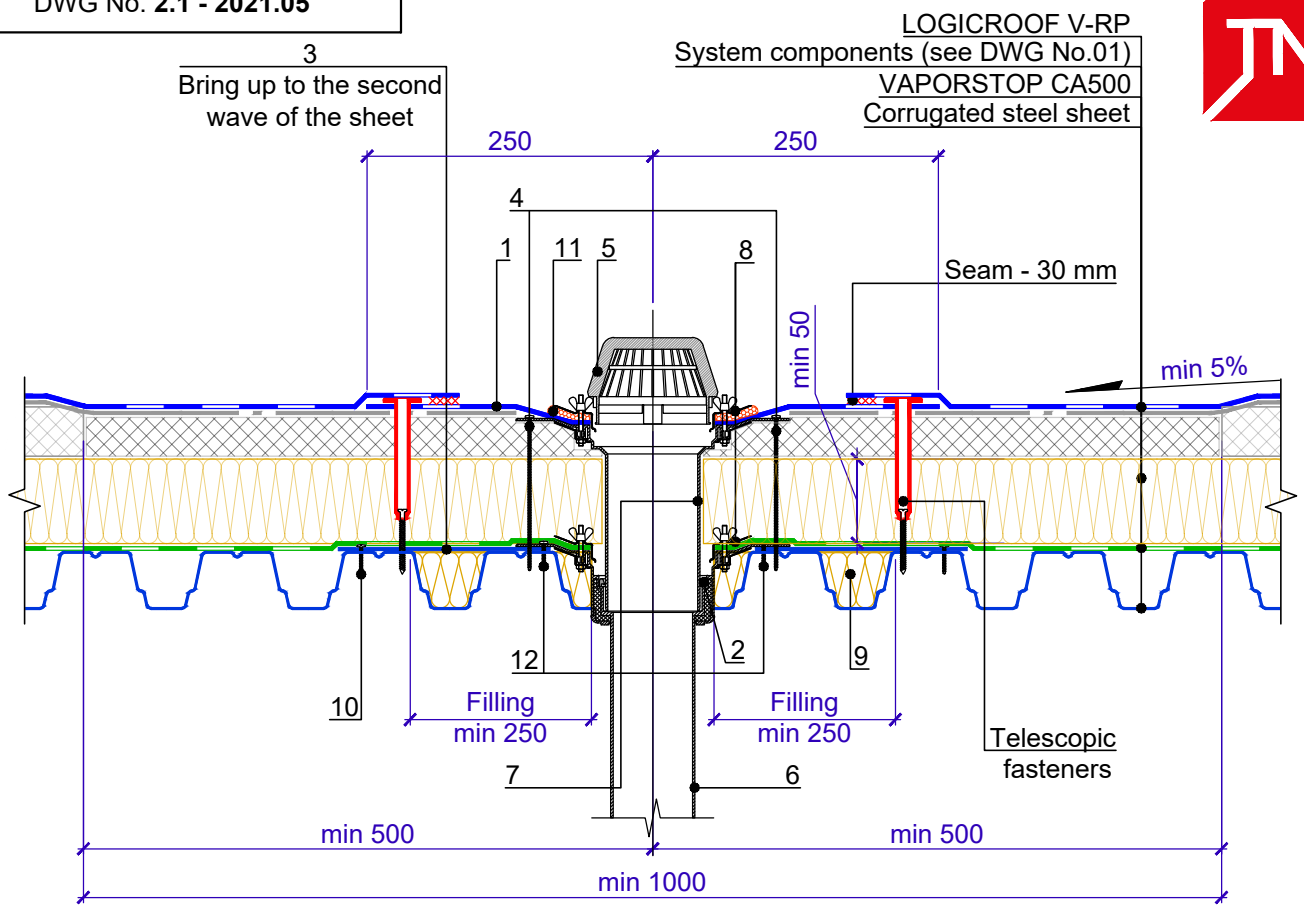
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Valley construction arrangement (corrugation direction across the slope)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **1.4 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings for gutter construction

№	Name	DWG No.
2.1	Inner drain. Water intake funnel with put-on element (placement along the valley line)	2.1
2.2	Internal drain. Water intake funnel (placement along the valley line)	2.2
2.3	Internal drain. Water intake funnel with put-on element (placement with offset from the valley line)	2.3
2.4	Drain through the parapet with insulation	2.4
2.5	External controlled water removal	2.5
2.6	Internal gutter	2.6

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.1 - 2021.05**



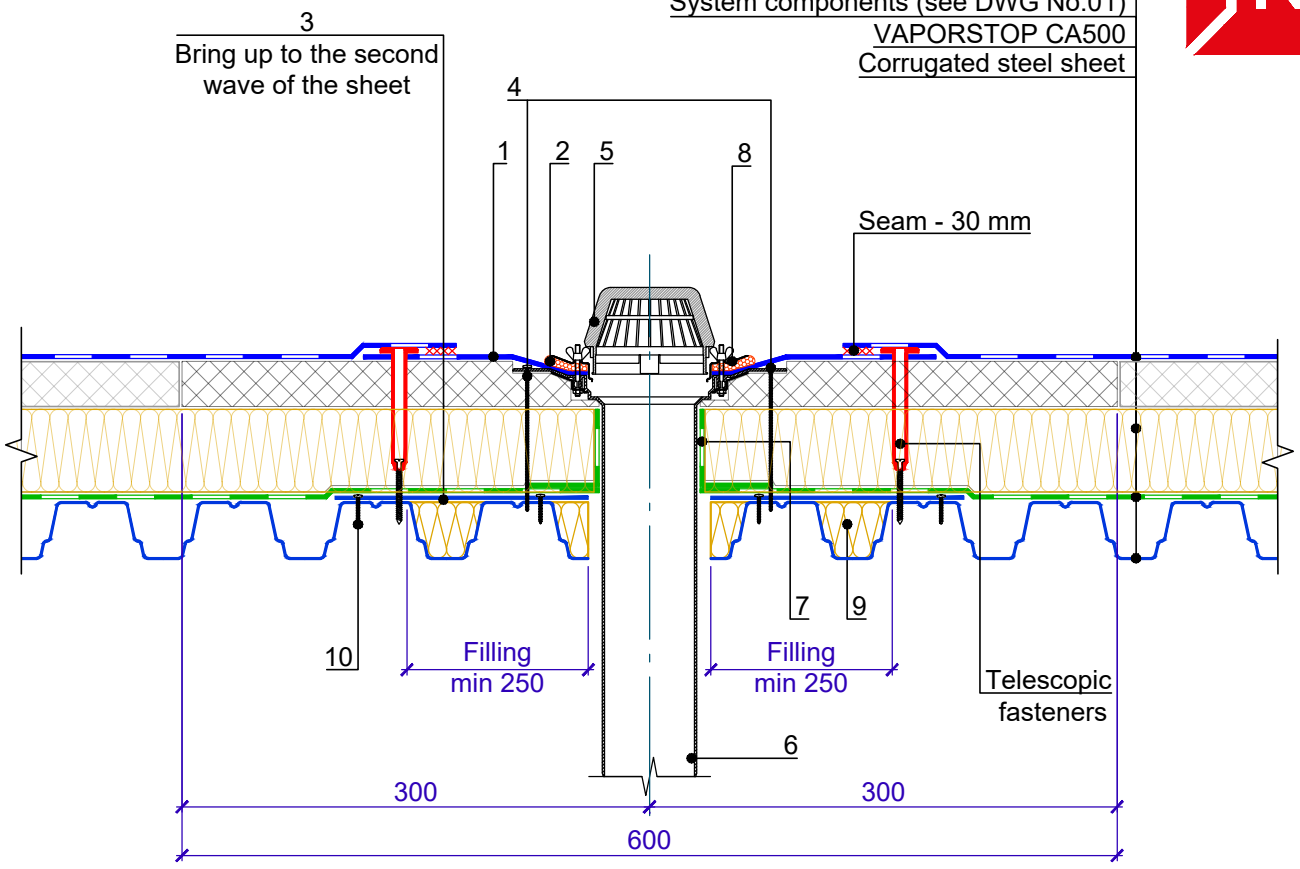
Specification of detail DWG No. 2.1 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	PVC membrane apron (set with funnel)	1	pcs.	
2	Sealing rings for put-on element	1		
3	0.7 mm thick galvanized steel sheet	upon the project	m^2	
4	Pointed self-tapping screw 4.8x(L-upon the project)	6	pcs.	
5	Leaf catcher (set with funnel)	1	pcs.	
6	Water intake funnel	1	pcs.	
7	Put-on element	1	pcs.	
8	Crimping flange (set with funnel)	1	pcs.	
9	Stone wool	upon the project	m^3	
10	Self-tapping screw 4.2x25 with pressure pad	12	pcs.	
11	Polyurethane sealant	0.5	pcs.	
12	Drill-tipped self-tapping screw 4.8x50	6	pcs.	

1. Join the put-on element to the lower funnel properly.
2. If necessary, use a TECHNONICOL heating water intake funnel (item 6).
3. Provide for an increase in the slope at the funnel up to 5% within a radius of at least 500 mm around. It is recommended that the funnel be deepened by 20-30 mm relative to the roof level.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Inner drain. Water intake funnel with put-on element (placement along the valley line)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.2 - 2021.05**



Specification of detail DWG No. 2.2 - 2021.05

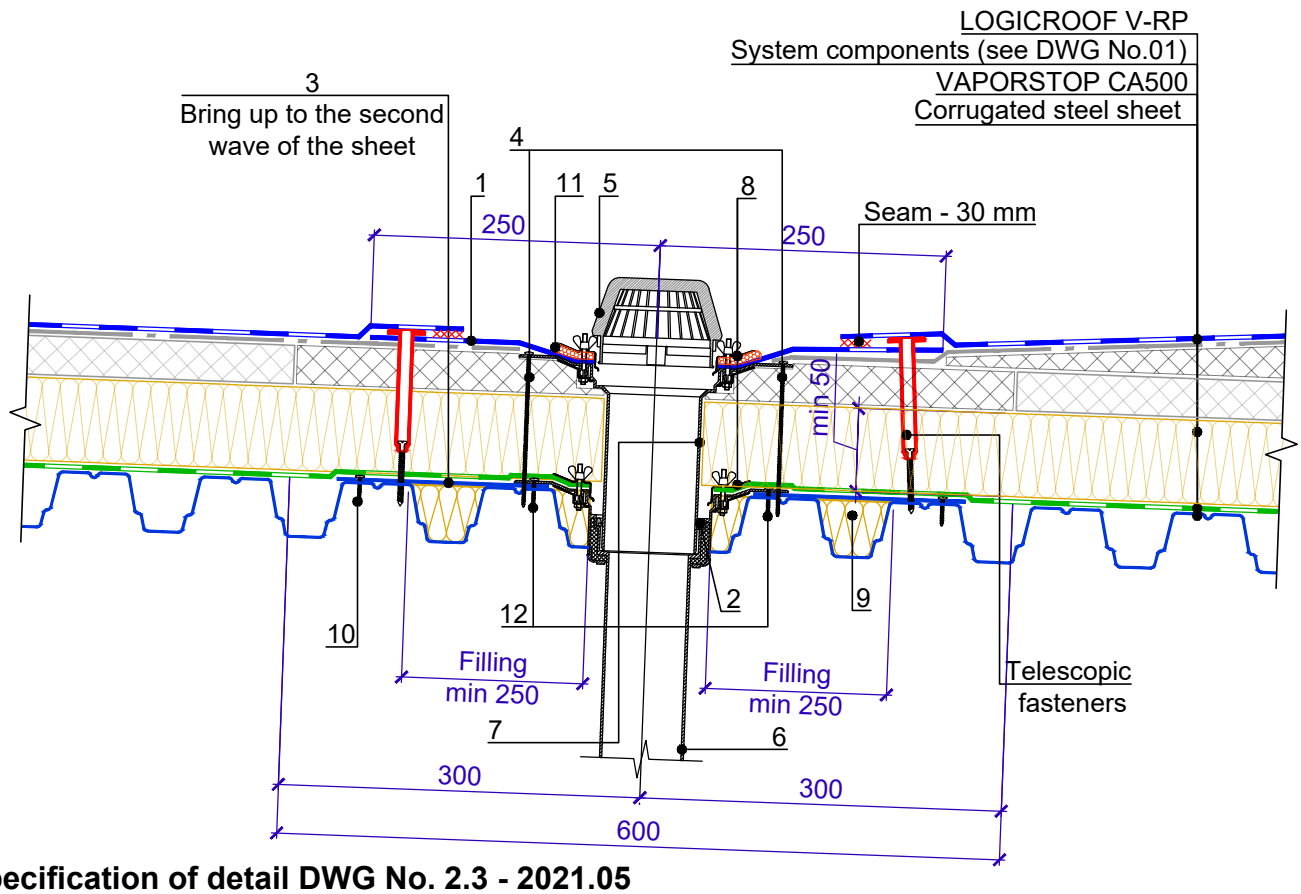
Position	Name	Consumption on 1 junction	Unit	Note
1	PVC membrane apron (set with funnel)	1	pcs.	
2	Polyurethane sealant	0.5	pcs.	
3	0.7 mm thick galvanized steel sheet	upon the project	m^2	
4	Pointed self-tapping screw 4.8x(L-upon the project)	6	pcs.	
5	Leaf catcher (set with funnel)	1	pcs.	
6	Water intake funnel	1	pcs.	
7	VAPORSTOP CA500	upon the project	m^2	
8	Crimping flange (set with funnel)	1	pcs.	
9	Stone wool	upon the project	m^3	
10	Self-tapping screw 4.2x25 with pressure pad	12	pcs.	

Notes

1. Provide for an increase in the slope at the funnel up to 5% within a radius of at least 500 mm around. It is recommended that the funnel be deepened by 20-30 mm relative to the roof level.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Internal drain. Water intake funnel (placement along the valley line)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.2 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.3 - 2021.05**



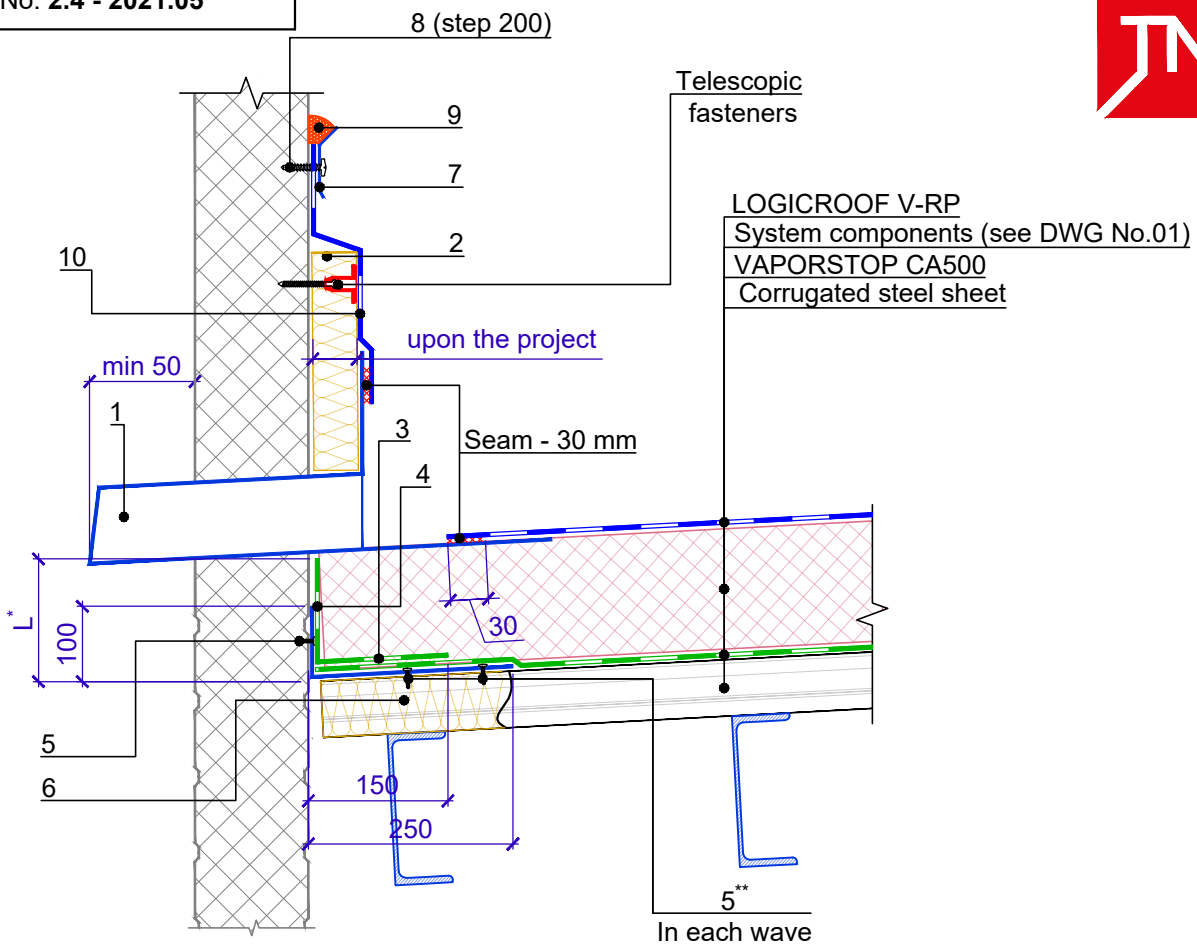
Specification of detail DWG No. 2.3 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	PVC membrane apron (set with funnel)	1	pcs.	
2	Sealing rings for put-on element	1		
3	0.7 mm thick galvanized steel sheet	upon the project	m^2	
4	Pointed self-tapping screw 4.8x(L-upon the project)	6	pcs.	
5	Leaf catcher (set with funnel)	1	pcs.	
6	Water intake funnel	1	pcs.	
7	Put-on element	1	pcs.	
8	Crimping flange (set with funnel)	1	pcs.	
9	Stone wool	upon the project	m^3	
10	Self-tapping screw 4.2x25 with pressure pad	12	pcs.	
11	Polyurethane sealant	0.5	pcs.	
12	Drill-tipped self-tapping screw 4.8x50	6	pcs.	

1. Join the put-on element to the lower funnel properly.
2. If necessary, use a TECHNONICOL heating water intake funnel (item 6).

