Roof systems

Slat roofs Lamaxa L70

Year-round use

Protection in all weather: Depending on the type, the incidence of light can be adjusted to several levels with the tilting and moving slats – from a fully unobstructed view of the sky all the way to a complete, weather-proof closure of the slat roof.

Dry

Dryness guaranteed: Controlled drainage through integrated rain gutters and drainage in the pole.

Customisable

Can be individually equipped according to personal preference with diverse, optional extras such as integrated LED and RGB lighting, integrated awnings with easyZIP guidance, sash frames or radiant heaters.

Construction limit values

Maximum order width	4500 mm
Maximum order length	6000 mm
Maximum order area	27 m^2

Order here

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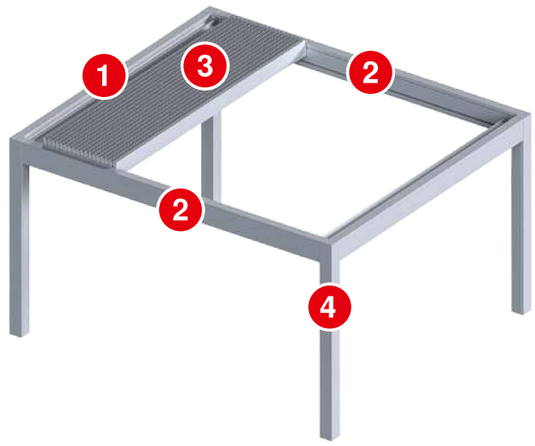
WAREMA tools

Sun Shading Planner

see "Navigating the document", Page 5

Components

Slat roof Lamaxa L70



1	Crossbeam with motor	3	Slats
2	Crossbeam with tilting mechanics	4	Pole

Slat

Slat - L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	235 mm
Height	45 mm
Swivelling range	0 - 135 °

Pole

Pole - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	170 mm
Height	170 mm

Installation options:

- Ground installation with frost-proof, on-site foundation.
- The grout for filling the clearance is not included in the scope of delivery when threaded rods are used.

Floor recess and separation cut:

- For a floor recess, we recommend the use of a separation cut in the inspection parts to allow for inspection without dismantling the floor.
- If the floor recess does not have a separation cut, the easyZIP guidance inlays and the integrated LED strips reach the bottom edge of the pole profile.
- Floor recesses with a separation cut must be at least 60 mm.

Pole, optional

Pole guide rails - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	170 mm
Height	170 mm

If an easyZIP awning is installed in a field in which a wall console is installed, a separate pole is required below the wall console. Inward or outward drainage through guide rail poles possible. Only corner base plate possible.

Base plate

Base plate - corner installation L60/L70

Material	Galvanised steel
Surface	Plain
Optional surface	Powder-coated
Width	300 mm
Height	300 mm

Base plate - internal L60/L70

Material	Galvanised steel
Surface	Plain
Optional surface	Powder-coated
Width	170 mm
Height	170 mm

Since the material thickness is generally visible, the internal base plate should be coated if there is no floor recess.

Crossbeam

Crossbeam - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	169 mm
Height	280 mm

Electrical distribution on the crossbeam

Material	Aluminium, extruded
Surface	Powder-coated
Width	91,5 mm
Height	174 mm

Drainage

Drainage in pole - L60/L70

- Drainage through drainpipe in pole
- In order to achieve rain class 2 with closed slats, at least one drainage point is required for a unit size smaller than 16 m^2 and at least two drainage points for a unit size larger than 16 m^2. If the minimum number of drainage points is not observed, rain class 2 is not achieved.

Position of drainage outlet:

- Possible on every pole
- Drainage and electronics/connecting lines must always be installed in separate poles.
- On the outsides of the poles or downward
- Min. height: 120 mm - 380 mm/height: 40 mm (for internal base plates)
- From 550 mm to 500 mm below the headroom

Note: Downward drainage through base plate:

When planning and measuring, please note that the concrete foundation must be very precisely manufactured if downward drainage through the base plate is required. The drainage does not sit centrally in the base plate.