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Internal drain. Water intake funnel with put-on element (placement with offset from the valley line)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.3 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.4 - 2021.05**



Specification of detail DWG No. 2.4 - 2021.05

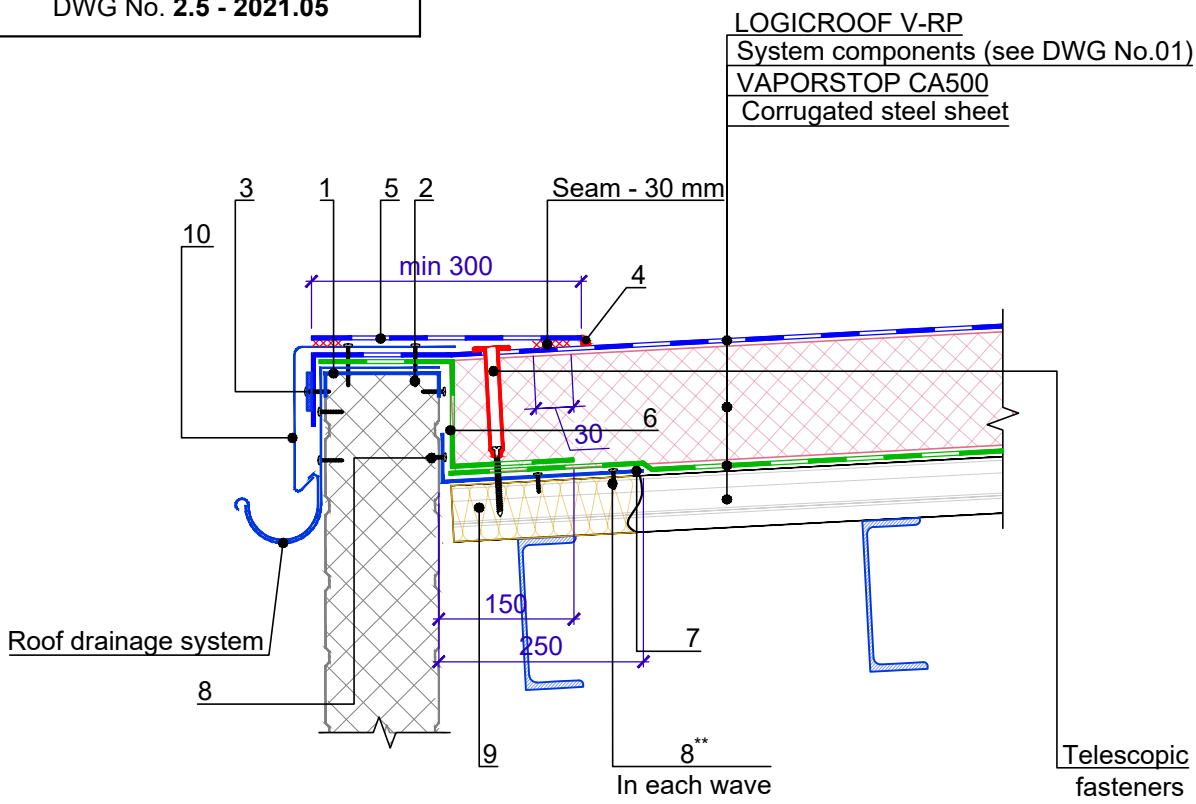
Position	Name	Consumption on 1 junction	Unit	Note
1	PVC parapet funnel	1	pcs.	
2	Stone wool	upon the project	m^3	
3	Strip from VAPORSTOP CA500	upon the project	m^2	
4	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
5	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
6	Stone wool	upon the project	m^3	
7	Edge rail	1.00	m	
8	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
9	Polyurethane sealant	0.25	pcs.	
10	LOGICROOF V-RP	upon the project	m^2	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.
2. The specification describes the average consumption based on 5 pcs per 1 lm (step 200). If necessary, adjust the consumption taking into account the pitch of wave of the corrugated steel sheet of the decking.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Drain through the parapet with insulation	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.4 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.5 - 2021.05**



Specification of detail DWG No. 2.5 - 2021.05

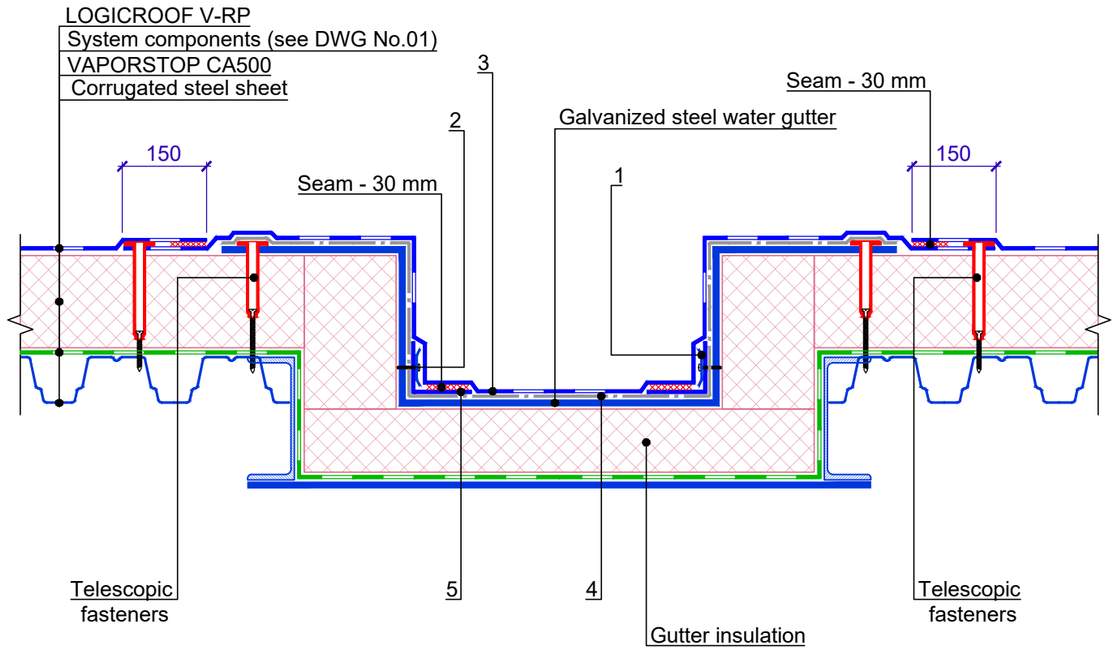
Position	Name	Consumption on 1 l. m.	Unit	Note
1	Galvanized steel boot	1.00	m	
2	Drill-tipped self-tapping screw 5.5x35	15	pcs.	
3	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
4	Liquid PVC	-	-	
5	LOGICROOF V-RP	0.3	m^2	
6	Strip made of VAPORSTOP CA500	upon the project	m^2	
7	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
8	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
9	Stone wool	upon the project	m^3	
10	PVC-laminated drip edge	1.00	m	

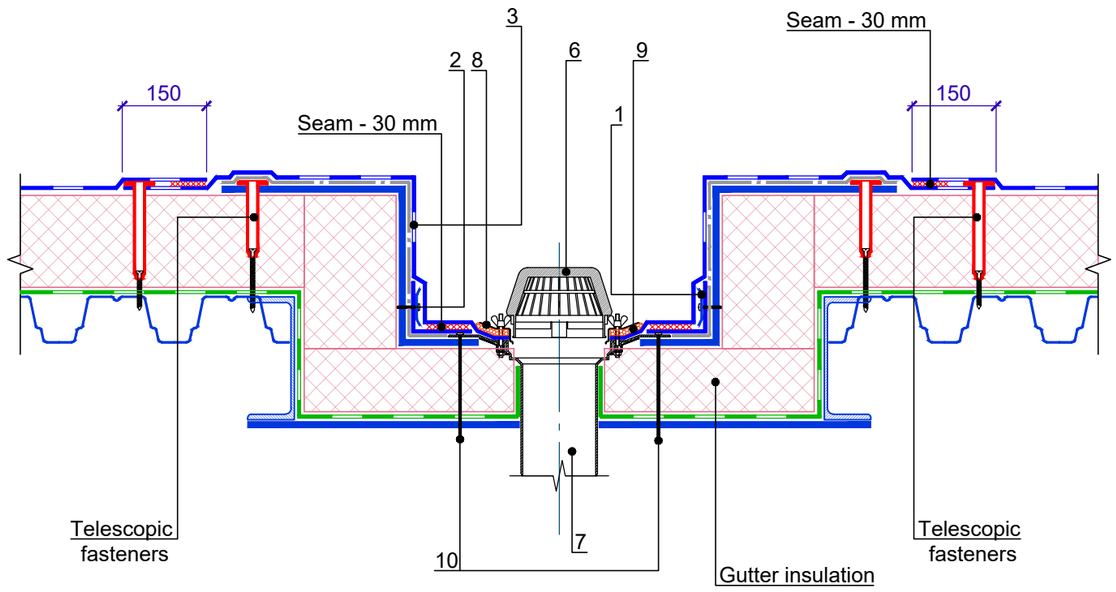
Notes

1. The specification describes the average consumption based on 5 pcs per 1 lm (step 200). If necessary, adjust the consumption taking into account the pitch of wave of the corrugated steel sheet of the decking.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				External controlled water removal	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.5 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **2.6 - 2021.05**





Specification of detail DWG No. 2.6 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	Clamping rail	2.00	m	
2	Drill-tipped self-tapping screw 5.5x35	10	pcs.	
3	LOGICROOF V-RP	upon the project	m^2	
4	Needle-punched heat-treated geotextile, 300 g/m^2	upon the project	m^2	
5	LOGICROOF V-RP	upon the project	m^2	
6	Leaf catcher (set with funnel)	1	pcs.	
7	Water intake funnel	1	pcs.	
8	Crimping flange (set with funnel)	1	pcs.	
9	Polyurethane sealant	0.5	pcs.	
10	Pointed self-tapping screw 4.8x(L-upon the project)	6	pcs.	

1. This detail shows the junction of TechnoNICOL materials to the water gutter
2. The arrangement of gutter elements is shown conditionally and should be worked out at the stage of designing of building structures.

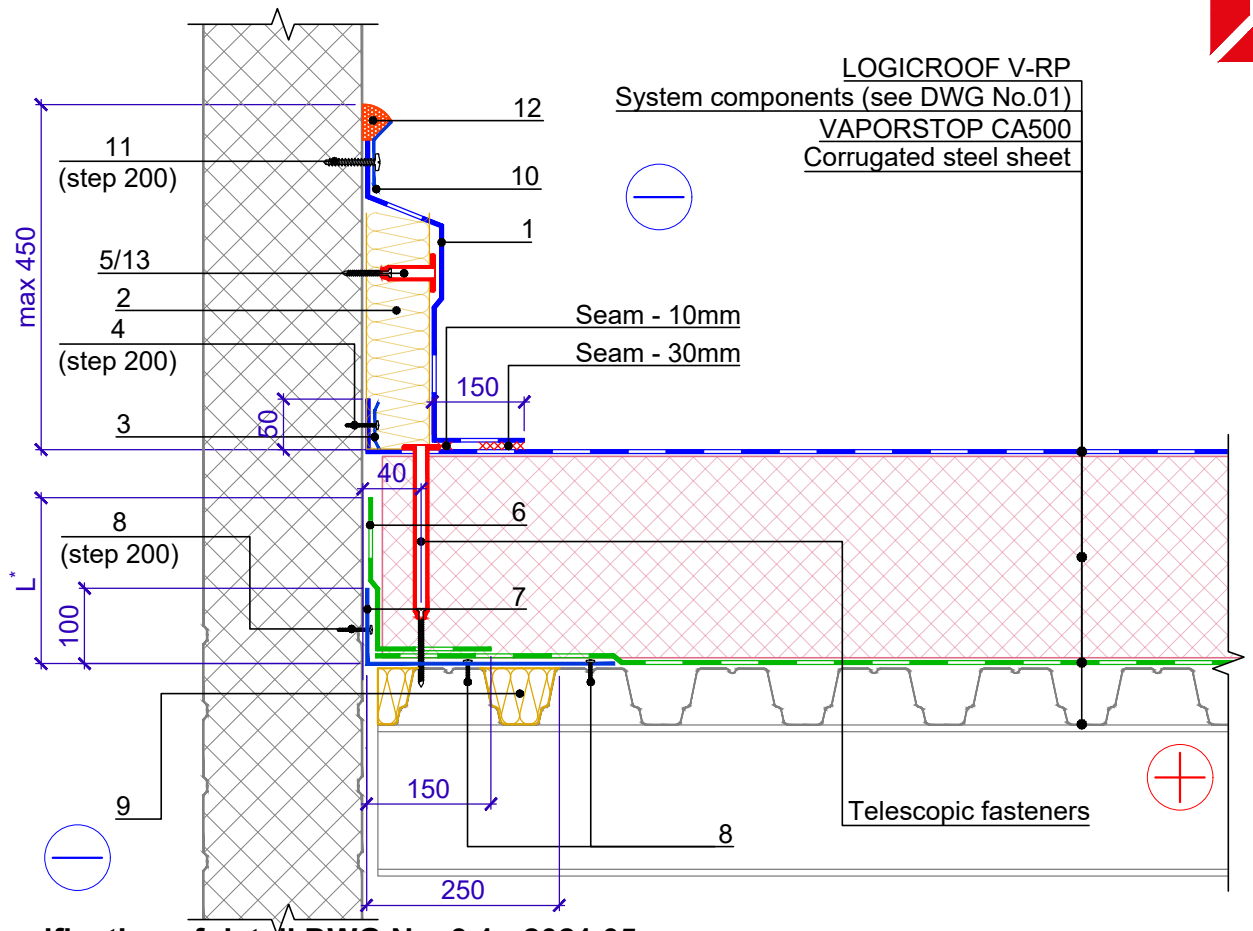
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Internal gutter	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **2.6 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings for arrangement of junctions to vertical surfaces

№	Name	DWG No.
3.1	Junction to a vertical with additional insulation for sandwich panels	3.1
3.2	Junction to a vertical with concrete and stone walls additional insulation	3.2
3.3	Junction to a vertical with additional insulation for stone walls	3.3
3.4	Junction to a low insulated parapet with a membrane placed on the parapet (junction to sandwich panels)	3.4
3.5	Junction to a low insulated parapet with waterproofing installation on the parapet (junction to concrete, brick, block)	3.5
3.6	Junction to a high insulated parapet with waterproofing installation on the parapet (junction to sandwich panels)	3.6
3.7	Junction to a high insulated parapet with waterproofing installation on the parapet (junction to concrete, brick, block)	3.7
3.8	Junction to the parapet with additional insulation of a single row half-timbered	3.8
3.9	Junction to the parapet with additional insulation of the horizontal bearing elements of the parapet	3.9

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.1 - 2021.05**



Specification of detail DWG No. 3.1 - 2021.05

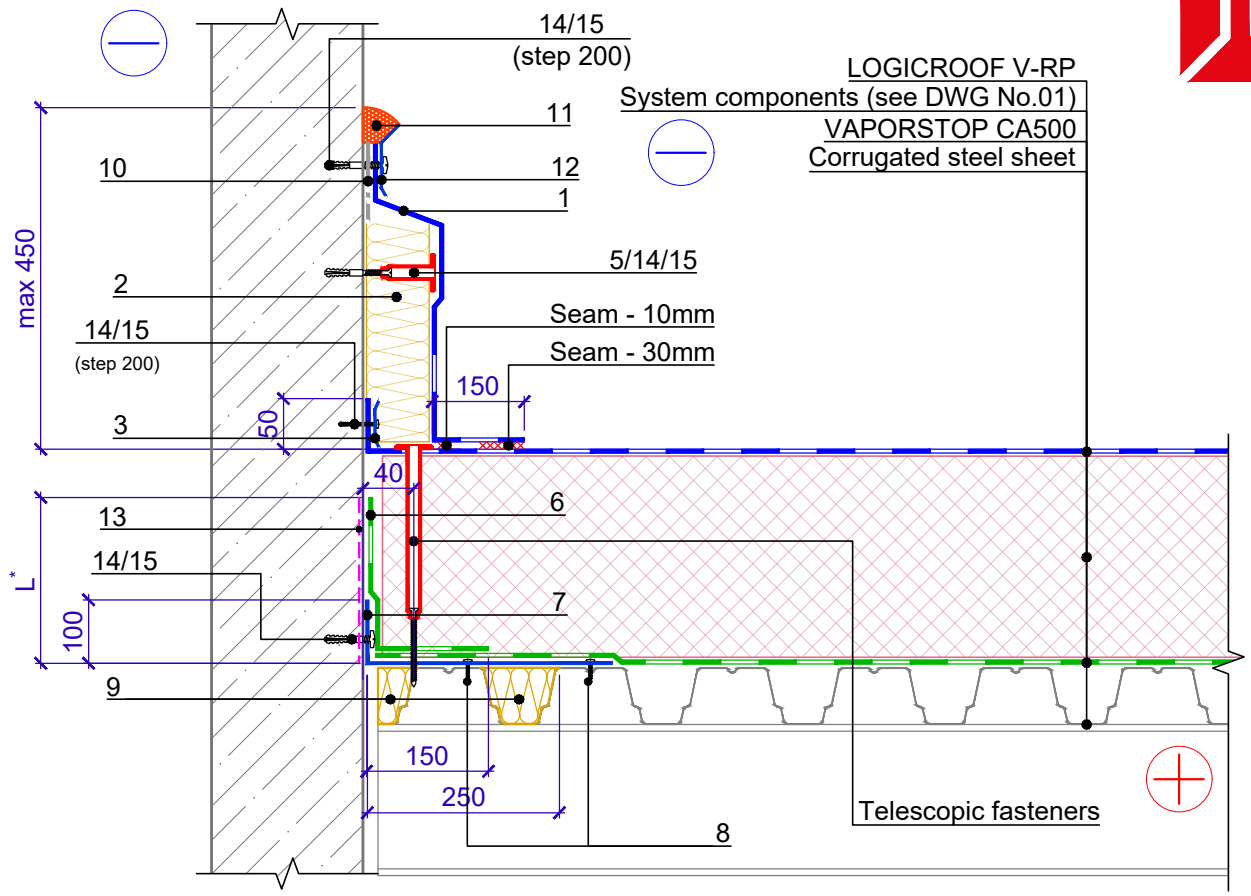
Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
5	Telescopic fasteners	5	pcs.	
6	Strip made of VAPORSTOP CA500	upon the project	m^2	
7	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
8	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
9	Stone wool	upon the project	m^3	
10	Edge rail	1.00	m	
11	Pointed self-tapping screw 5.5x35	5	pcs.	
12	Polyurethane sealant	0.25	pcs.	
13	Pointed self-tapping screw 4.8x(L-upon the project)	5	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a vertical with additional insulation for sandwich panels	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 3.1 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.2 - 2021.05**



Specification of detail DWG No. 3.2 - 2021.05

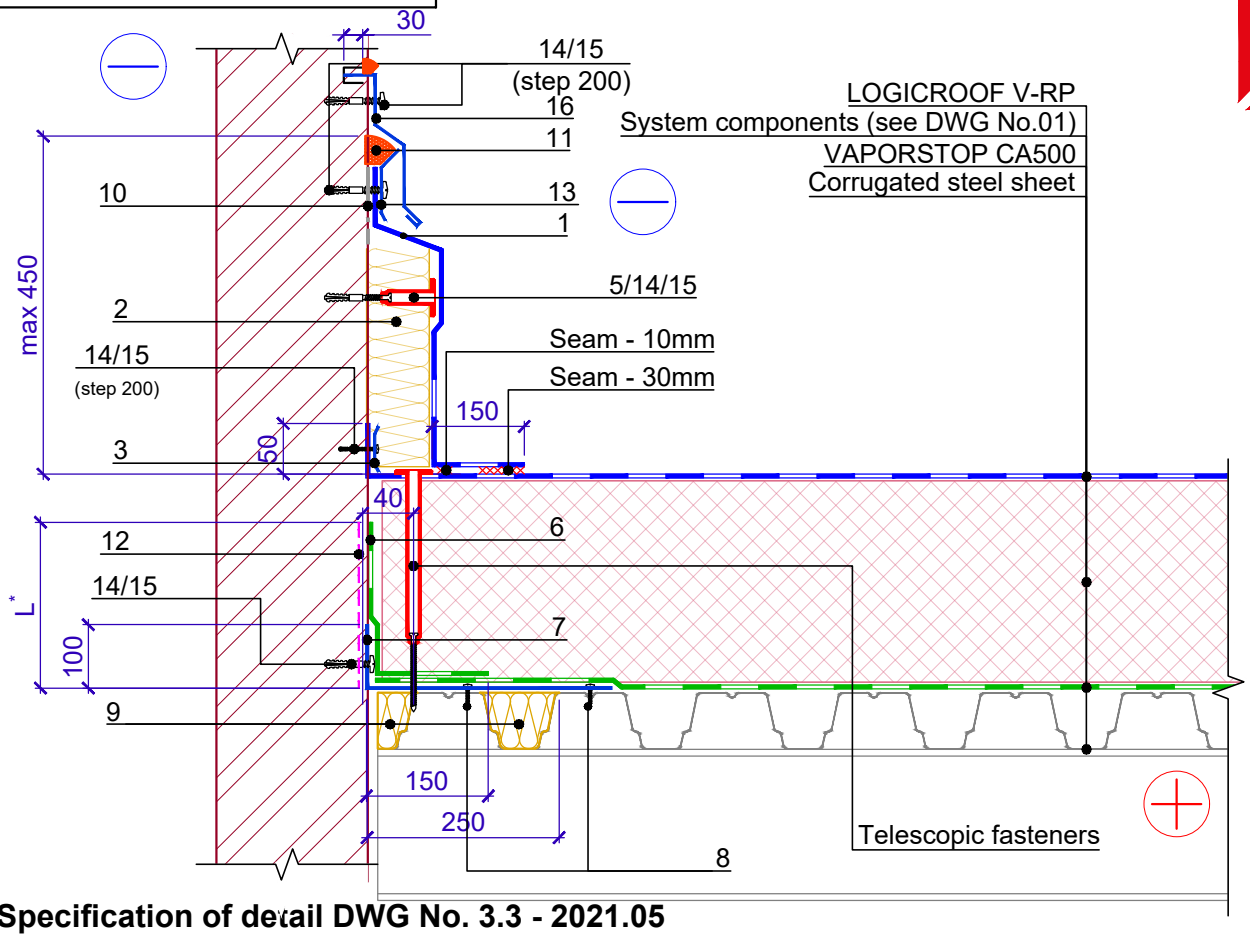
Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Pointed self-tapping screw 4.8x50 with anchoring element 8x45	5	pcs.	
5	Telescopic fastener with anchoring element 8x45	5	pcs.	
6	Strip made of VAPORSTOP CA500	upon the project	m^2	
7	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
8	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
9	Stone wool	upon the project	m^3	
10	Needle-punched heat-treated geotextile, 150 g/m^2	0.20	m^2	
11	Polyurethane sealant	0.25	pcs.	
12	Edge rail	1.00	m	
13	Bitumen Prime Coating	upon the project	l	
14	Pointed self-tapping screw 4.8x50	20	pcs.	
15	Anchor element 8x45	20	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a vertical with concrete and stone walls additional insulation	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 3.2 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.3 - 2021.05**



Specification of detail DWG No. 3.3 - 2021.05

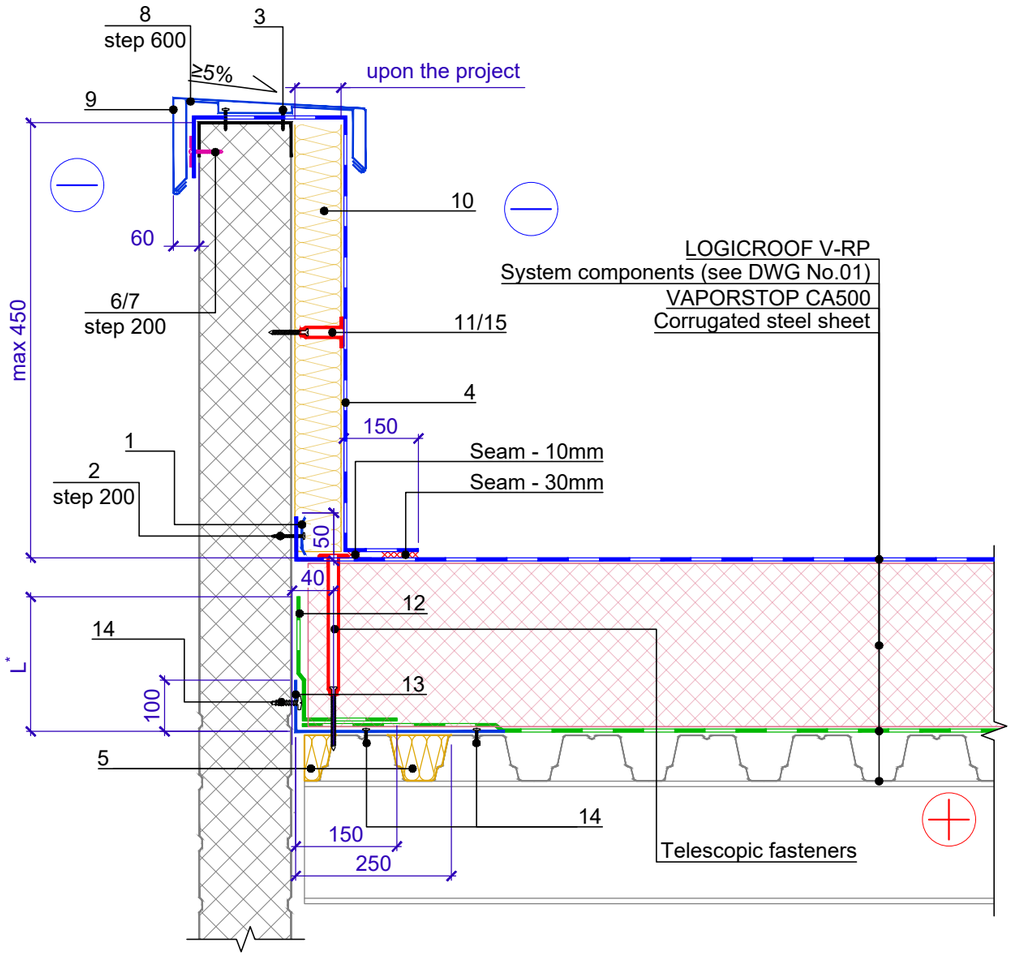
Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drain element made of galvanized steel (cap)	1.00	m	
5	Telescopic fastener with anchoring element 8x45	5	pcs.	
6	Strip made of VAPORSTOP CA500	upon the project	m^2	
7	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
8	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
9	Stone wool	upon the project	m^3	
10	Needle-punched heat-treated geotextile, 150 g/m^2	0.20	m^2	
11	Polyurethane sealant	0.25	pcs.	
12	Bitumen Prime Coating	upon the project	l	
13	Edge rail	1.00	m	
14	Pointed self-tapping screw 4.8x50	25	pcs.	
15	Anchor element 8x45	25	pcs.	

Notes

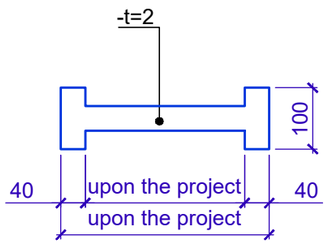
1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	Junction to a vertical with additional insulation for stone walls	DWG No. **3.3 - 2021.05**	REV.

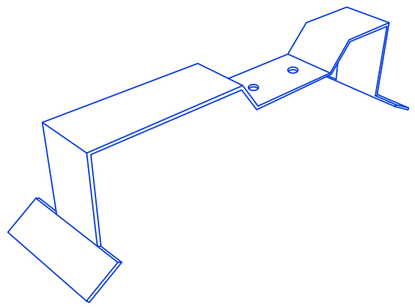
TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.4 - 2021.05**



Position 8



Position 8. Bending



Specification of detail DWG No. 3.4 - 2021.05

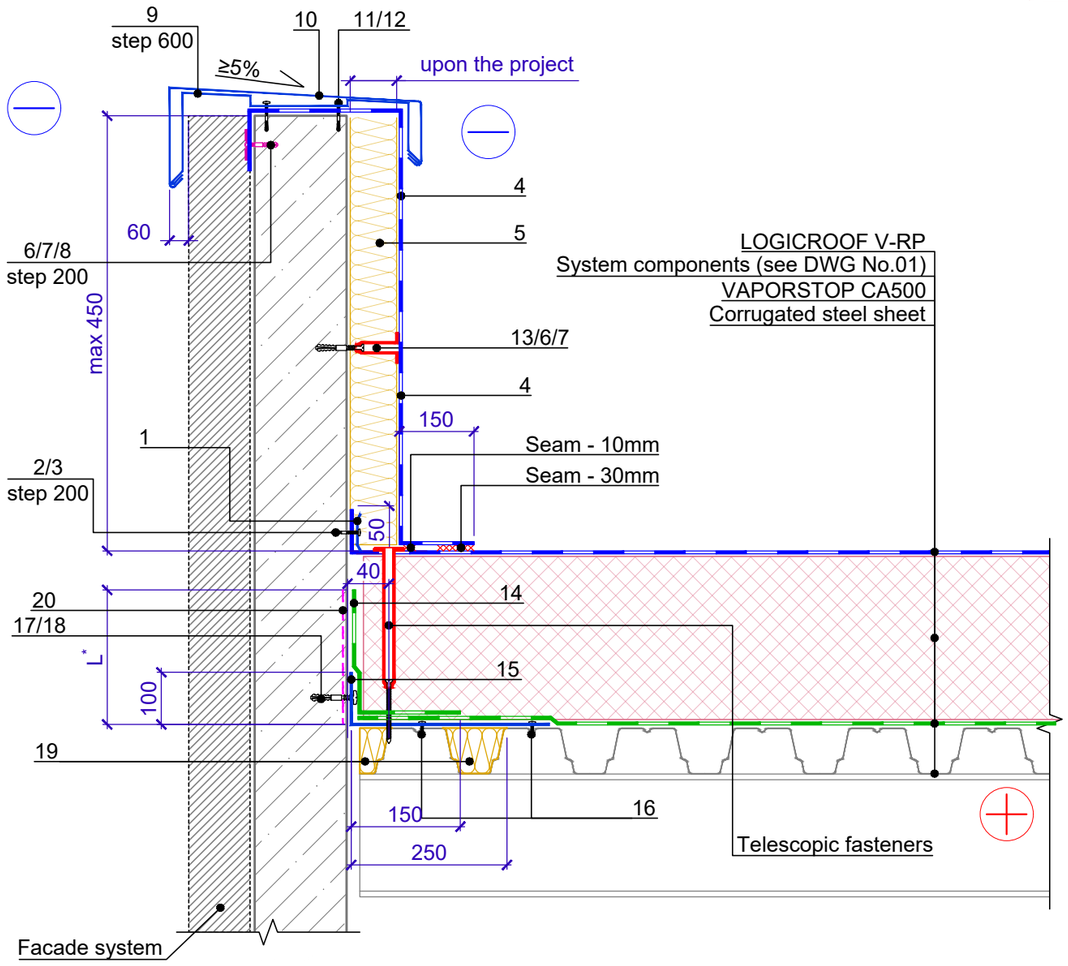
Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	Clamping rail	1.00	m	
2	Pointed self-tapping screw 4.8x50	5	pcs.	
3	Pointed self-tapping screw 4.8x50	3.40	pcs.	
4	LOGICROOF V-RP	upon the project	m^2	
5	Stone wool	upon the project	m^3	
6	Pointed self-tapping screw 5.5x35	5	pcs.	
7	Circular or oval-shaped washer	5	pcs.	
8	Fastener (T-shaped support)	1.70	pcs.	
9	Drain element made of galvanized steel (cap)	1.00	m	
10	Stone wool	upon the project	m^3	
11	Telescopic fasteners	upon the project	pcs.	
12	Strip made of VAPORSTOP CA500	upon the project	m^2	
13	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
14	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
15	Pointed self-tapping screw 4.8x50	5	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN / APPROVED
				Junction to a low insulated parapet with a membrane placed on the parapet (junction to sandwich panels)	SCALE / DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 3.4 - 2021.05 / REV.

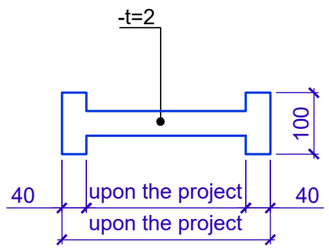
TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.5 - 2021.05**



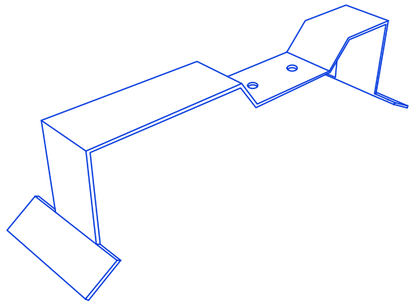
Specification of detail DWG No. 3.5 - 2021.05

Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	Clamping rail	1.00	m	
2	Pointed self-tapping screw 4.8x50	5	pcs.	
3	Anchor element 8x45	5	pcs.	
4	LOGICROOF V-RP	upon the project	m^2	
5	Stone wool	upon the project	m^3	
6	Pointed self-tapping screw 4.8x50	5	pcs.	
7	Anchor element 8x45	5	pcs.	
8	Circular or oval-shaped washer	5	pcs.	
9	Fastener (T-shaped support)	1.70	pcs.	
10	Drain element made of galvanized steel (cap)	1.00	m	
11	Pointed self-tapping screw 4.8x50	3.40	pcs.	
12	Anchor element 8x45	3.40	pcs.	
13	Telescopic fasteners	upon the project	pcs.	
14	Strip made of VAPORSTOP CA500	upon the project	m^2	
15	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
16	Self-tapping screw 4.2x25 with pressure pad	10	pcs.	
17	Pointed self-tapping screw 4.8x50	5	pcs.	
18	Anchor element 8x45	5	pcs.	
19	Stone wool	upon the project	m^3	
20	Bitumen Prime Coating	0,05	l	

Position 9



Position 9. Bending

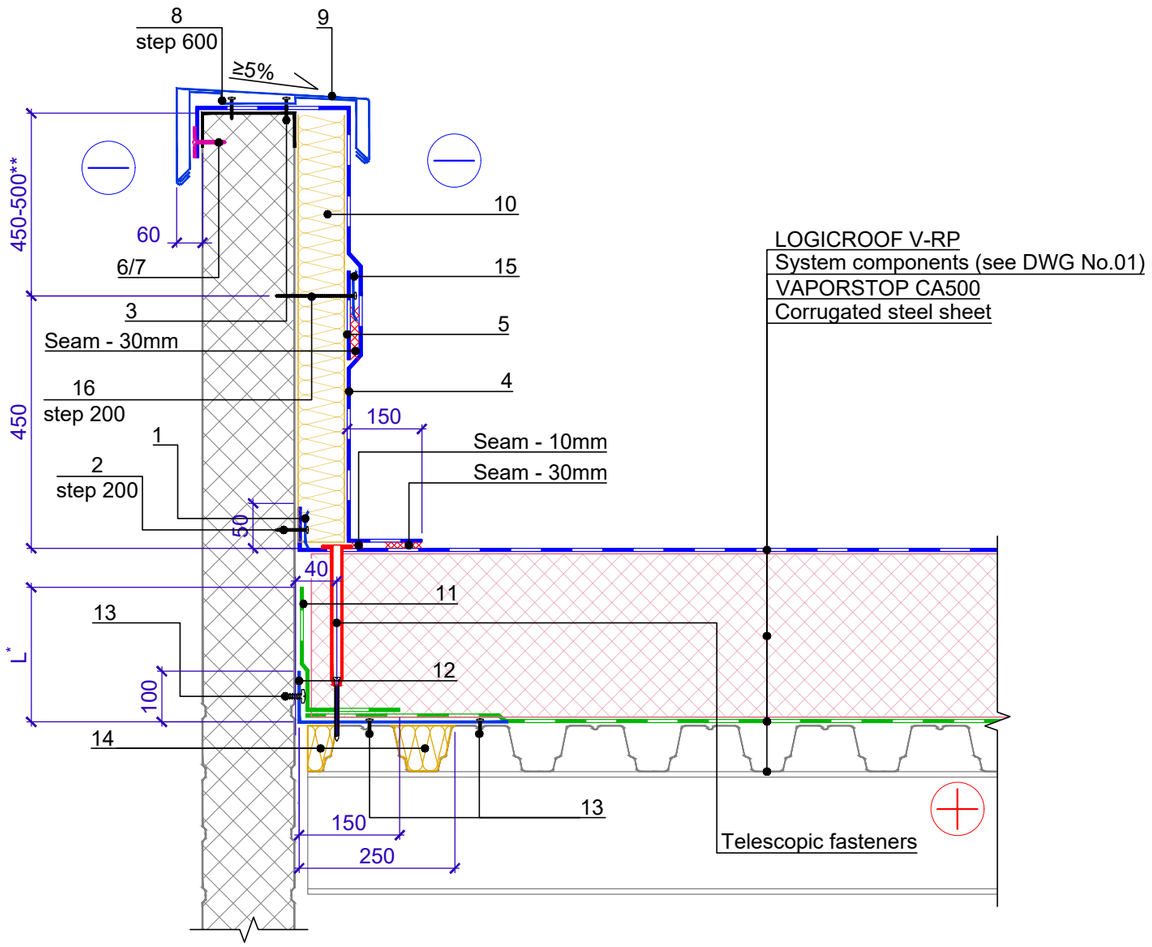


Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a low insulated parapet with waterproofing installation on the parapet (junction to concrete, brick, block)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **3.5 - 2021.05**	REV.

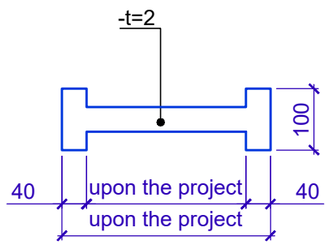
TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.6 - 2021.05**



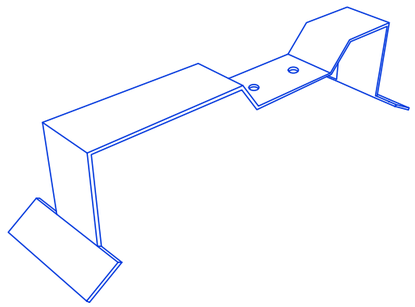
Specification of detail DWG No. 3.6 - 2021.05

Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	Clamping rail	1.00	m	
2	Pointed self-tapping screw 4.8x50	5	pcs.	
3	Pointed self-tapping screw 4.8x50	3.40	pcs.	
4	LOGICROOF V-RP	upon the project	m^2	
5	LOGICROOF V-RP	upon the project	m^2	
6	Pointed self-tapping screw 5.5x35	5	pcs.	
7	Circular or oval-shaped washer	5	pcs.	
8	Fastener (T-shaped support)	1.70	pcs.	
9	Drain element made of galvanized steel (cap)	1.00	m	
10	Stone wool	upon the project	m^3	
11	Strip made of VAPORSTOP CA500	upon the project	m^2	
12	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
13	Self-tapping screw 4.2x25 with pressure pad	15	pcs.	
14	Stone wool	upon the project	m^3	
15	Clamping rail	1.00	m	
16	Drill-tipped self-tapping screw 5,5x(L-upon the project)	5	pcs.	

Position 8



Position 8. Bending

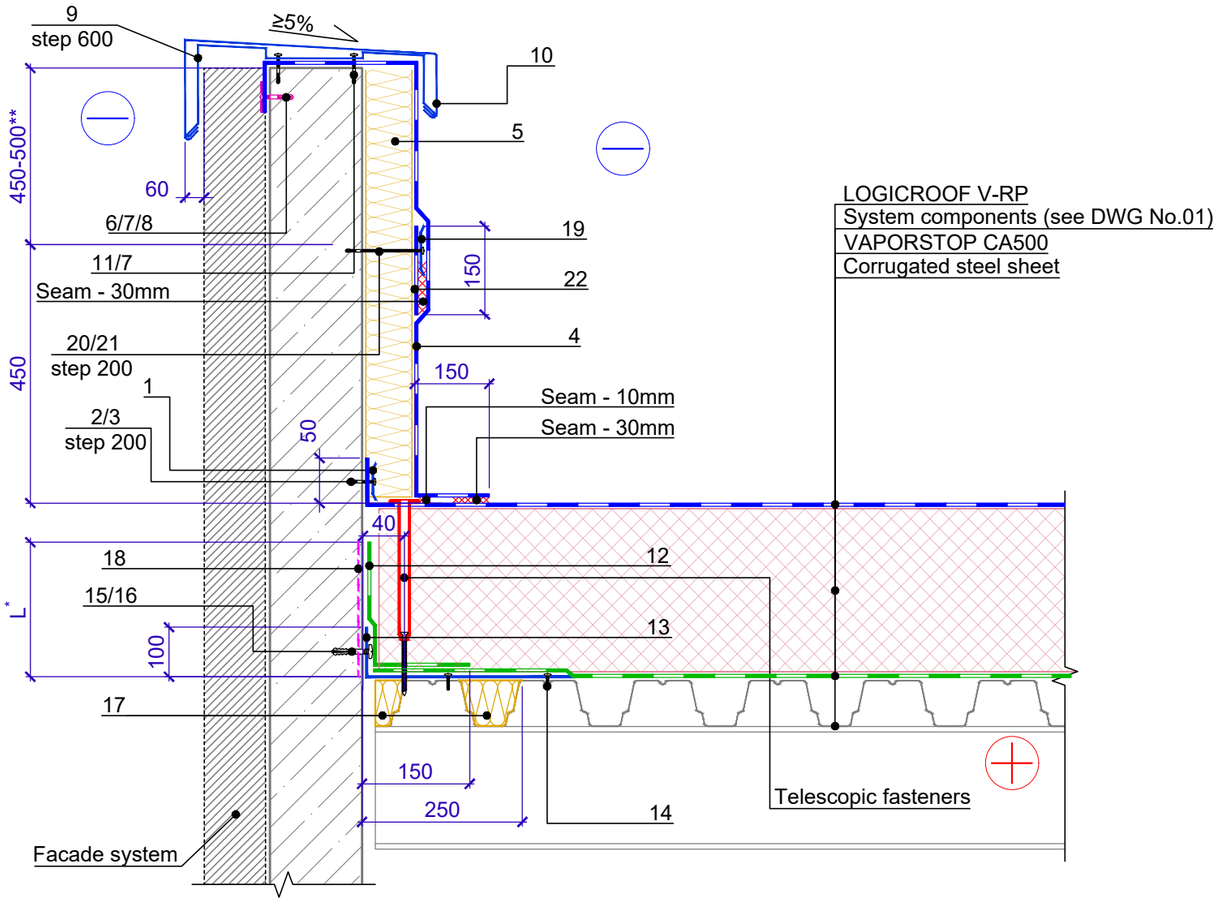


Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a high insulated parapet with waterproofing installation on the parapet (junction to sandwich panels)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **3.6 - 2021.05**	REV.