Wall connection profile, optional

Wall connection profile with small rain hood

Material	Aluminium, extruded
Surface	Powder-coated
Width	54 - 65 mm
Height	48 mm
Dimensions, notes	The adjustment range in the depth between rain hood and wall connection profile is up to 11 mm.

The on-site sealing is the responsibility of the specialist partner; if necessary, the commissioning of a plumbing company is recommended.

Field of application:

- Terrea K50
- Terrea K70
- Perea P20 (up to an angle of 10°)
- Lamaxa L50/L60/L70

Console, optional

Wall console - Lamaxa L60/L70

Material	Galvanised steel
Surface	Powder-coated
Width	120 mm
Height	180 mm
Depth	140 mm

- Use in corner as pole replacement.
- A maximum of two poles can be replaced by wall consoles.
- For a concrete mounting substructure; adapter plates are required for other substructures.
- The wall console protrudes 11 mm beyond the order width and order length. This results in a gap of 11 mm between the crossbeam and the wall.
- For inner angle wall consoles, the lateral corner area is not covered by profiles.

Offset wall console - Lamaxa L60/L70

Material	Aluminium, extruded
Width	200 mm
Height	120 mm
Depth	120 mm

- For attachment to Tb and/or Td.
- Use in corner as pole replacement or as Free installation.
- A maximum of 4 poles can be replaced by offset wall consoles.
- For a concrete mounting substructure; adapter plates are required for other substructures.
- In the case of the Free installation version with offset wall console, the beam cover is omitted, creating a gap between the beam and the installation point. Angle bracket or cover on request.

Drive variants

- Motor

Motor

- WMS-LP (WMS)

see "Drive variants", Page 201

Colours

- WAREMA Colour World, Individual category, fine texture surface quality
- WAREMA Colour World, Highlight category, fine texture surface quality
- WAREMA Colour World, Variation category, fine texture surface quality

Colours, optional:

- WAREMA Colour World

see "Colours and finishes", Page 10

Notes

Notes on installation

Limit position learning:

The WAREMA Smart programming cable is required to set the motor limit positions.

Notes on operation

To ensure convenient and fast operation of the slat roof, we recommend WMS WebControl pro (control via smartphone, tablet, etc.) and WMS Weather station plus in order to use the control modes (e.g. sun control). To do so, a sufficiently strong radio reception must be ensured.

Supplementary accessories

- Design radiant heater
- Lamaxa lighting
- Integrated awnings with easyZIP guidance
- Additional pole - L60/L70
- Offset pole - L60/L70
- Glass sliding system SL20e
- Sliding shutters - L50/L60/L70
- Power socket

see "Supplementary accessories", Page 143

Construction limit values

Configuration variants	Minimum order width	Maximum order width	Minimum order length	Maximum order length	Maximum order area	Minimum headroom	Maximum headroom
Slat							
Slat - L70	2500 mm	4500 mm	2000 mm	6000 mm	27 m^2	1200 mm	2700 mm

Pole height:

- Minimum height for poles with drainage: 1200 mm
- Minimum height for poles without drainage: 550 mm
- Maximum pole height (headroom plus floor recess) is ≤ 3000 mm.

Dimensions:

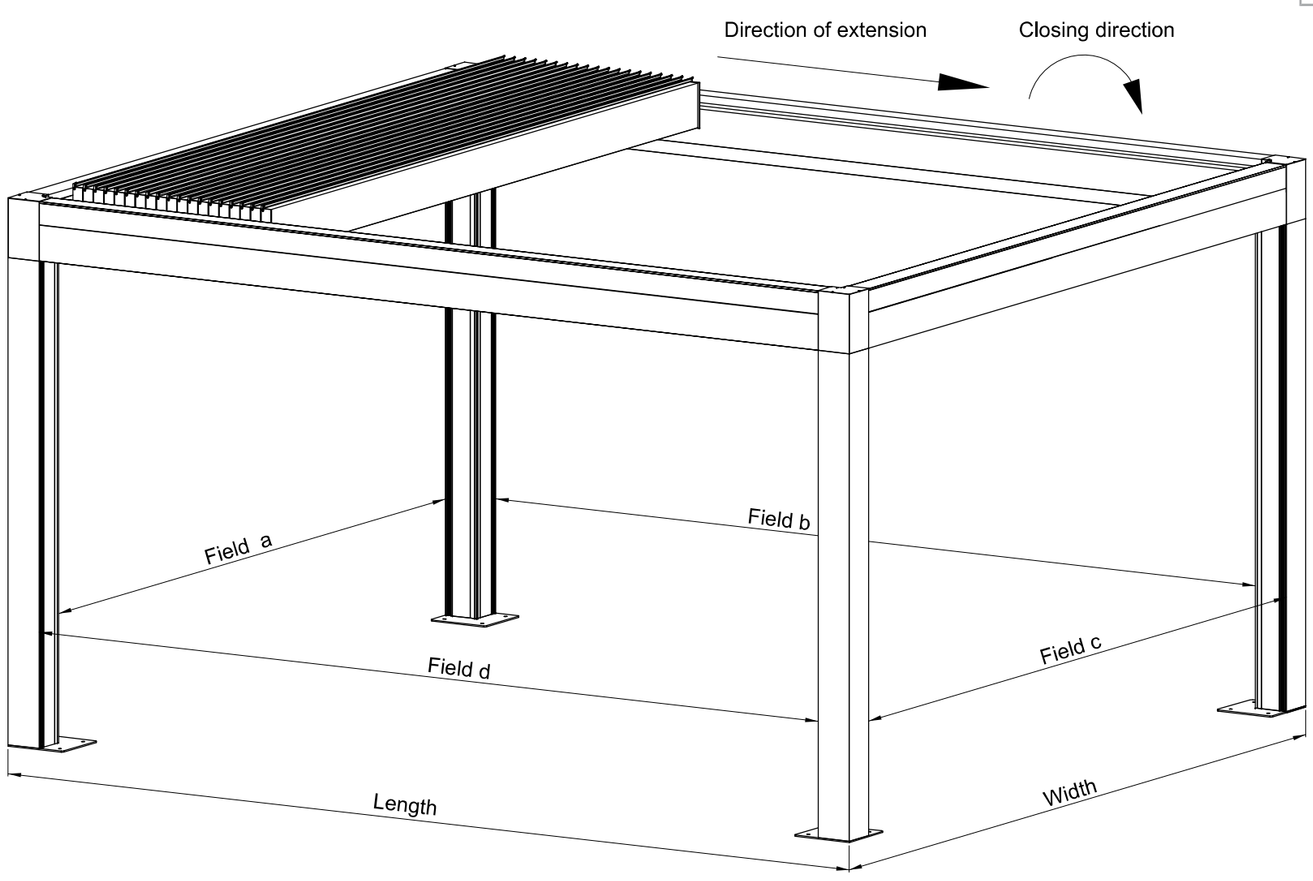
- the order length/width corresponds to the outer dimensions from crossbeam to crossbeam
- the poles are 1 mm above the crossbeams on each side
- the cover panel (outside) is 2 mm above the crossbeams in each case