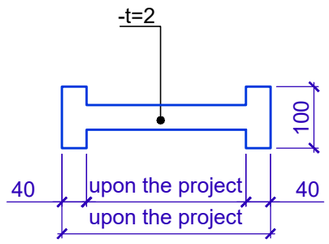
TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.7 - 2021.05**



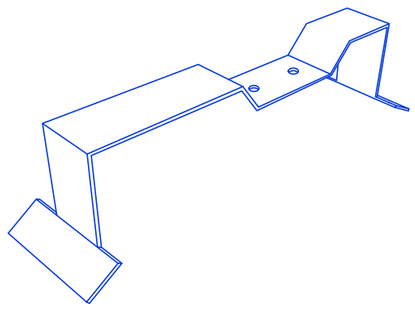
Specification of detail DWG No. 3.7 - 2021.05

Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	Clamping rail	1.00	m	
2	Pointed self-tapping screw 4.8x50	5	pcs.	
3	Anchor element 8x45	5	pcs.	
4	LOGICROOF V-RP	upon the project	m^2	
5	Stone wool	upon the project	m^3	
6	Pointed self-tapping screw 4.8x50	10	pcs.	
7	Anchor element 8x45	10	pcs.	
8	Circular or oval-shaped washer	5	pcs.	
9	Fastener (T-shaped support)	1.70	pcs.	
10	Drain element made of galvanized steel (cap)	1.00	m	
11	Pointed self-tapping screw 4.8x50	3.40	pcs.	
12	Strip made of VAPORSTOP CA500	upon the project	m^2	
13	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
14	Self-tapping screw 4.2x25 with pressure pad	10	pcs.	
15	Pointed self-tapping screw 4.8x50	5	pcs.	
16	Anchor element 8x45	5	pcs.	
17	Stone wool	upon the project	m^3	
18	Bitumen Prime Coating	0,05	l	
19	Clamping rail	1.00	m	
20	Pointed self-tapping screw 4,8xL (L-upon the project)	5	pcs.	
21	Anchor element 8x45	5	pcs.	
22	LOGICROOF V-RP (strip)	0.15	m^2	

Position 9



Position 9. Bending

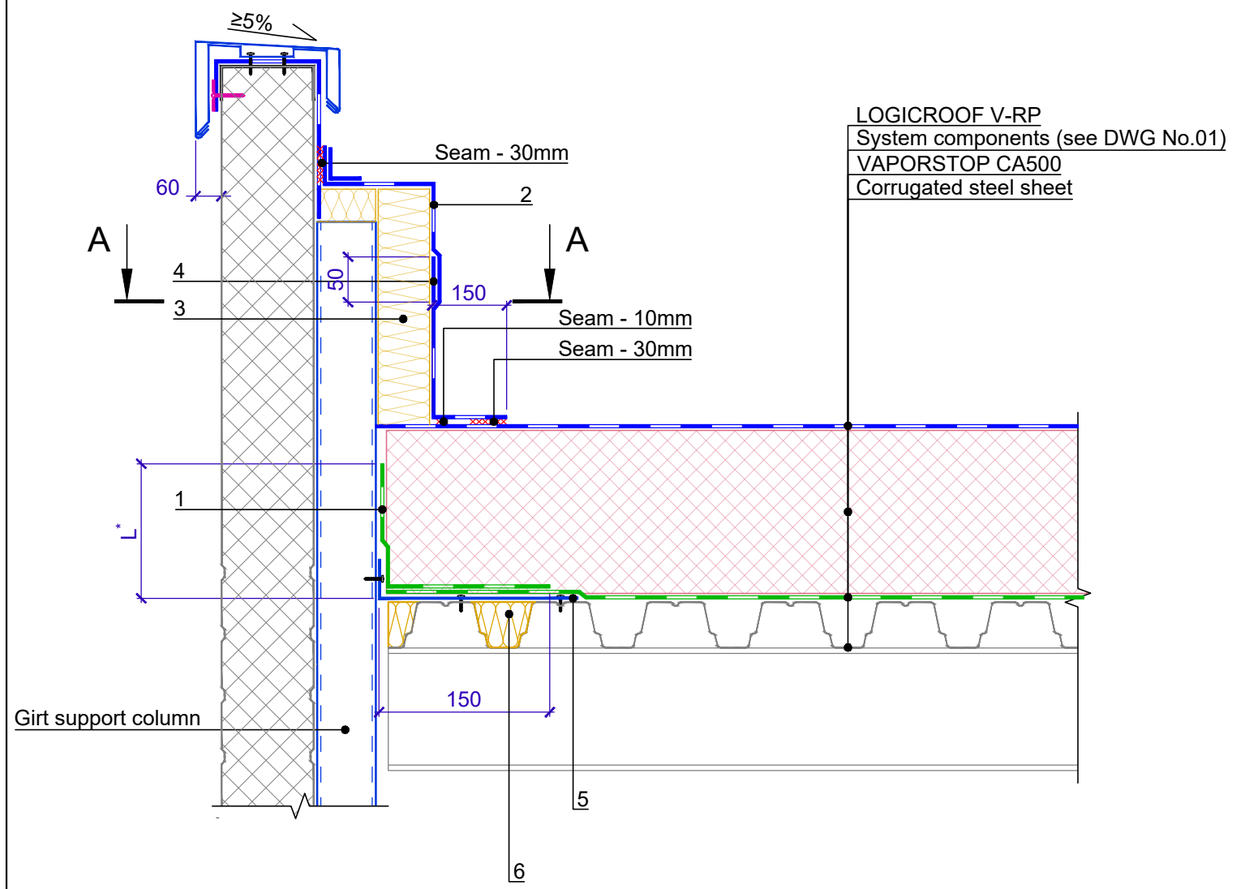


Notes

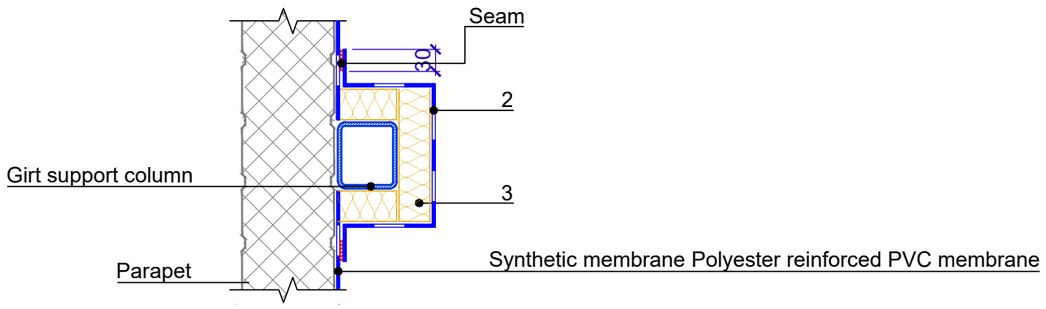
1. L* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should be connected to a metal compensator with the formation folds.
2. ** - If the height of a junction to the parapet is more than 450 mm, it is necessary to provide additional fastening of the roofing membrane to the vertical surface using a clamping rail. The clamping rail is installed with a step of no more than 450-500 mm vertically. If the height of a parapet is 450 mm or less, no intermediate fixing on the vertical is required (see solutions for a low parapet).

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a high insulated parapet with waterproofing installation on the parapet (junction to concrete, brick, block).	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **3.7 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.8 - 2021.05**



A-A



Specification of detail DWG No. 3.8 - 2021.05

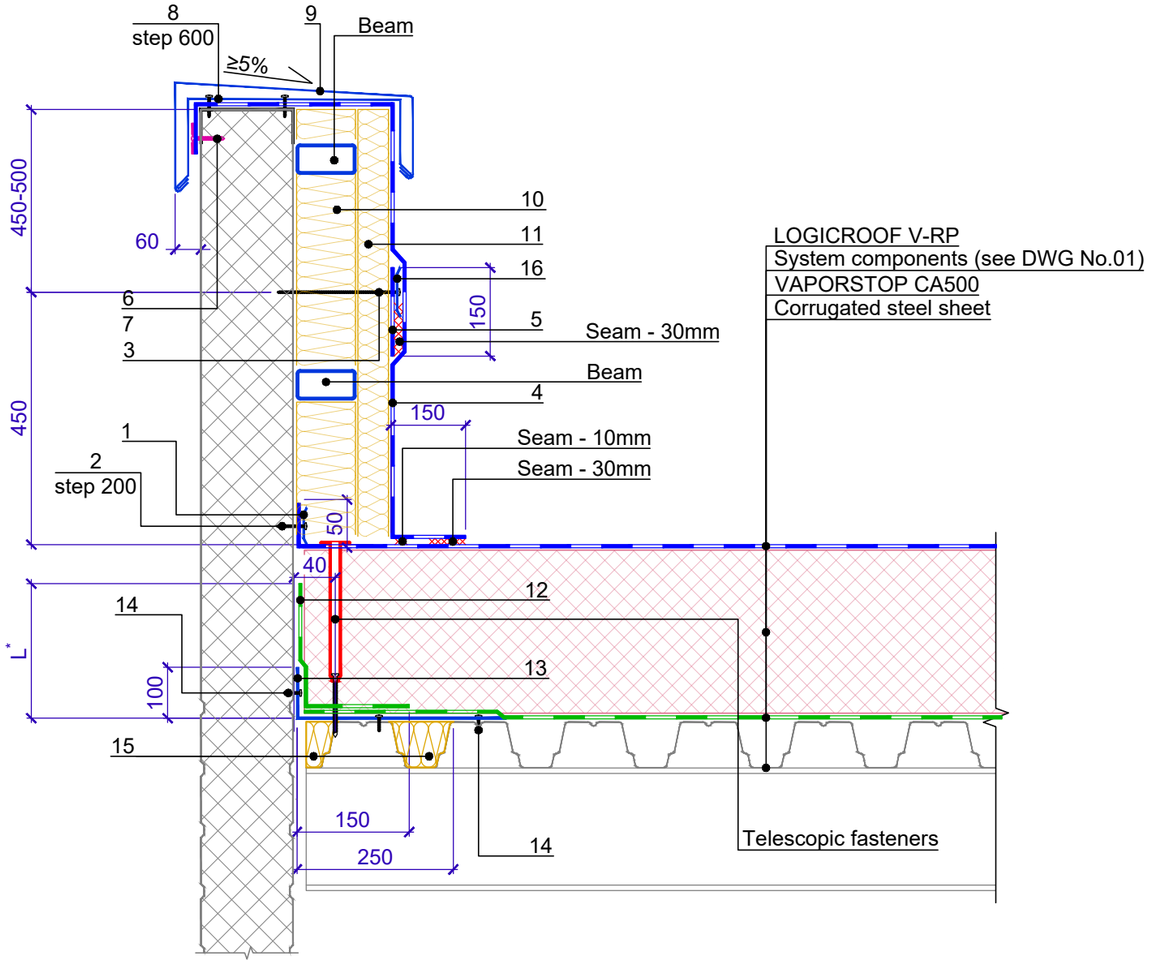
Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	VAPORSTOP CA500	upon the project	m^2	
2	LOGICROOF V-RP	upon the project	m^2	
3	Stone wool	upon the project	m^3	
4	LOGICROOF V-RP - strip for insulation fastening (width 50mm)	upon the project	m^2	
5	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
6	Stone wool	upon the project	m^3	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the parapet with additional insulation of a single row half-timbered	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **3.8 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **3.9 - 2021.05**



Specification of detail DWG No. 3.9-2021.05

Position	Name	Consumption on 1 l.m. of junction	Unit	Note
1	Clamping rail	1.00	m	
2	Pointed self-tapping screw 4.8x50	5	pcs.	
3	Drill-tipped self-tapping screw 5,5x(L-upon the project)	5	pcs.	
4	LOGICROOF V-RP	upon the project	m^2	
5	LOGICROOF V-RP (strip)	0.15	m^2	
6	Pointed self-tapping screw 5.5x35	5	pcs.	
7	Circular or oval-shaped washer	5	pcs.	
8	Fastener (T-shaped support)	1.70	pcs.	
9	Drain element made of galvanized steel (cap)	1.00	m	
10	Stone wool	upon the project	m^3	
11	Stone wool	upon the project	m^3	
12	Strip made of VAPORSTOP CA500	upon the project	m^2	
13	Galvanized steel corner piece 0.7 mm thick	upon the project	m	
14	Self-tapping screw 4.2x25 with pressure pad	10	pcs.	
15	Stone wool	upon the project	m^3	
16	Clamping rail	1.00	m	

Notes

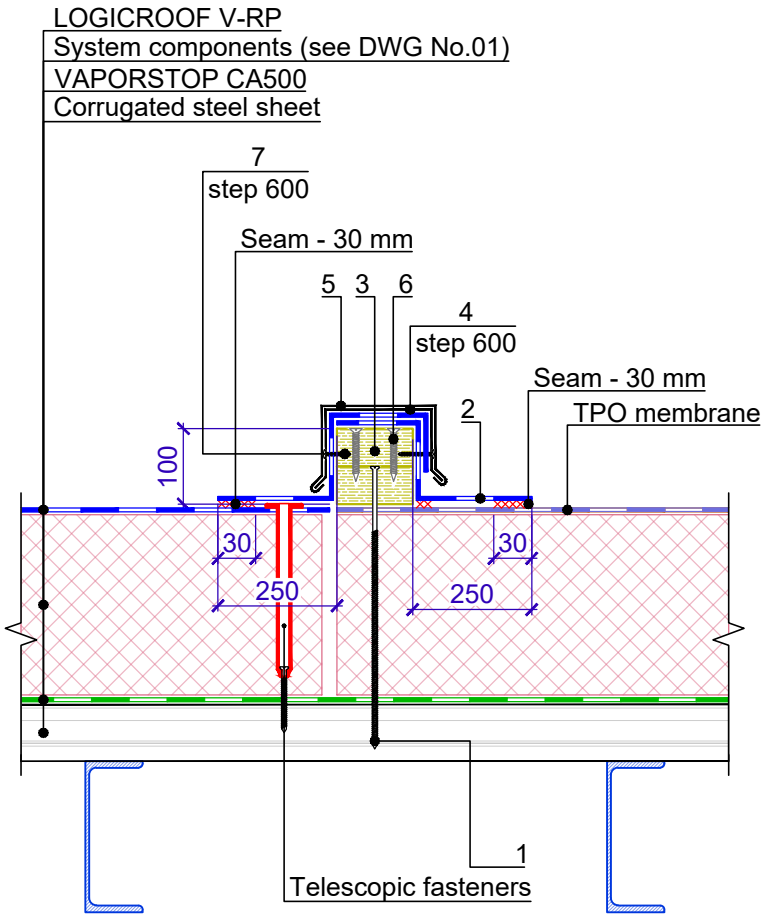
1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the parapet with additional insulation of the horizontal bearing elements of the parapet	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **3.9 - 2021.05**	REV.

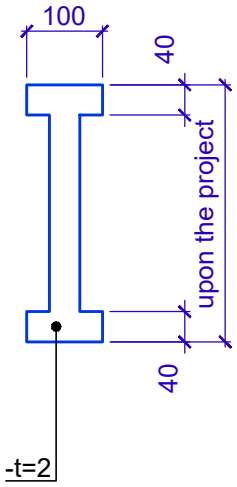
Register of drawings for construction of junctions to the roof with other materials

№	Name	DWG No.
4.1	Connection of PVC and TPO membranes	4.1
4.2	Connection of PVC and bitumen membranes	4.2

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **4.1 - 2021.05**



Fastener
(T-shaped support)
Position 4



Specification of detail DWG No. 4.1 - 2021.05

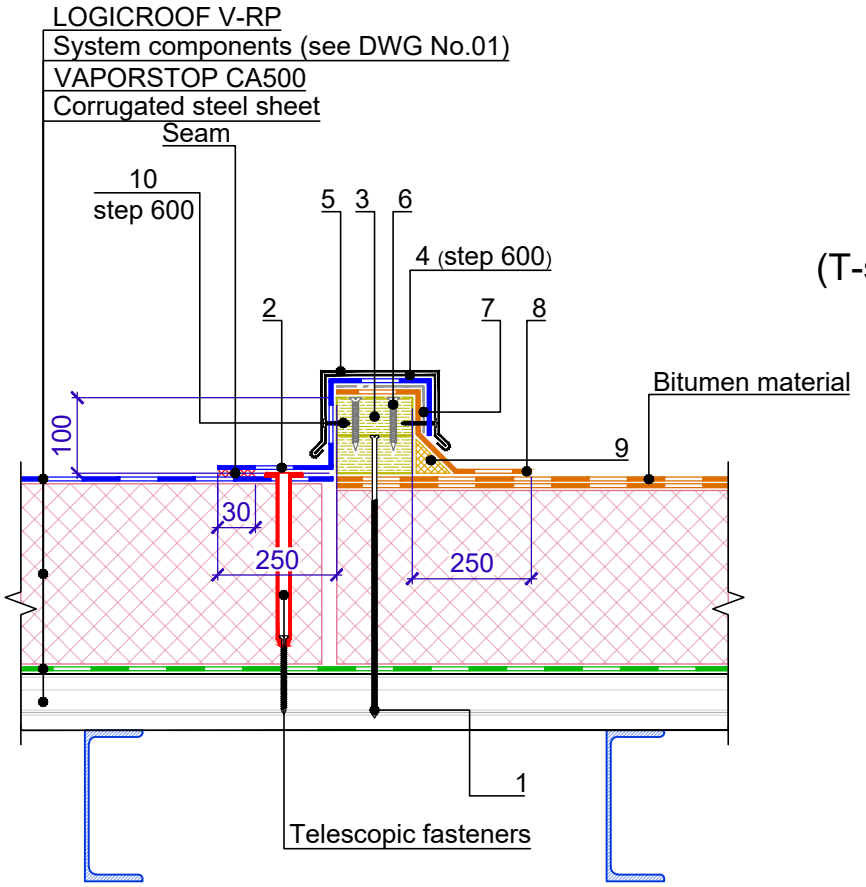
Position	Name	Consumption on 1 l. m.	Unit	Note
1	Drill-tipped self-tapping screw Ø4.8mm (L - upon the project)	3	pcs.	
2	TPO membrane	0.55	m^2	
3	Wooden bar 50x100	0.01	m^3	
4	Fastener	1.70	pcs.	
5	Drain element from galvanized steel	1.0	m	
6	Self-tapping screw Ø4.2mm (L=75mm)	10	pcs.	
7	Self-tapping screw Ø4.2mm (L=35mm)	4	pcs.	

Notes

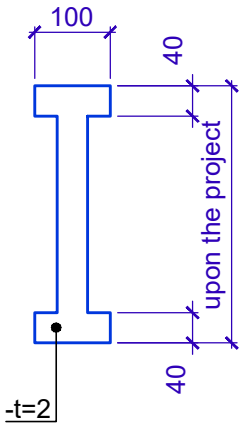
1. Cover the wooden bar (3) with fire-retardant and pesticide before installation.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Connection of PVC and TPO membranes	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **4.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **4.2 - 2021.05**



Fastener
(T-shaped support)
Position 4



Specification of detail DWG No. 4.2 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	Drill-tipped self-tapping screw Ø4.8mm (L - upon the project)	3	pcs.	
2	LOGICROOF V-RP	0.55	m^2	
3	Wooden bar 50x100	0.01	m^3	
4	Fastener	1.70	pcs.	
5	Drain element from galvanized steel	1.0	m	
6	Self-tapping screw Ø4.2mm (L=75mm)	10	pcs.	
7	Heat treated nonwoven geotextile 150 g/m^2	0.20	m^2	
8	Ultraplast grey mineral (APP)	0.50	m^2	
9	Stone wool angle fillet, 10x10 cm	0.005	m^3	
10	Drill-tipped self-tapping screw Ø4.2mm (L=35mm)	4	pcs.	

Notes
1. Cover the wooden bar (3) with fire-retardant and pesticide before installation.
2. Cut the stone wool angle fillet in place for drain element installation.