Dimension determination

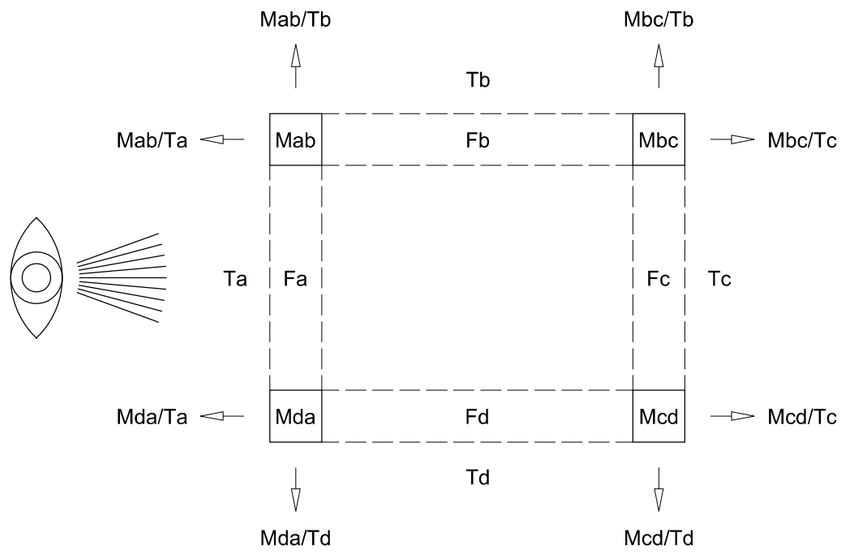
The headroom of each pole can be ordered individually (e.g. in case of a sloping finished floor).

L70, field definition

PDF DWG



Top view of the position/connection points - L50/L60/L70

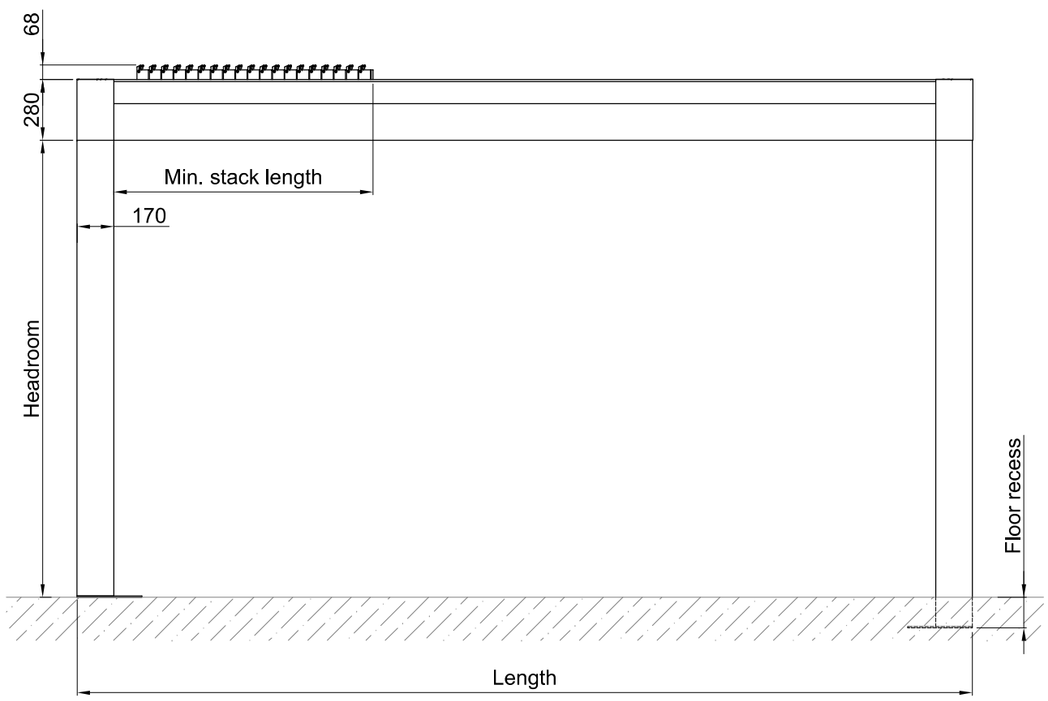


F Field

M Point of installation (pole or wall connection)