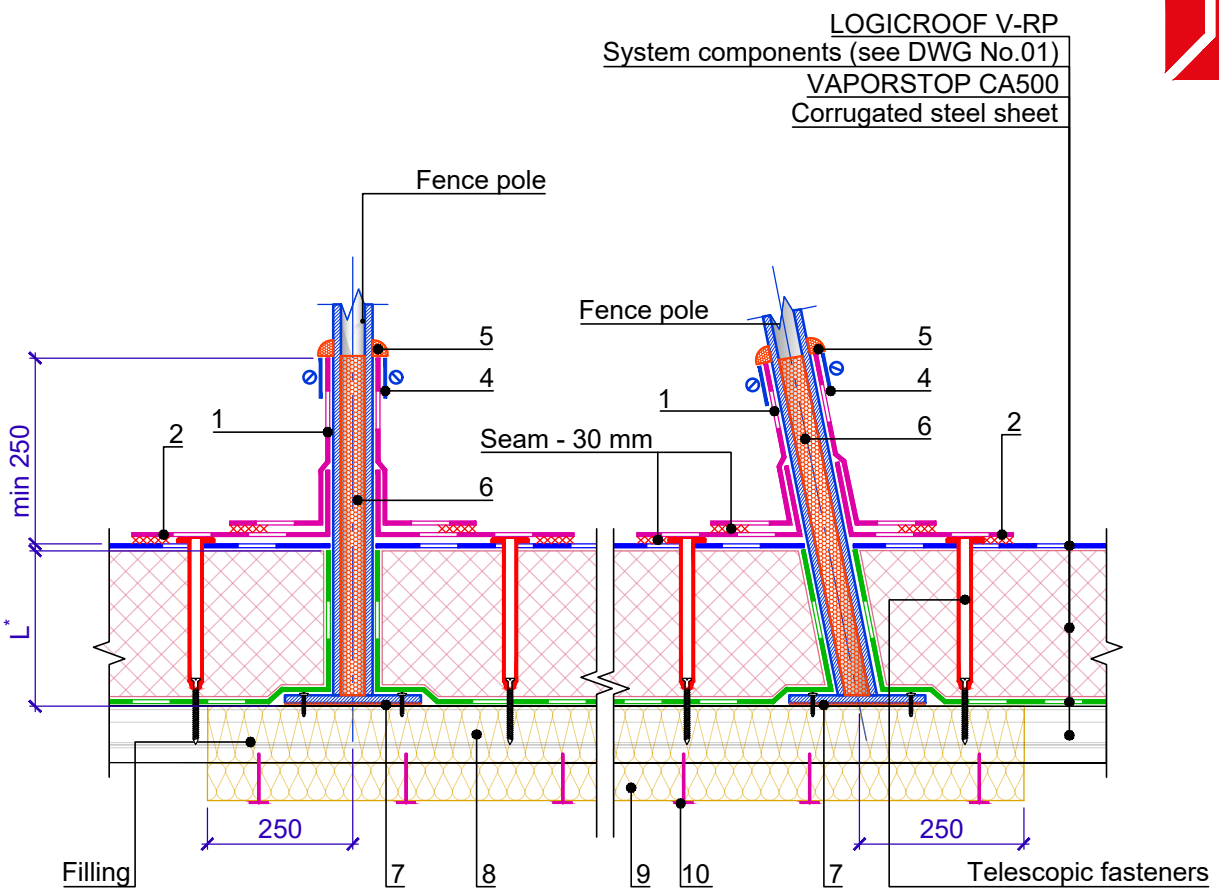
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Connection of PVC and bitumen membranes	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **4.2 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings of construction of junctions to the roof fence poles and equipment racks

№	Name	DWG No.
5.1	Junctions to the roof fence pole	5.1
5.2	Junction to the equipment racks	5.2
5.3	Junction to TECHNONICOL roof support	5.3

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **5.1 - 2021.05**



L* - the height of the insertion should be at least the thickness of the insulating layer.

Specification of detail DWG No. 5.1 - 2021.05

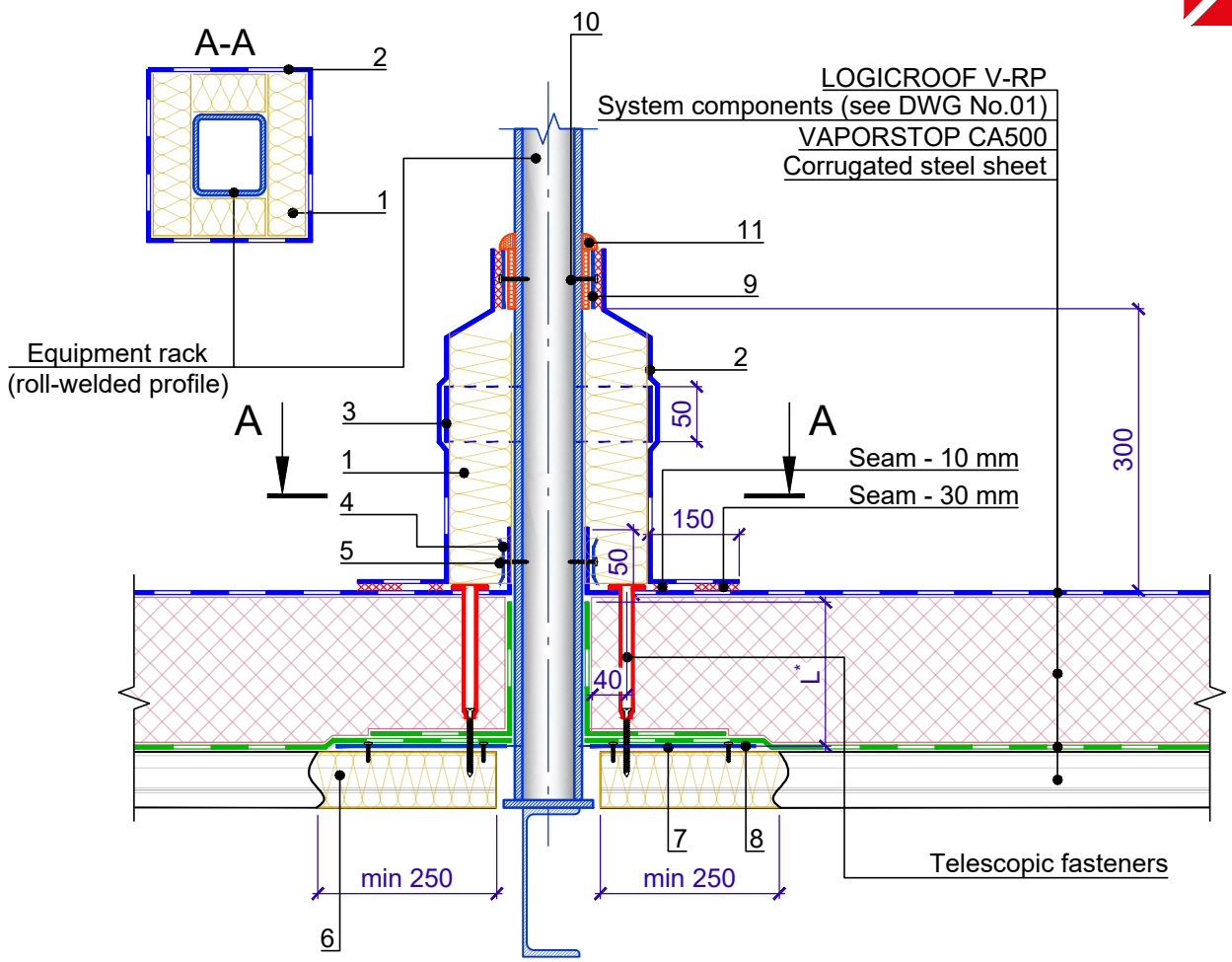
Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	LOGICROOF V-SR	upon the project	m^2	
4	Metal clip band	upon the project	pcs.	
5	Polyurethane sealant	0.5	pcs.	
6	Construction foam	upon the project	m^3	
7	Paronite lining (not less than 5 mm thick)	upon the project	m^2	
8	Stone wool	upon the project	m^3	
9	Stone wool	upon the project	m^3	
10	Self-tapping screw with plate	upon the project	pcs.	

Notes

1. Fence pole should be made of a pipe of at least 30 mm with a wall thickness of more than 2 mm. Fill it with mounting foam to a height of 250 mm.
2. Fence pole step should be not more than 1500mm.
3. The applicability of this design conception should be verified by calculation depending on the specific operating conditions.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junctions to the roof fence pole	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **5.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **5.2 - 2021.05**

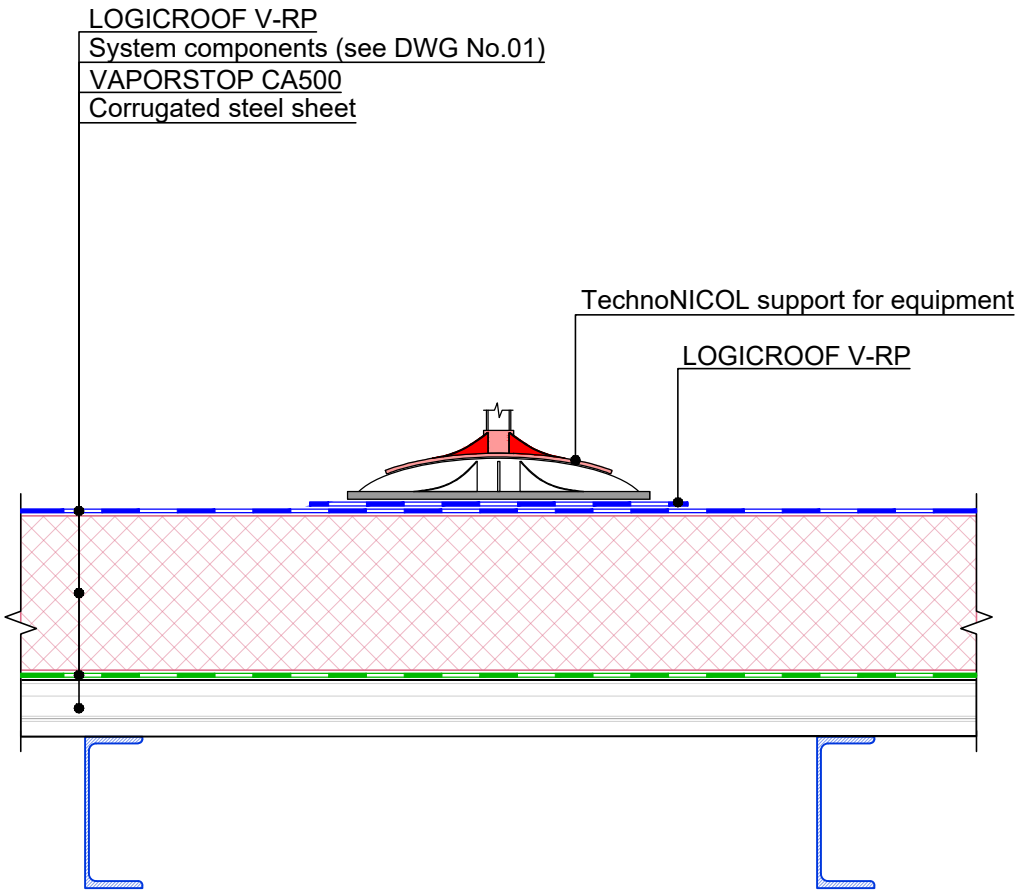


L* - the height of the insertion should be at least the thickness of the insulating layer.

Specification of detail DWG No. 5.2 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	Stone wool	upon the project	m^3	
2	LOGICROOF V-RP	upon the project	m^2	
3	LOGICROOF V-RP (strip for insulation fastening - width 50mm)	upon the project	m^2	
4	Clamping rail	upon the project	m	
5	Pointed self-tapping screw 5.5x35	5	pcs.	
6	Stone wool	upon the project	m^3	
7	0.7 mm thick galvanized steel sheet	upon the project	m^2	
8	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	
9	Edge rail	1.00	m	
10	Pointed self-tapping screw 5.5x35	upon the project	pcs.	
11	Polyurethane sealant	0.25	pcs.	

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the equipment racks	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **5.2 - 2021.05**	REV.

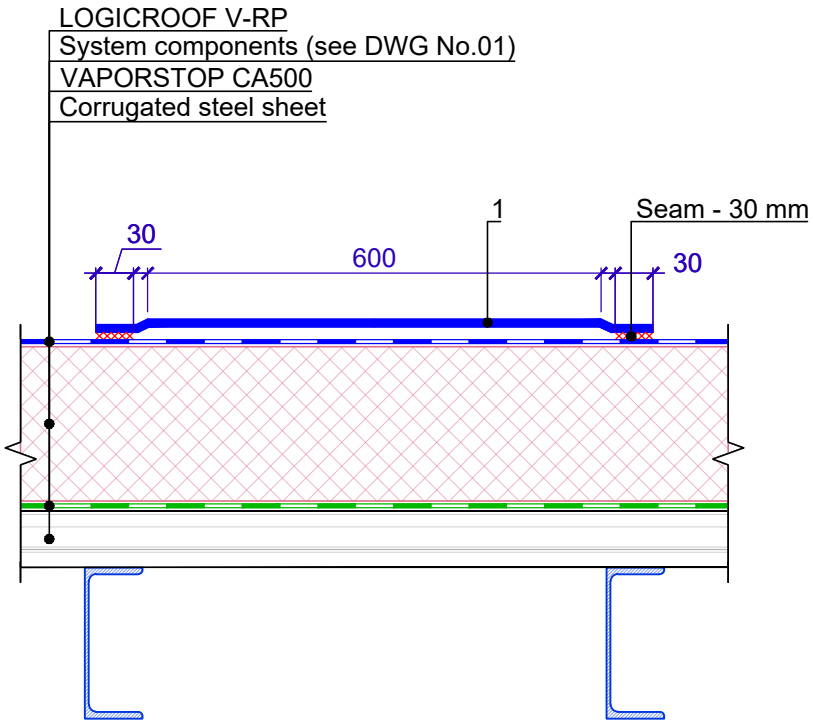


1. These supports are intended for special roof frames designed for installation of roofing equipment.
2. The number and step of the supports must be selected depending on the loads from the equipment and the load-bearing capacity of the roof system.
3. The maximum load on one support is 500 kg (without taking into account the load-bearing capacity of the roof system).
4. The maximum roof slope when using this type of supports is 7°, when using adjustable support columns and rotary supports.
5. The supports are completed with inserts for various standard sizes of support columns (38x40, 41x41, 50x50). It is also possible to install in combination with a profile square pipe of 41x41x2 and 50x50x3.
6. When installing supports, it is recommended to install an additional layer of the upper waterproofing material of the roof. The additional layer can be laid freely over the support area

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings for walkway installation

№	Name	DWG No.
6.1	Arrangement of the walkway from prefabricated components	6.1
6.2	Arrangement of the walkway (traditional method)	6.2



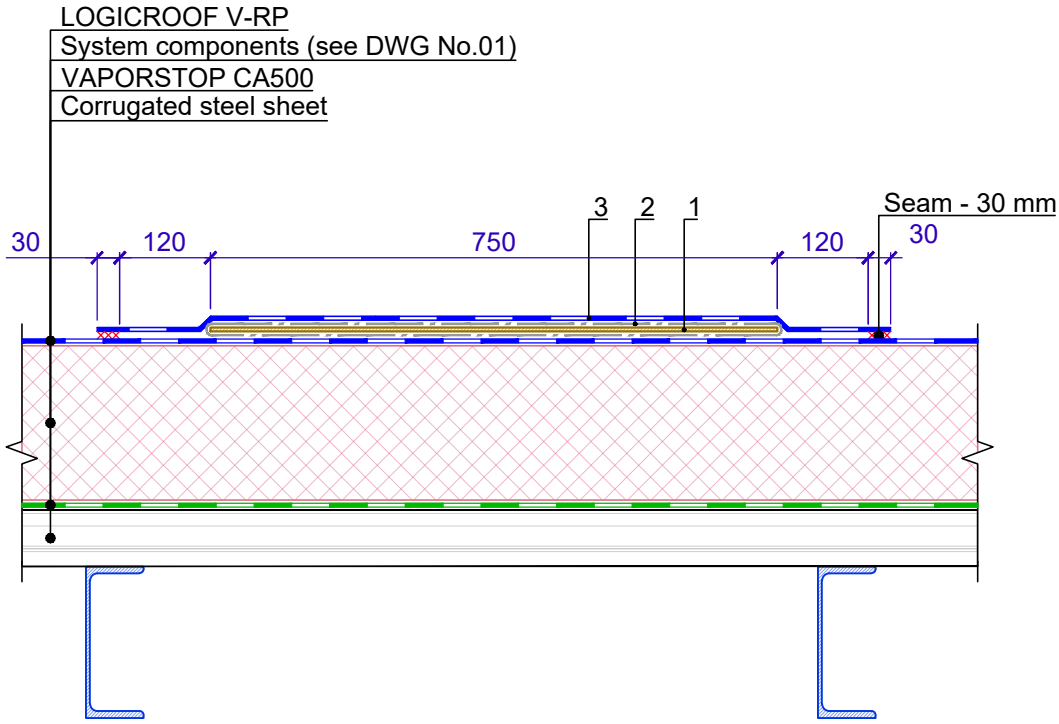
Specification of detail DWG No. 6.1 - 2021.05

Position	Name	Consumption per 1 l.m. of the walkway	Unit	Note
1	Prefabricated walkway puzzles made of PVC membranes	upon the project	pcs.	

Notes

1. Preliminary fixation of walkway elements to the roof cladding is carried out using a hot air gun.
2. After assembling of the walkway, weld it to the roof using automatic welding equipment. For welding, strips without embossing are provided along the edges of the walkway components.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Arrangement of the walkway from prefabricated components	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **6.1 - 2021.05**	REV.



Specification of detail DWG No. 6.2 - 2021.05

Position	Name	Consumption per 1 l.m. of the walkway	Unit	Note
1	Laminated plywood	0.75	m^2	
2	Heat treated nonwoven geotextile 300 g/m^2	1.60	m^2	
3	LOGICROOF V-RP with anti-slip textured surface - 2.0mm	1.05	m^2	

Notes

1. To avoid areas of water accumulation on the roof, make the walkway with compartments of not more than 6 m. Provide a technological gap of 20 mm between the compartments for water passage.

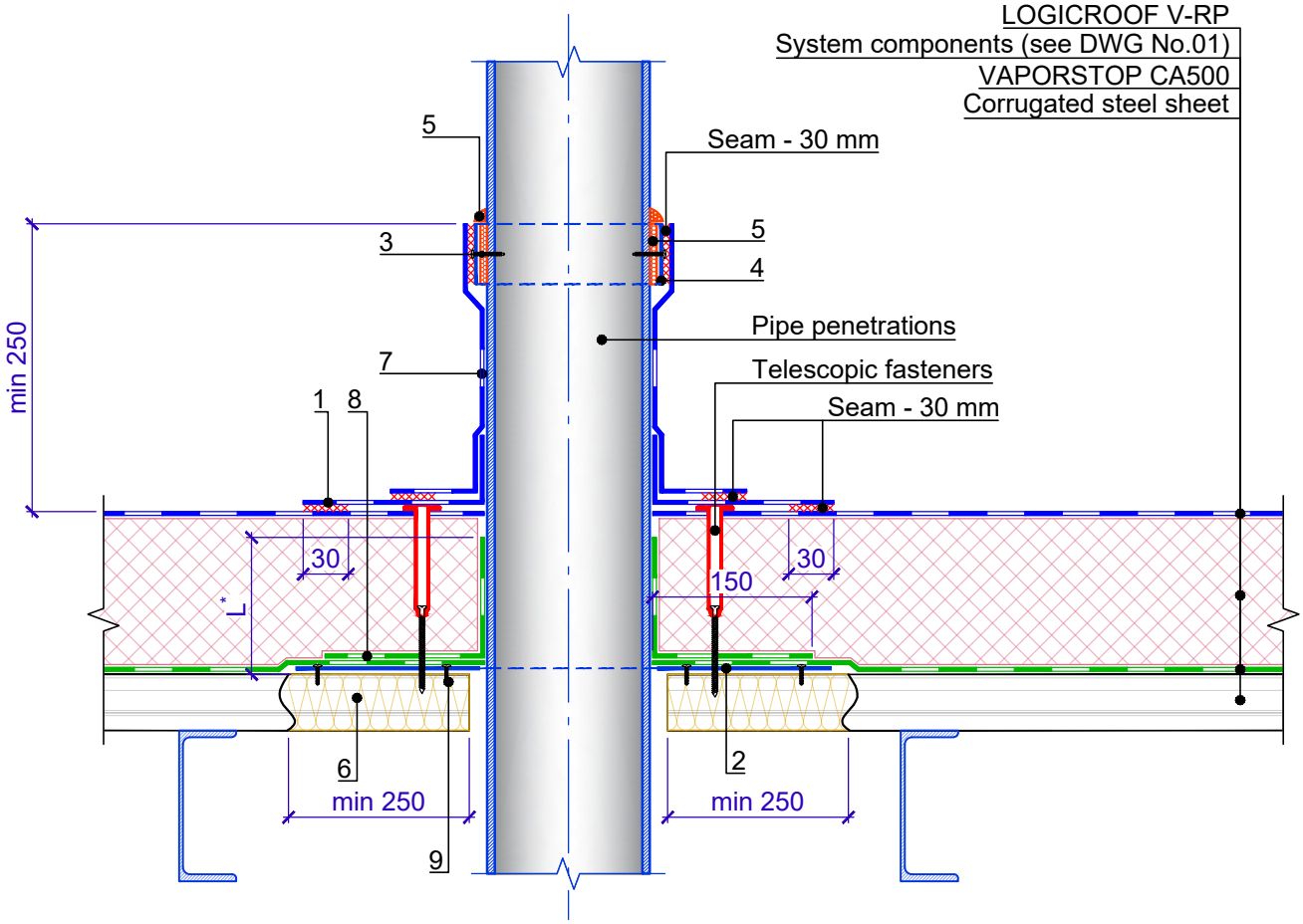
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Arrangement of the walkway (traditional method)	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **6.2 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings of construction of pipes and junctions to the aerators

№	Name	DWG No.
7.1	Junction to the pipe penetrations	7.1
7.2	Junction to small diameter pipe	7.2
7.3	Junction to the hot pipe. Option 1.	7.3
7.4	Junction to the hot pipe. Option 2.	7.4
7.5	Junction to the roof aerator	7.5
7.6	Junction to square air duct	7.6

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **7.1 - 2021.05**



Specification of detail DWG No. 7.1 - 2021.05

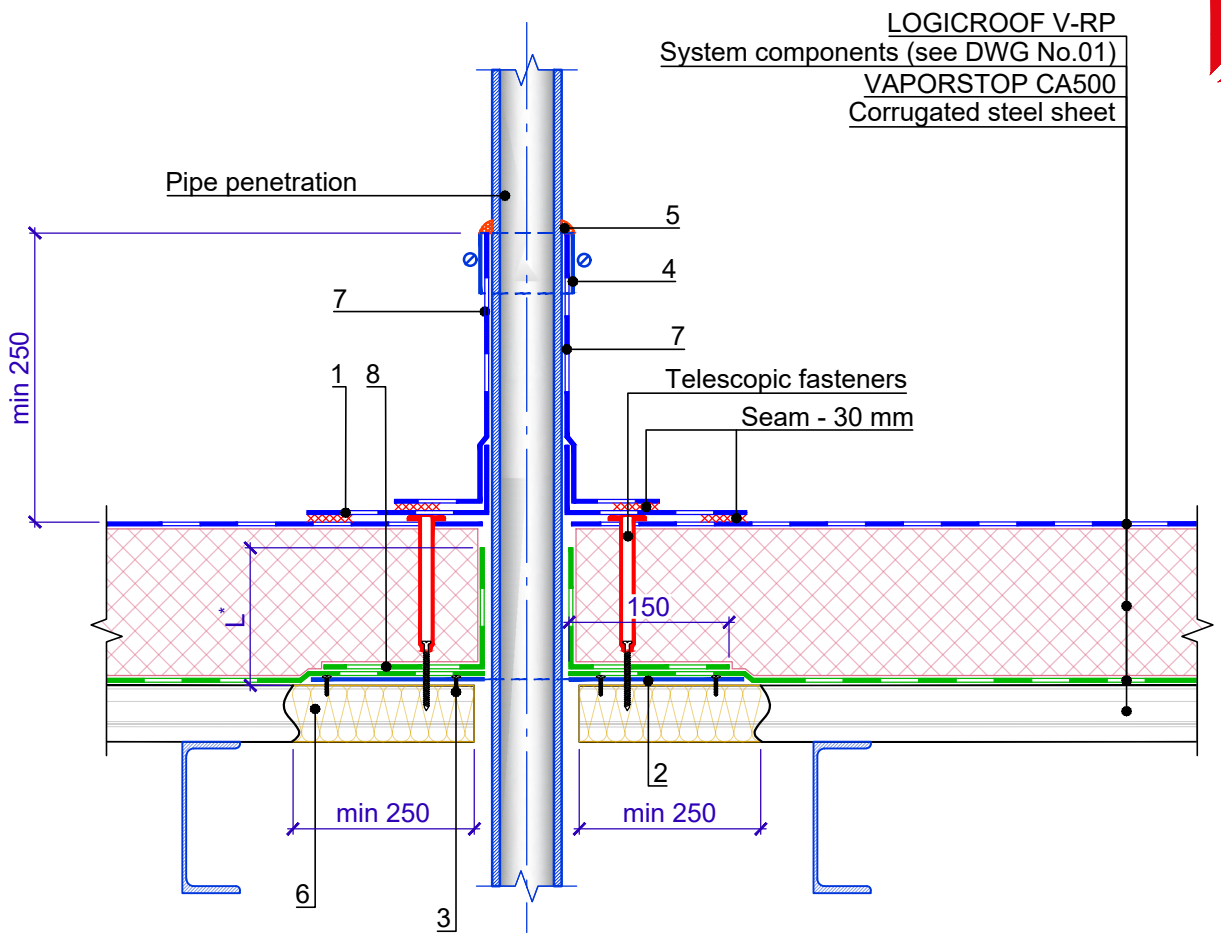
Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	0.7 mm thick galvanized steel sheet	0.25	m^2	
3	Drill-tipped self-tapping screw 5.5x35	upon the project	pcs.	
4	PVC laminated metal strip	upon the project	m	
5	Polyurethane sealant	0.5	pcs.	
6	Stone wool	upon the project	m^3	
7	LOGICROOF V-SR	upon the project	m^2	
8	Strip made of VAPORSTOP CA500 300mm	0.30	m^2	
9	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the pipe penetrations	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **7.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **7.2 - 2021.05**



Specification of detail DWG No. 7.2 - 2021.05

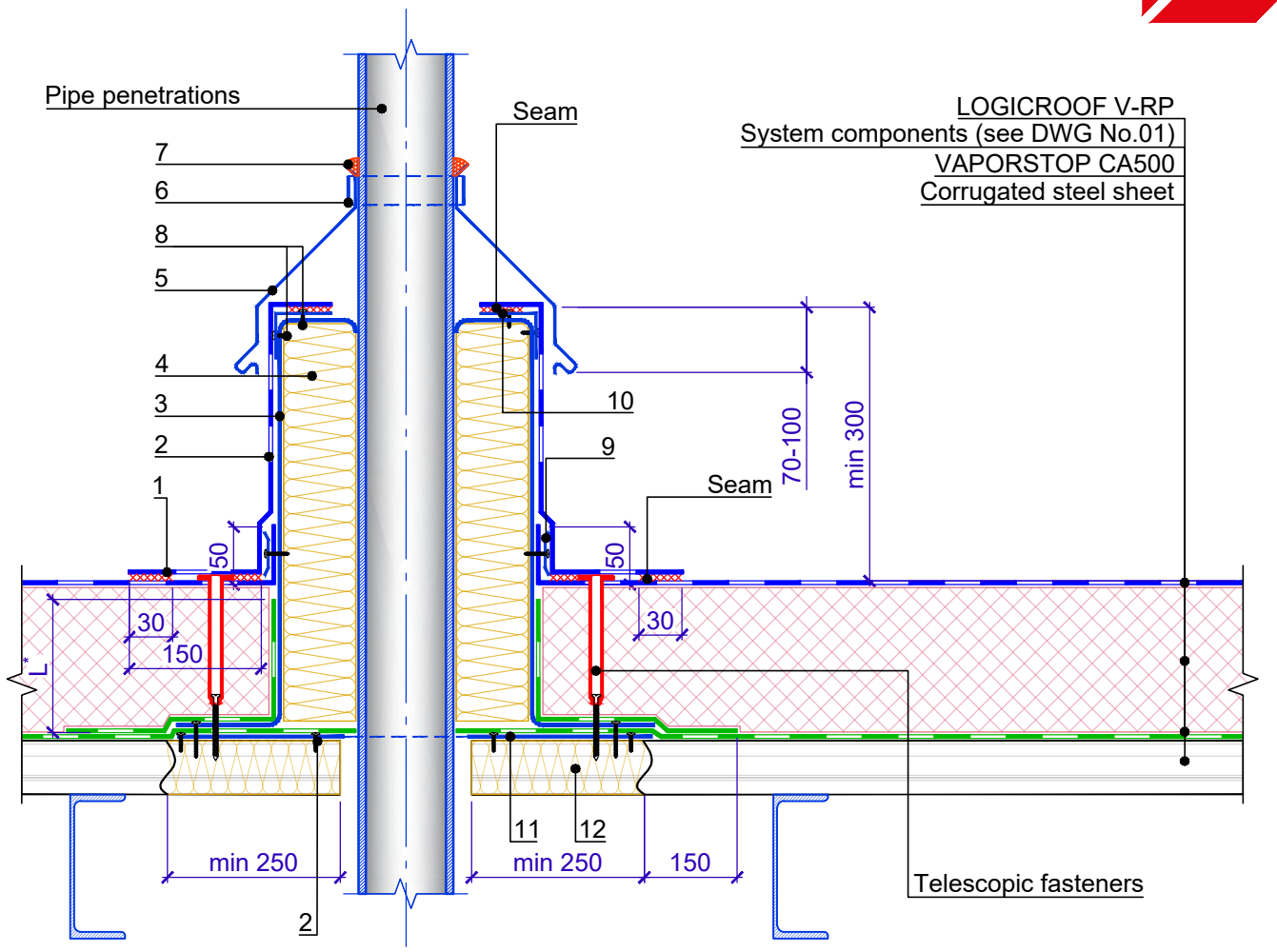
Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	0.7 mm thick galvanized steel sheet	upon the project	m^2	
3	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	
4	Metal clip band	1	pcs.	
5	Polyurethane sealant	0.25	pcs.	
6	Stone wool	upon the project	m^3	
7	LOGICROOF V-SR	upon the project	m^2	
8	Strip made of VAPORSTOP CA500 300mm	0.30	m^2	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.
2. The detail is used for single cold pipes with a diameter of up to 250 mm, anchors, antenna extensions.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to small diameter pipe	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 7.2 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **7.3 - 2021.05**

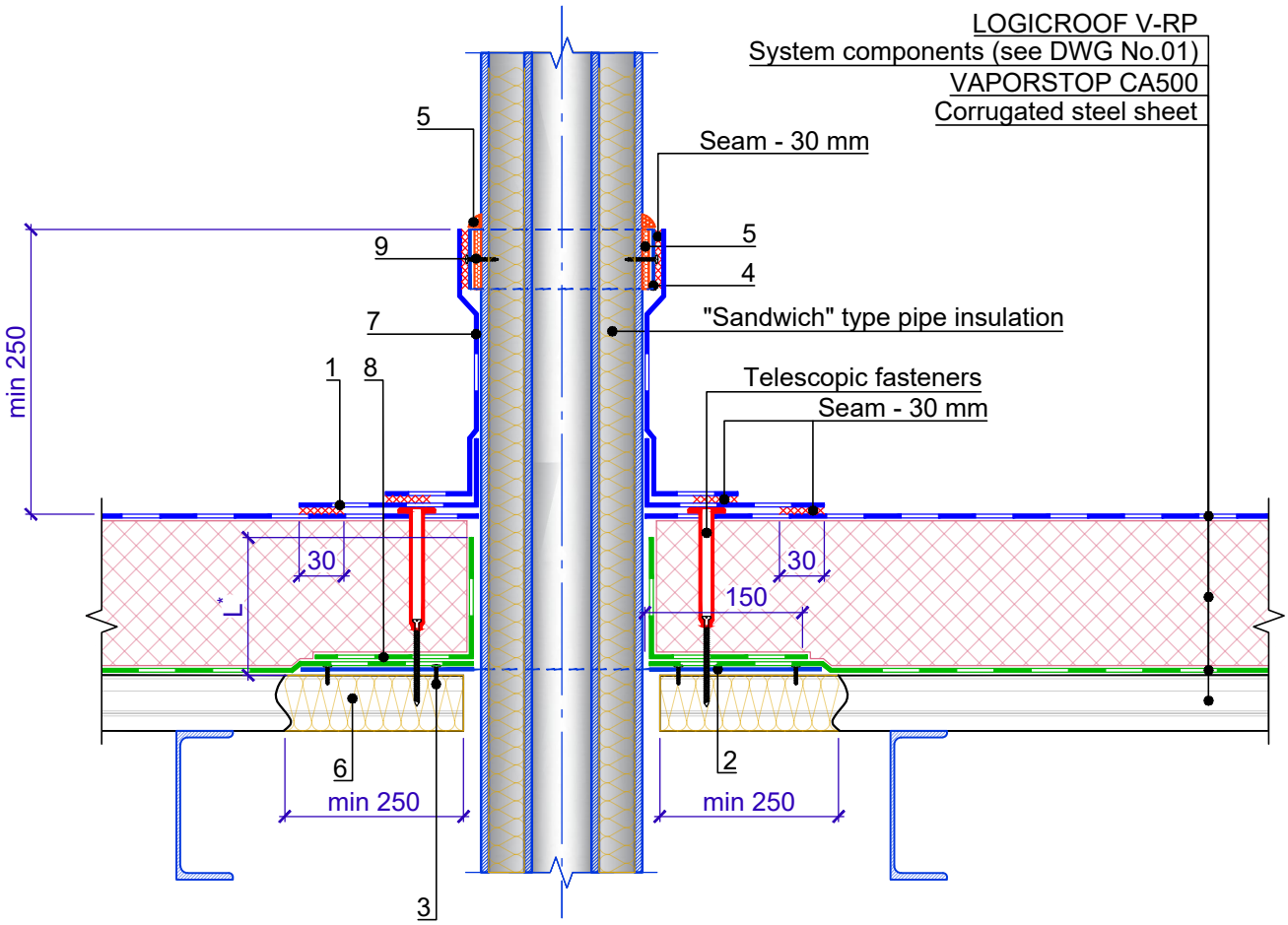


Specification of detail DWG No. 7.3 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	
3	Galvanized steel box at least 0.7 mm thick	upon the project	-	
4	Stone wool	upon the project	m^3	min 120mm
5	Flashing made of galvanized steel	upon the project	-	
6	Metal clip band	1	pcs.	
7	Polyurethane sealant	0.5	pcs.	
8	Pointed self-tapping screw 5.5x35	24	pcs.	
9	Clamping rail	upon the project	m	
10	PVC laminated metal strip	upon the project	m	
11	0.7 mm thick galvanized steel sheet	upon the project	-	
12	Stone wool	upon the project	m^3	

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the hot pipe. Option 1.	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 7.3 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **7.4 - 2021.05**



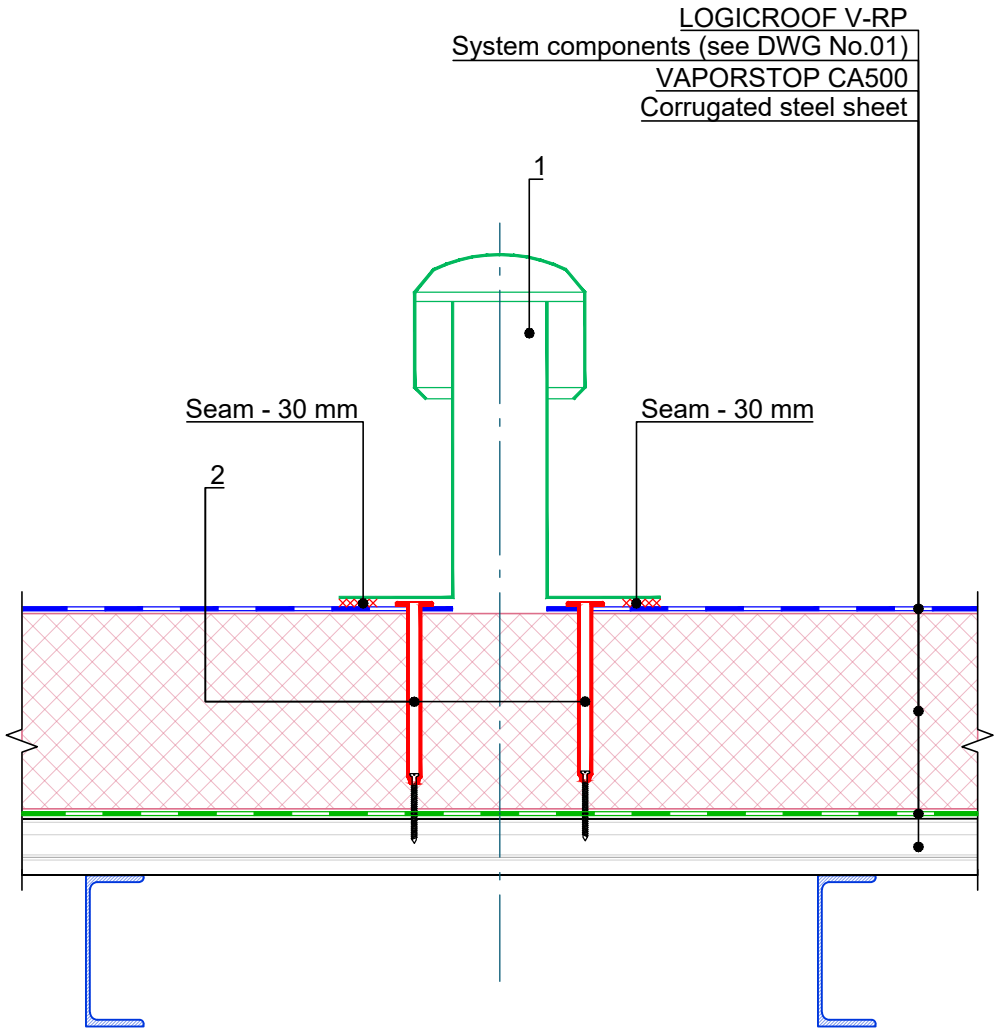
Specification of detail DWG No. 7.4 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	0.7 mm thick galvanized steel sheet	0.25	m^2	
3	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	
4	PVC coated metal strip	upon the project	m	
5	Polyurethane sealant	0.5	pcs.	
6	Stone wool	upon the project	m^3	
7	LOGICROOF V-SR	upon the project	m^2	
8	VAPORSTOP CA500	upon the project	m^2	
9	Drill-tipped self-tapping screw 5.5x35	upon the project	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

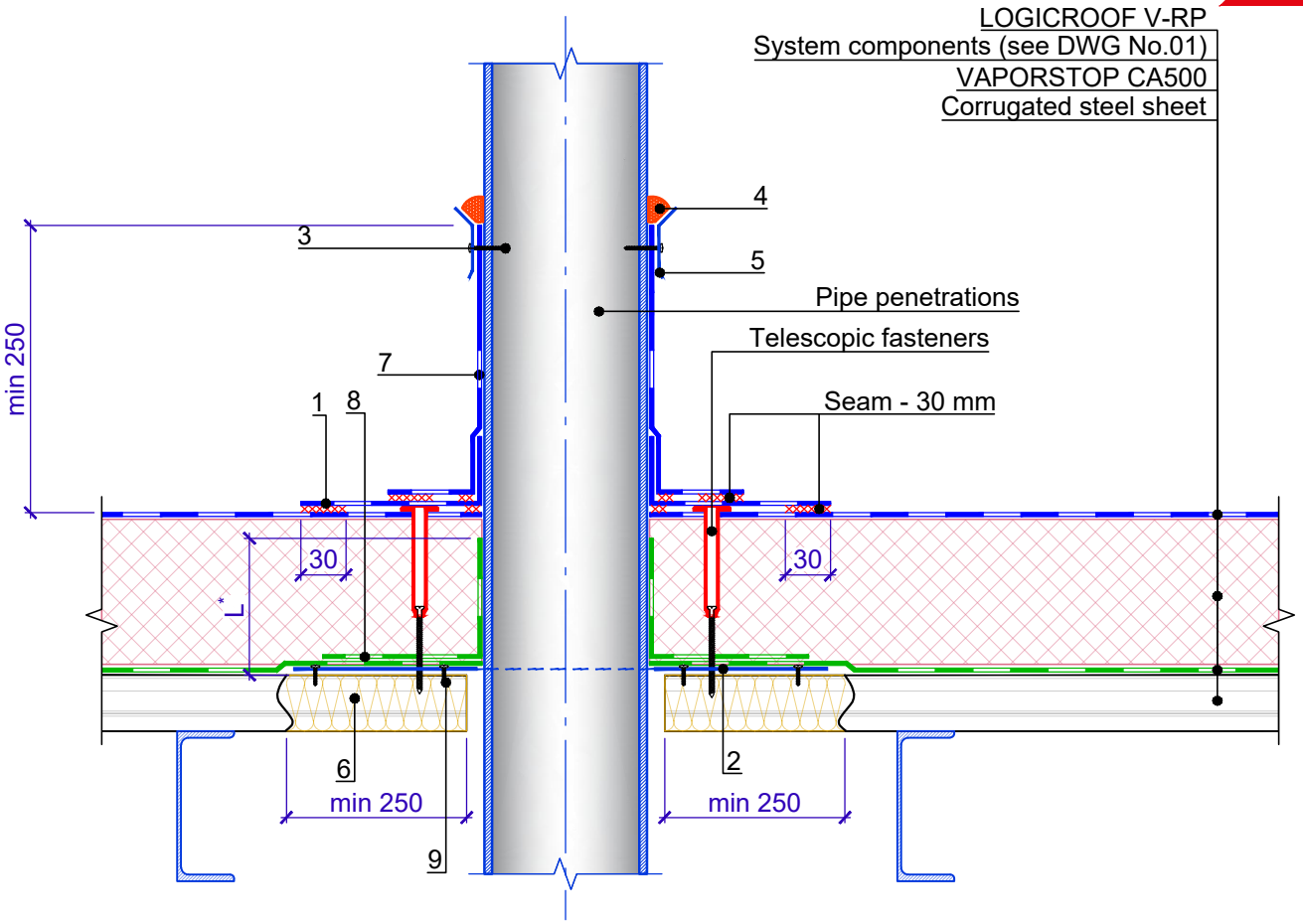
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	Junction to the hot pipe. Option 2.	DWG No. 7.4 - 2021.05	REV.