T Crossbeam

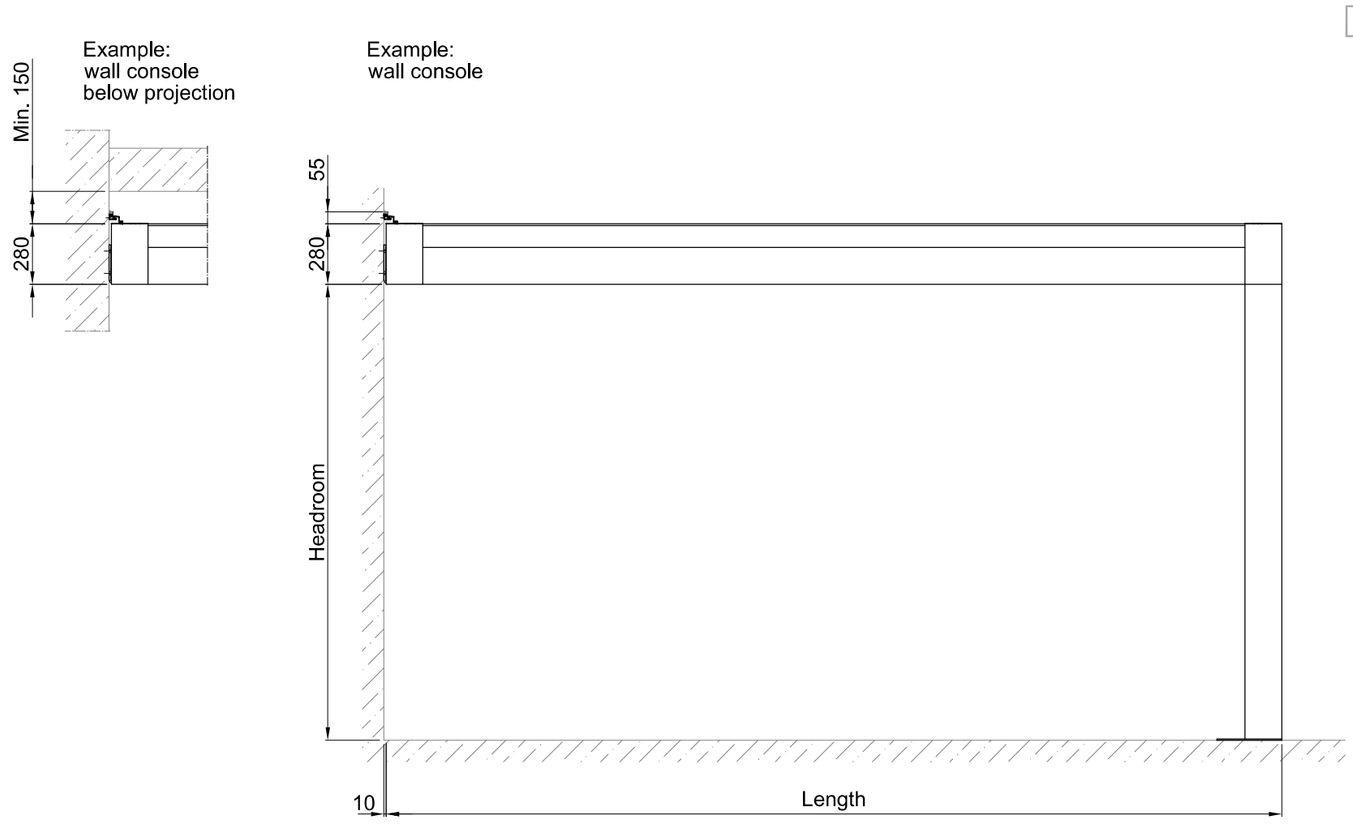
L70, open slats, side view



When closed, the slats do not protrude beyond the crossbeam.