Specification of detail DWG No. 7.5 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	PVC roof aerator	1	pcs.	
2	Telescopic fasteners	4	pcs.	

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **7.6 - 2021.05**



Specification of detail DWG No. 7.6 - 2021.05

Position	Name	Consumption on 1 junction	Unit	Note
1	LOGICROOF V-SR	upon the project	m^2	
2	0.7 mm thick galvanized steel sheet	0.25	m^2	
3	Drill-tipped self-tapping screw 5.5x35	upon the project	pcs.	
4	Polyurethane sealant	0.5	pcs.	
5	Edge rail	1.00	m	
6	Stone wool	upon the project	m^3	
7	LOGICROOF V-SR	upon the project	m^2	
8	VAPORSTOP CA500	upon the project	m^2	
9	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to square air duct	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **7.6 - 2021.05**	REV.

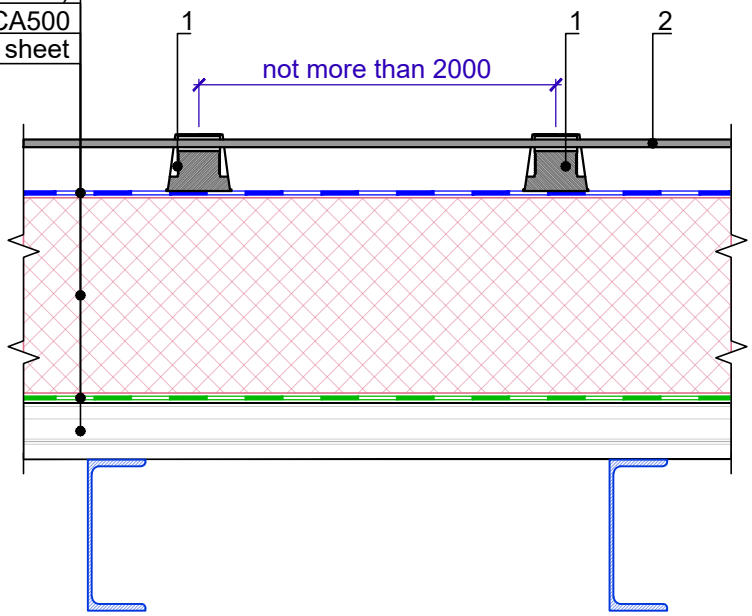
TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings for the junctions to the lightning protection constructions

№	Name	DWG No.
8.1	Construction of lightning protection	8.1

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **8.1- 2021.05**

LOGICROOF V-RP
System components (see DWG No.01)
VAPORSTOP CA500
Corrugated steel sheet



Specification of detail DWG No. 8.1 - 2021.05

Position	Name	Consumption	Unit	Note
1	Lightning rod holder (stand)	upon the project	pcs.	
2	Lightning rod metal mesh Ø8mm	upon the project	m	

Notes

1. Lightning rod holders (stands) are installed freely over the entire roof area without being fixed to the roof and filled with sand or cement-sand mortar. The lightning rod mesh is placed on the supports.

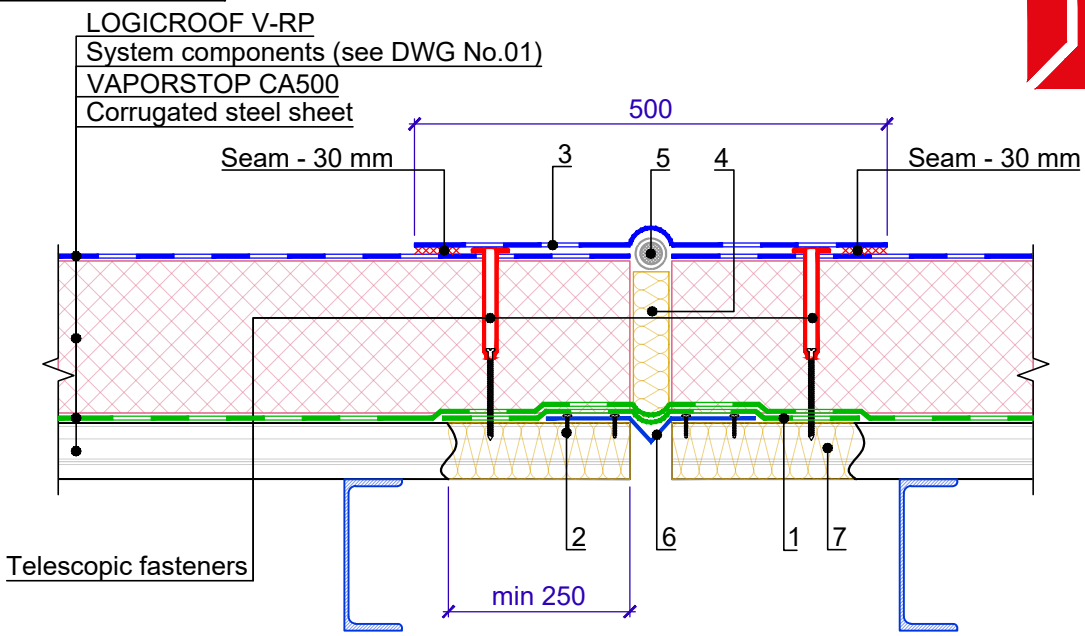
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Construction of lightning protection	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **8.1 - 2021.05**	REV.

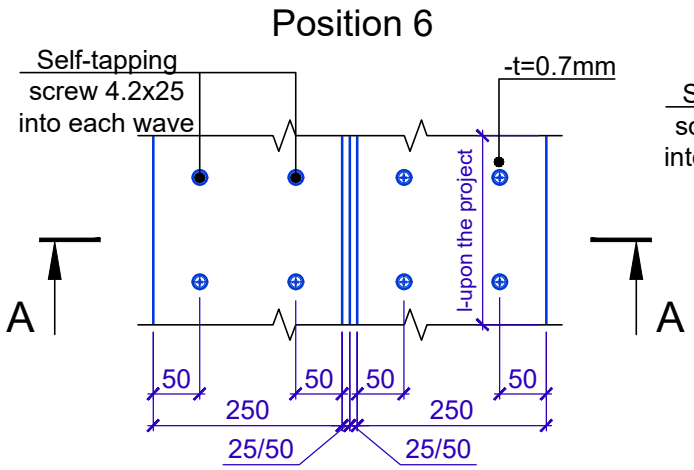
TN_ROOF_PVC_STEEL_SMART_EN

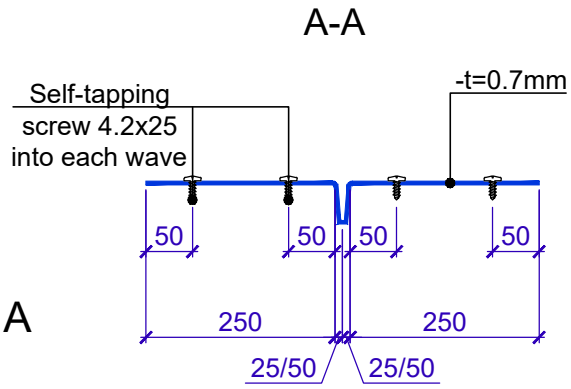
Register of drawings for arrangement of junctions to expansion joints

№	Name	DWG No.
9.1	Expansion joint	9.1
9.2	Expansion spacer	9.2
9.3	Expansion joint in the junction to the wall	9.3

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **9.1 - 2021.05**







Specification of detail DWG No. 9.1 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	Strip made of VAPORSTOP CA500 500mm	0.5	m^2	
2	Self-tapping screw 4.2x25 with pressure pad	8	pcs.	
3	LOGICROOF V-RP	0.5	m^2	
4	Stone wool	upon the project	m^2	
5	Expansion cord	1.00	m	
6	Metal compensator	1.0	m	
7	Stone wool	upon the project	m^3	

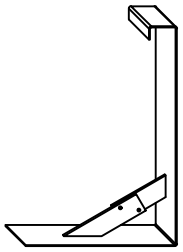
Notes

1. Instead of a telescopic fastener, it is possible to install a steel clamping rail and telescopic fasteners for induction.
2. The width of the insert made of the TECHNOLITE EXTRA insulation should be taken as 10 mm larger than the clearance.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Expansion joint	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **9.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **9.2 - 2021.05**

Element 4

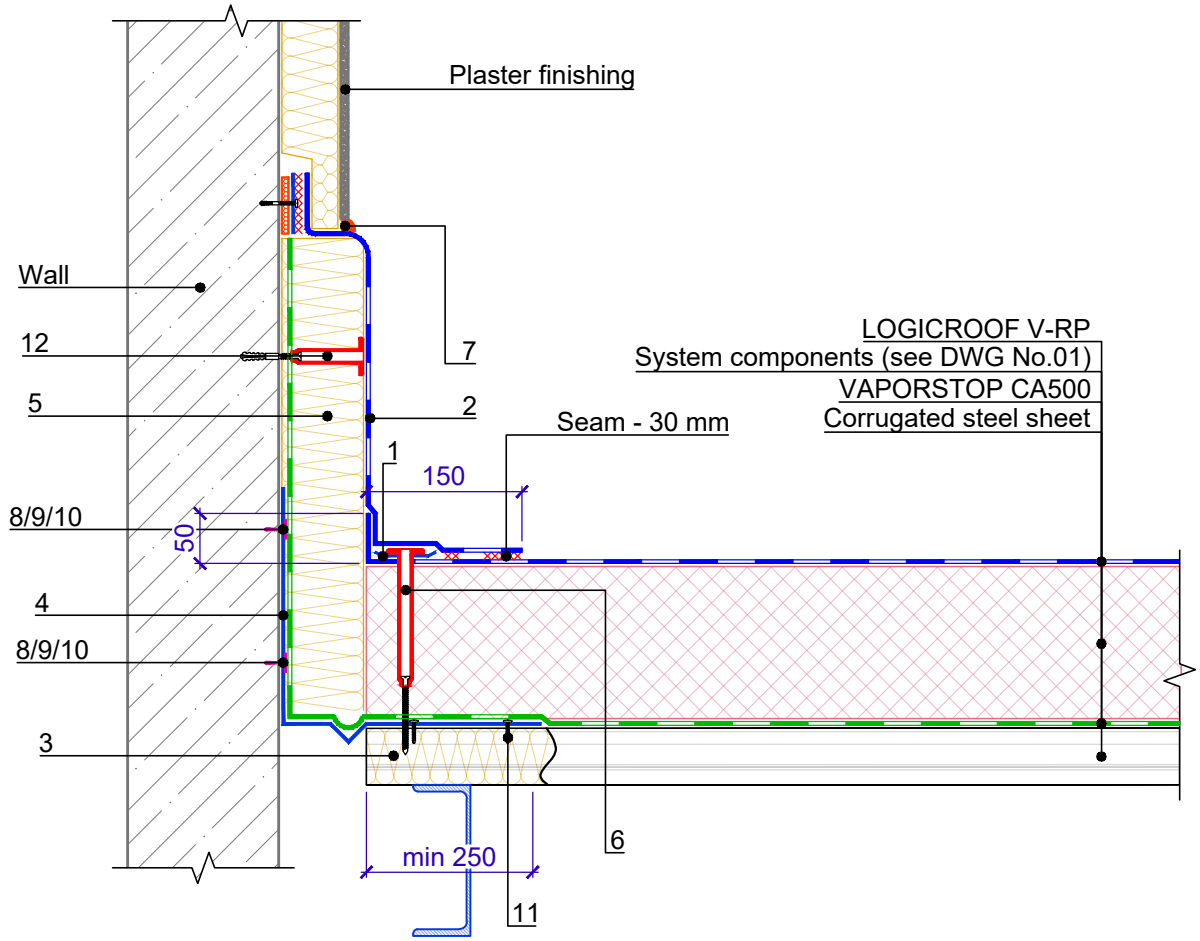


Specification of detail DWG No. 9.2 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	* Cross profile for rail mounting	1.00	m	
3	LOGICROOF V-RP	upon the project	m^2	
4	Bracket	0.84	pcs.	
5	Stone wool	upon the project	m^3	
6	PVC coated metal profile	1.00	m	
7	Expansion cord in geotextile 150 g/m^2	1.00	m	
8	Clamping rail	1.00	m	
9	Metal compensator	upon the project	-	
10	Stone wool	upon the project	m^3	
11	Stone wool	upon the project	m^3	
12	Pointed self-tapping screw 5.5x35	upon the project	pcs.	
13	Pointed self-tapping screw 5.5x35	20	pcs.	

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Expansion spacer	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 9.2 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **9.3 - 2021.05**



Specification of detail DWG No. 9.3 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	Clamping rail	1.00	m	
2	LOGICROOF V-RP	upon the project	m^2	
3	Stone wool	upon the project	m^3	
4	Metal compensator	upon the project	-	
5	Stone wool	upon the project	m^3	
6	Telescopic fasteners	5	pcs.	
7	Polyurethane sealant	0.25	pcs.	
8	Pointed self-tapping screw 4.8x50	25	pcs.	
9	Anchor element 8x45	25	pcs.	
10	Washer Ø50mm	15	pcs.	
11	Self-tapping screw 4.2x25 with pressure pad	upon the project	pcs.	
12	Telescopic fastener with anchoring element 8x45	upon the project	pcs.	

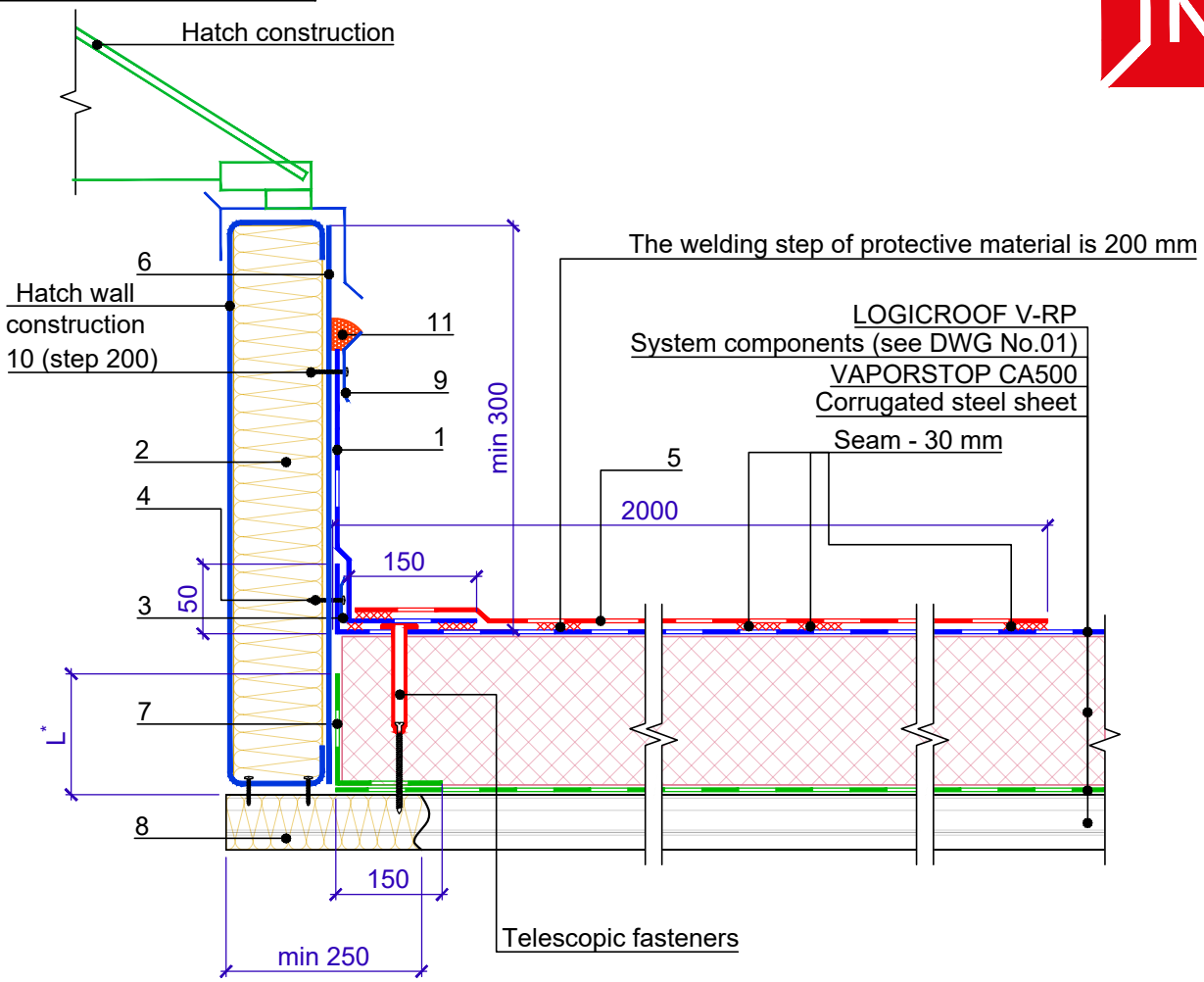
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Expansion joint in the junction to the wall	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. 9.3 - 2021.05	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings for junctions to the zenith skylights

№	Name	DWG No.
10.1	Junction to the smoke exhaust hatch. Option 1	10.1
10.2	Junction to the zenith skylight. Option 1	10.2
10.3	Junction to the smoke exhaust hatch. Option 2	10.3
10.4	Junction to the zenith skylight. Option 2	10.4

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **10.1 - 2021.05**



Specification of detail DWG No. 10.1 - 2021.05

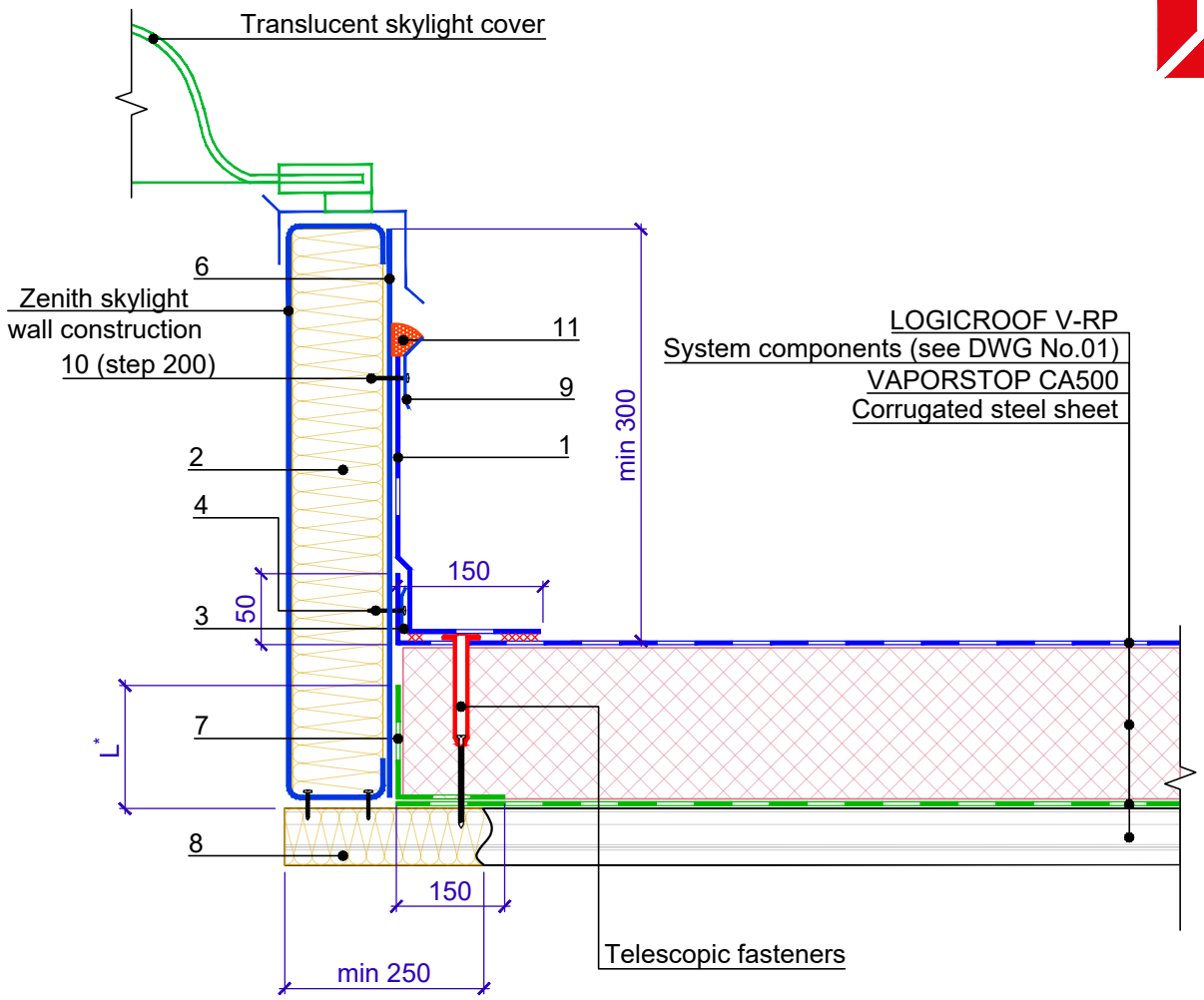
Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
5	LOGICROOF NG	2.00	m^2	
6	Galvanized steel sheet	upon the project	m^2	
7	VAPORSTOP CA500	upon the project	m^2	
8	Stone wool	upon the project	m^3	
9	Edge rail	1.00	m	
10	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
11	Polyurethane sealant	0.25	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	Junction to the smoke exhaust hatch. Option 1	DWG No. **10.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **10.2 - 2021.05**



Specification of detail DWG No. 10.2 - 2021.05

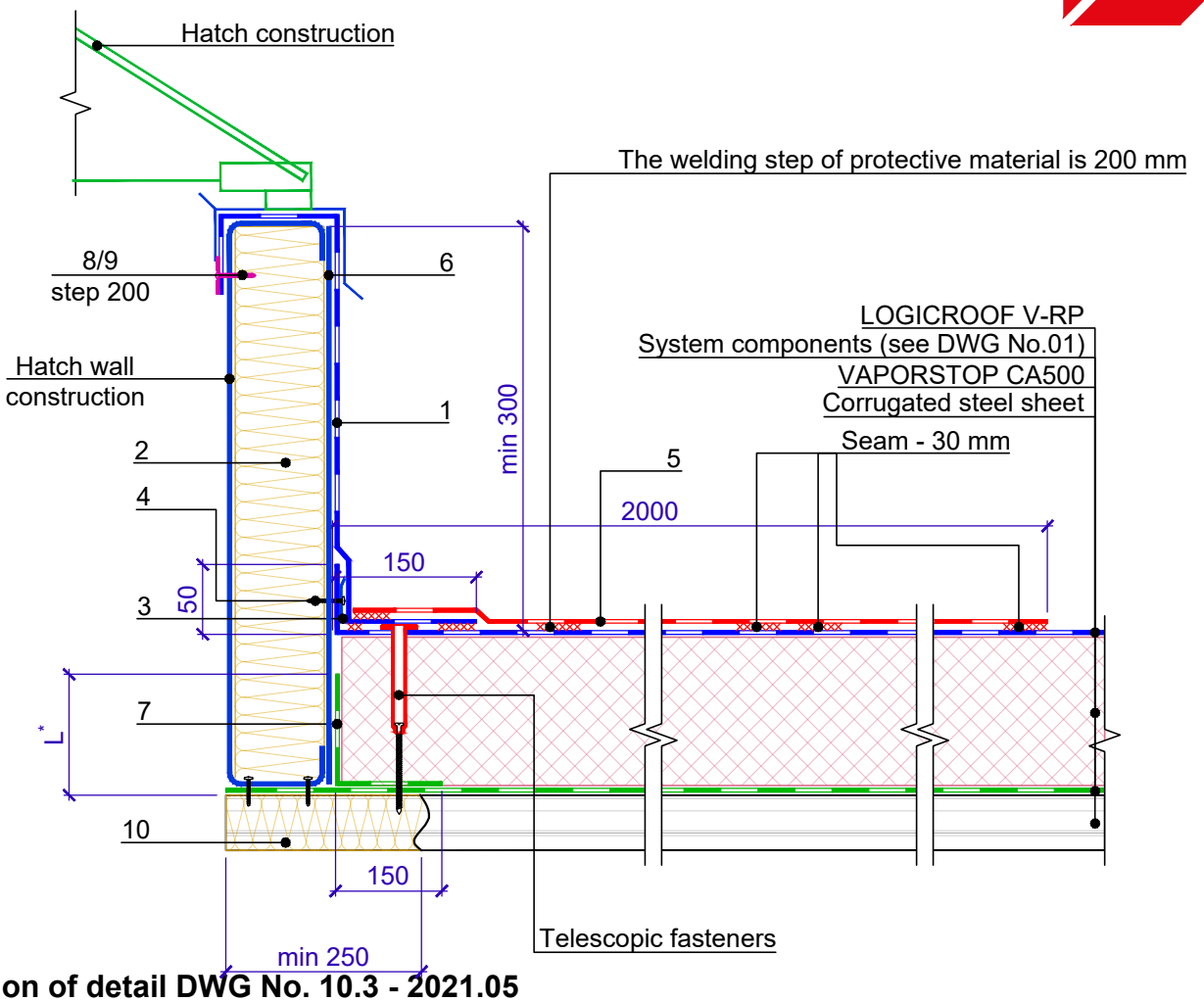
Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
6	Galvanized steel sheet	upon the project	m^2	
7	VAPORSTOP CA500	upon the project	m^2	
8	Stone wool	upon the project	m^3	
9	Edge rail	1.00	m	
10	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
11	Polyurethane sealant	0.25	pcs.	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the zenith skylight. Option 1	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **10.2 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **10.3 - 2021.05**



Specification of detail DWG No. 10.3 - 2021.05

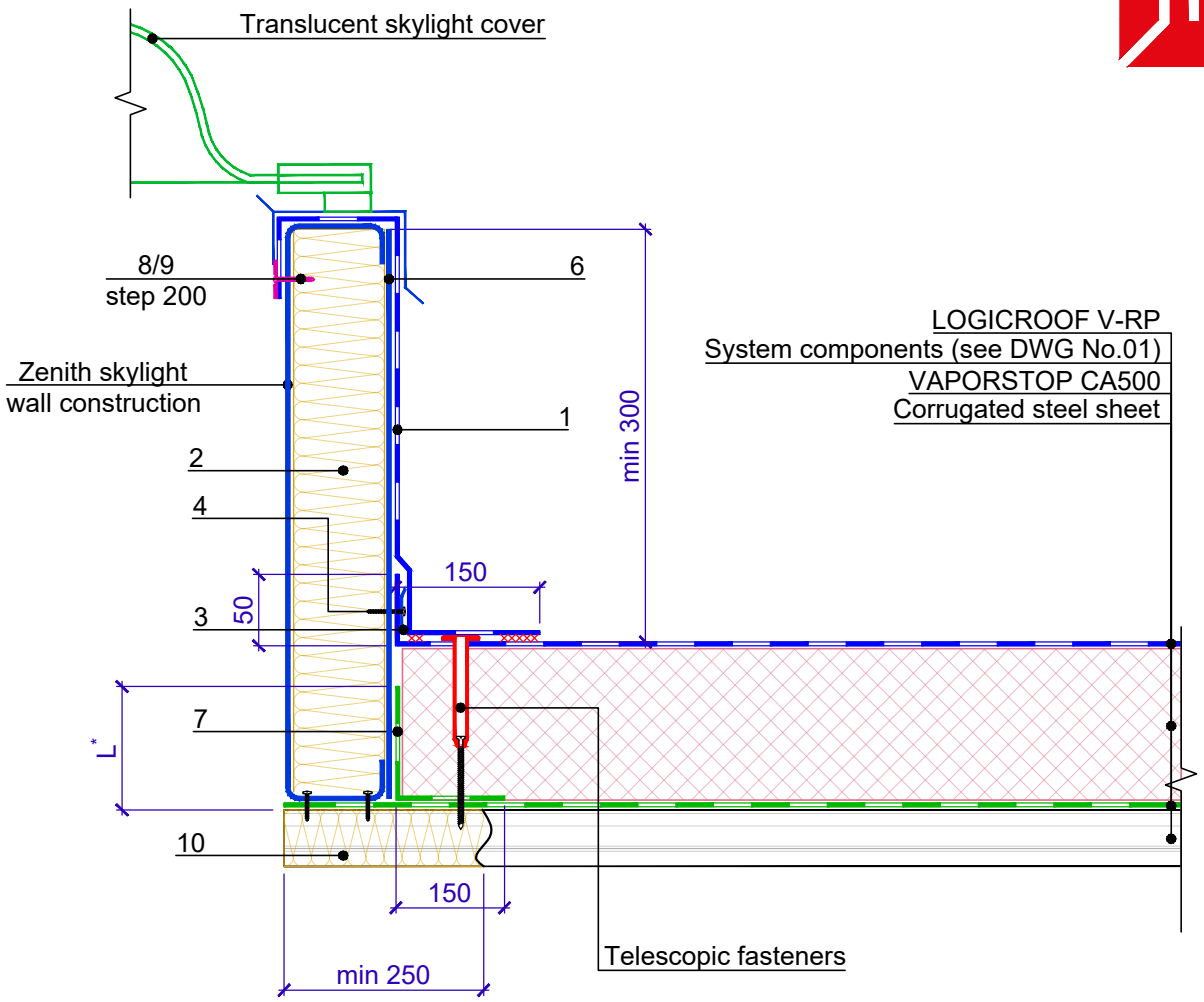
Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
5	LOGICROOF NG	2.00	m^2	
6	Galvanized steel sheet	upon the project	m^2	
7	VAPORSTOP CA500	upon the project	m^2	
8	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
9	Circular or oval-shaped washer	5	pcs.	
10	Stone wool	upon the project	m^3	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
					SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED	Junction to the smoke exhaust hatch. Option 2	DWG No. **10.3 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **10.4 - 2021.05**



Specification of detail DWG No. 10.4 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	upon the project	m^2	
2	Stone wool	upon the project	m^3	
3	Clamping rail	1.00	m	
4	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
5	LOGICROOF NG	2.00	m^2	
6	Galvanized steel sheet	upon the project	m^2	
7	VAPORSTOP CA500	upon the project	m^2	
8	Drill-tipped self-tapping screw 5.5x35	5	pcs.	
9	Circular or oval-shaped washer	5	pcs.	
10	Stone wool	upon the project	m^3	

Notes

1. L^* - vapor barrier installation height. The vapor barrier at the junctions of the heat-insulating layer to the walls, walls of the skylights, shafts and equipment passing through the cover or the attic floor must be raised to a height not less than the thickness of the heat-insulating layer and glued to a vertical surface, and in places of expansion joints it should cover the metal compensator forming the compensating fold.

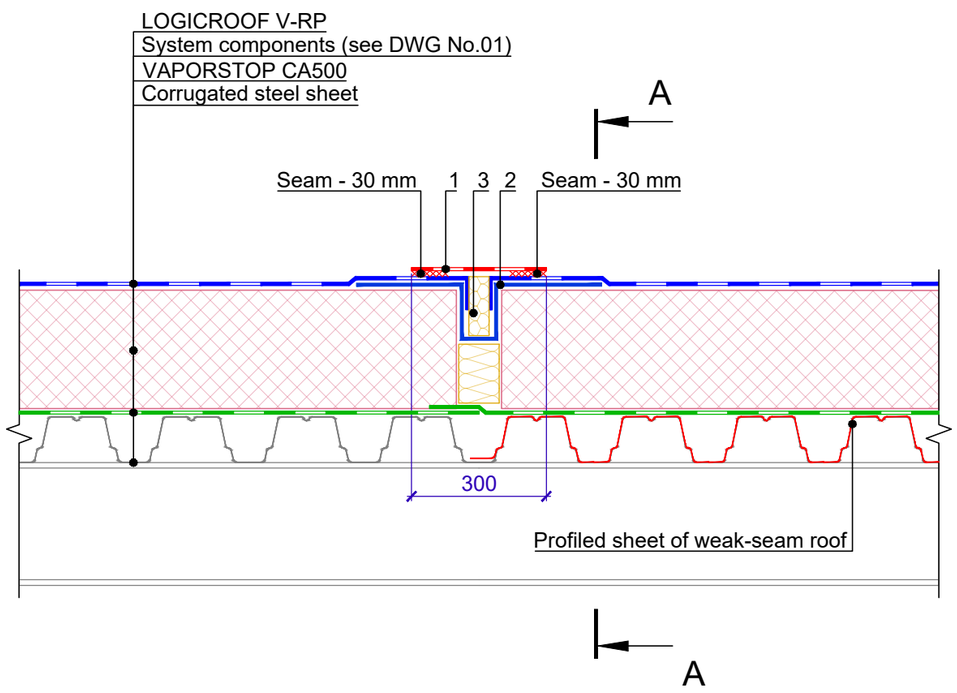
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to the zenith skylight. Option 2	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **10.4 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

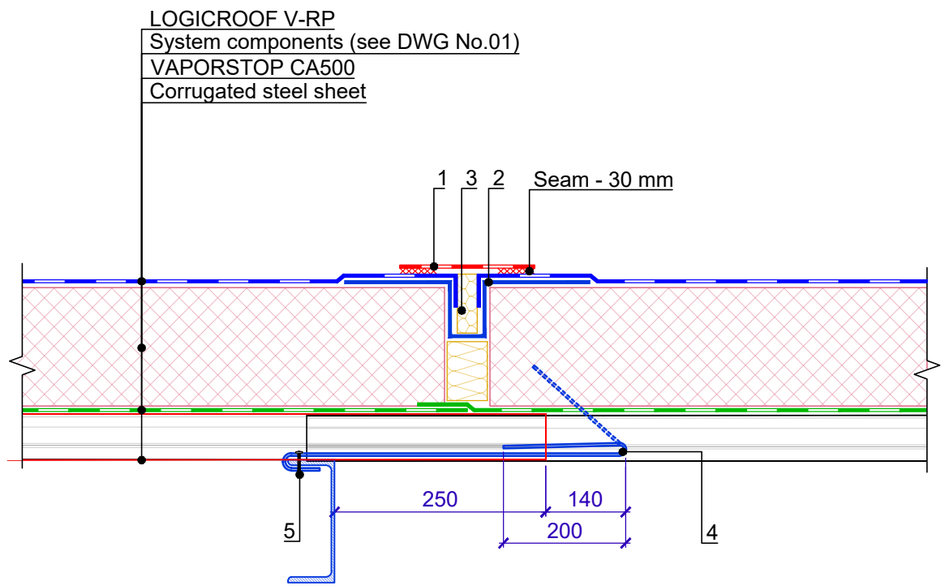
Register of drawings for arrangement of junctions to weak-seam roof

№	Name	DWG No.
11.1	Junction to a section with weak-seam roof	11.1

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **11.1 - 2021.05**



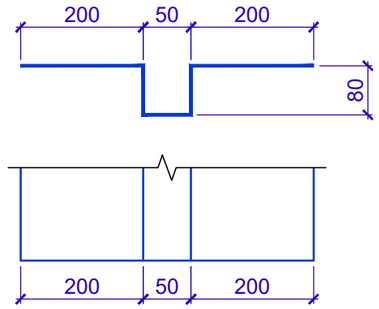
A–A



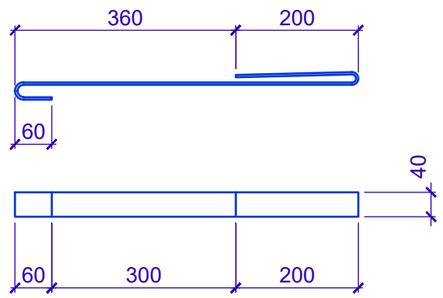
Specification of detail DWG No. 11.1 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	LOGICROOF V-RP	0.30	m^2	
2	Metal compensator	1.00	m	
3	Stone wool	upon the project	m^3	
4	Cleat (step according to project)	upon the project	pcs.	
5	Self-tapping screw for fastening the main roof profiled sheet	upon the project	pcs.	

Element 2



Element 4



Notes

1. The applicability of this design conception should be verified by calculation depending on the specific operating conditions.
2. Corrugated steel sheet of the weak-seam roof should be mounted onto adjacent sheet and fastened with cleats.
3. The number of cleats is set by calculation.

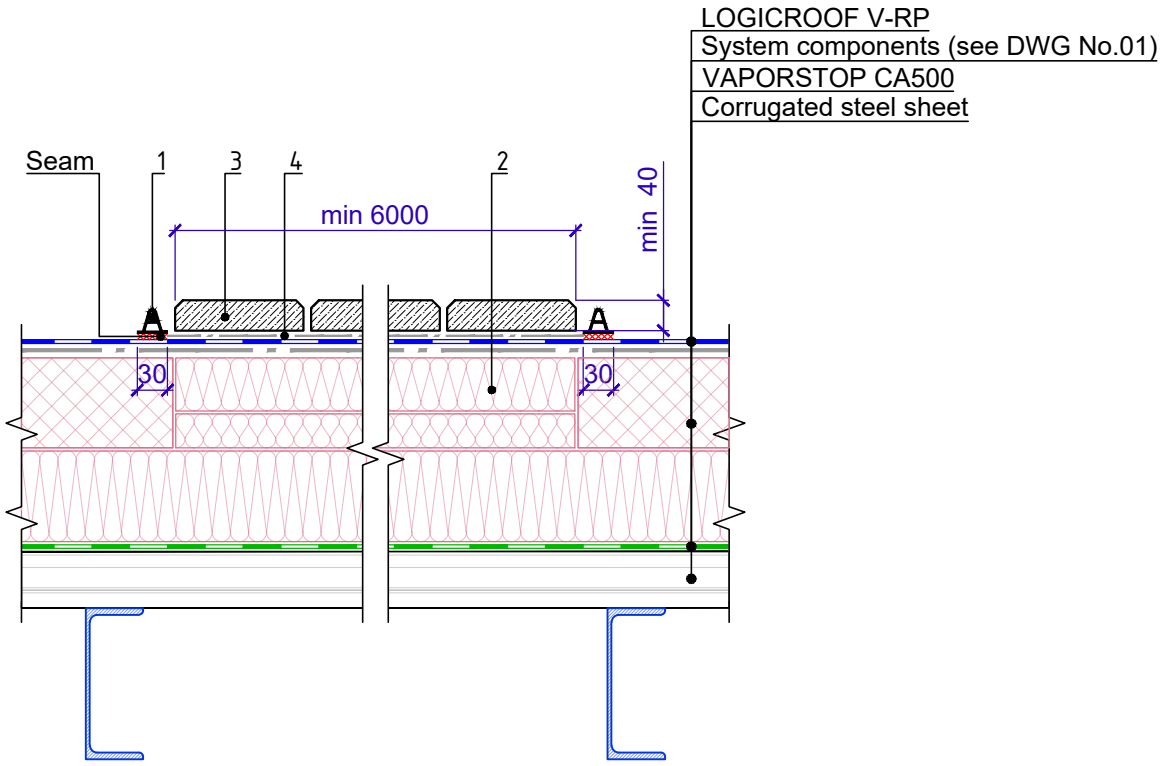
				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Junction to a section with weak-seam roof	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **11.1 - 2021.05**	REV.

TN_ROOF_PVC_STEEL_SMART_EN

Register of drawings of junctions of the fire-cuts

№	Name	DWG No.
12.1	Construction of the fire-cuts	12.1

TN_ROOF_PVC_STEEL_SMART_EN
DWG No. **12.1 - 2021.05**



Specification of detail DWG No. 12.1 - 2021.05

Position	Name	Consumption on 1 l. m.	Unit	Note
1	A-profile *	-	m	
2	Stone wool	upon the project	m^3	
3	Protective coating of non-combustible panel materials, at least 40 mm thick	upon the project	m^2	
4	Heat treated nonwoven geotextile 300 g/m^2	upon the project	m^2	

Notes

* Weld the A-profile to the polymer membrane using hot air. Leave a gap 2 cm wide after each running meter.

				TN_ROOF_PVC_STEEL_SMART_EN	DESIGN	APPROVED
				Construction of the fire-cuts	SCALE	DATE
REV.	DATE	DESCRIPTION	CHECKED		DWG No. **12.1 - 2021.05**	REV.