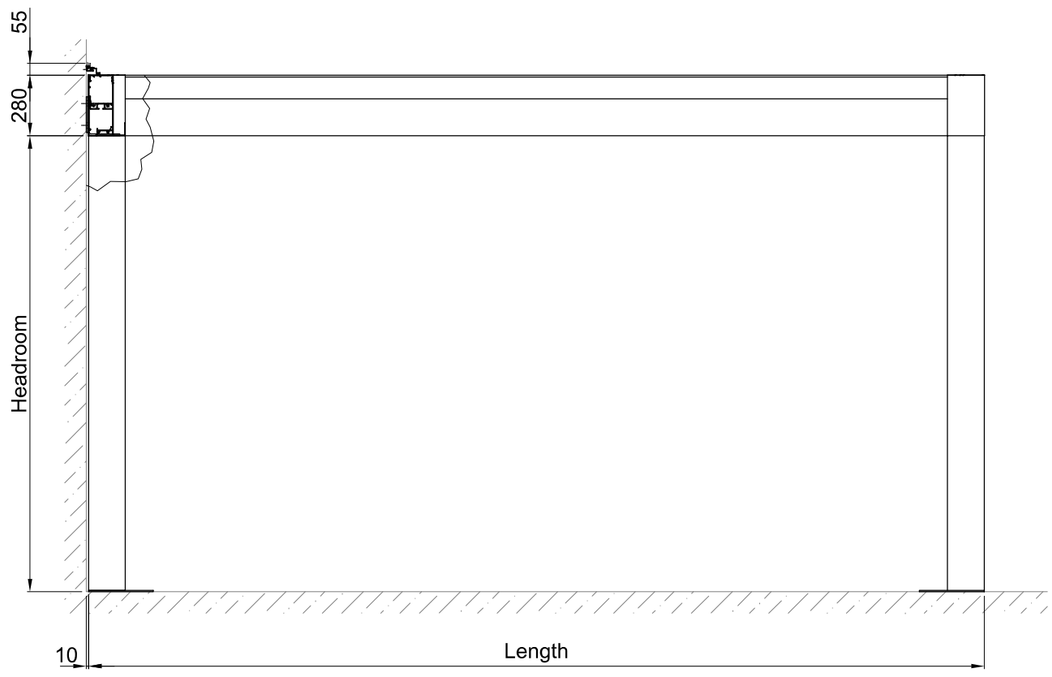
L60/L70, wall console

PDF DWG

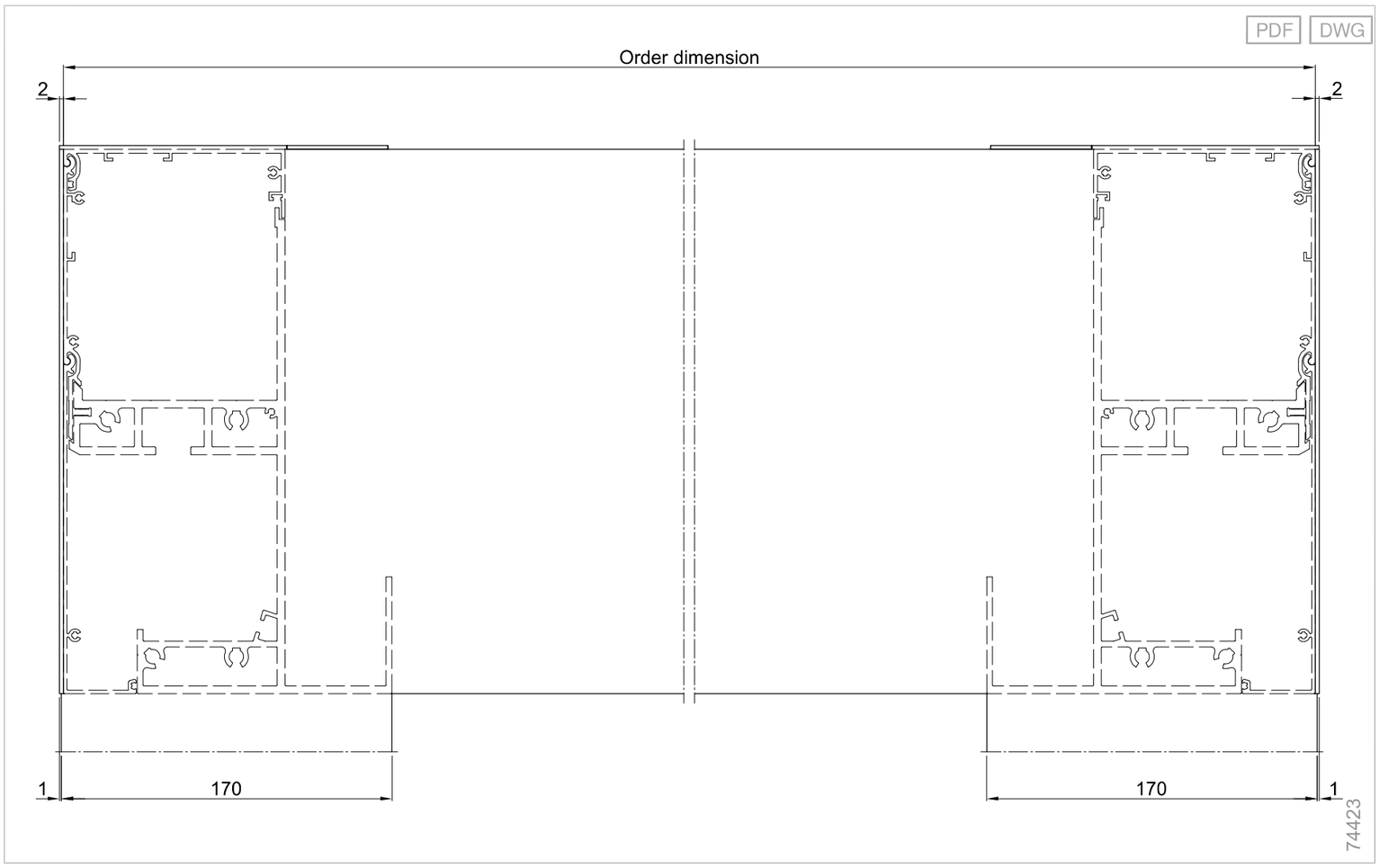


L60/L70, wall console, guide rail pole

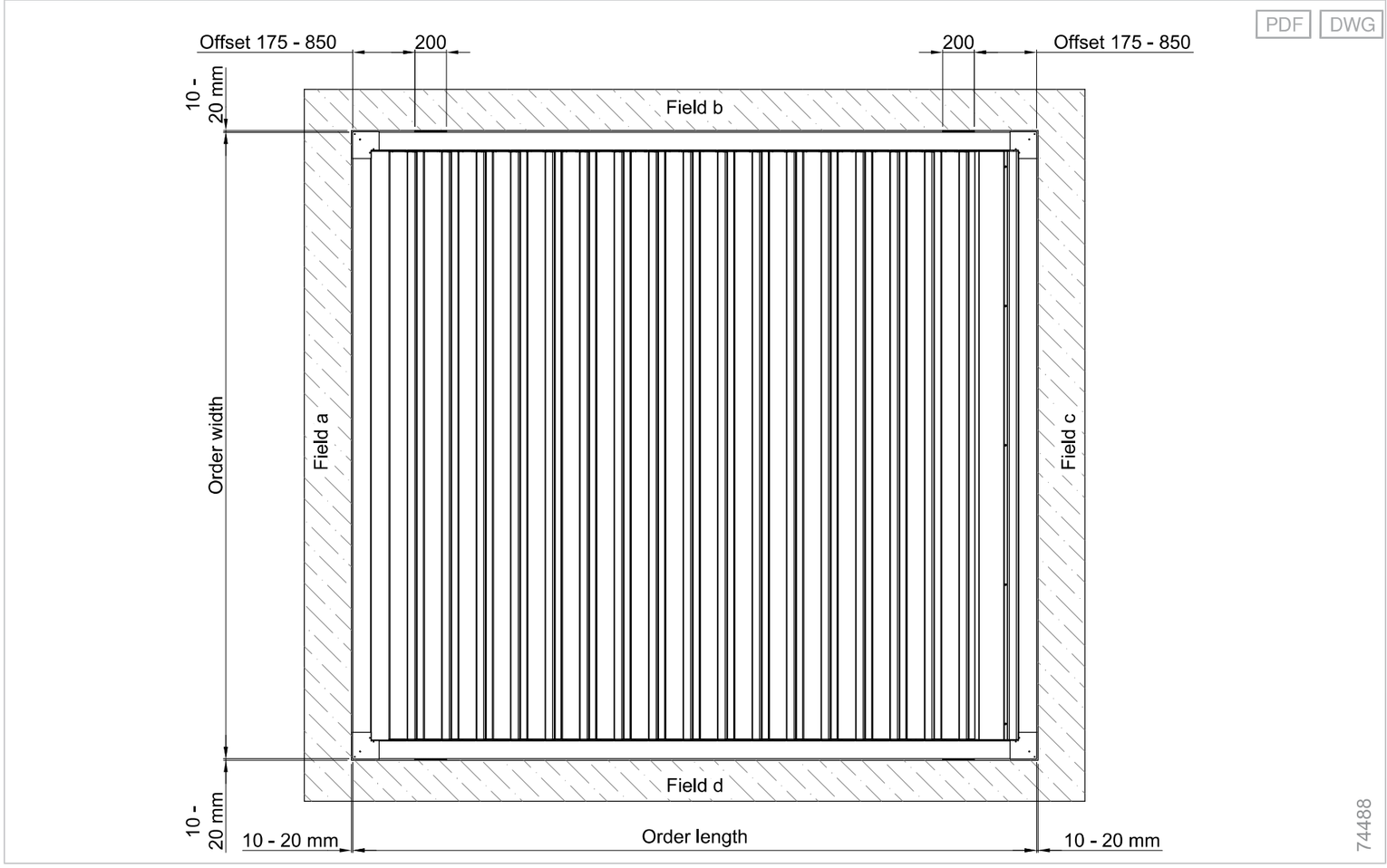
PDF DWG



L60/L70, dimension determination, order dimension

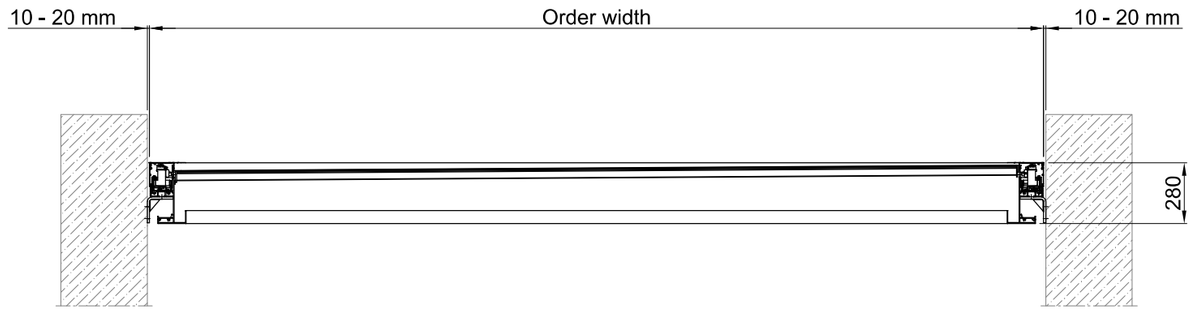


L60/L70, Free-installation with offset wall console



L60/L70, Free-installation with offset wall console

PDF DWG



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Weight assessment

Weight assessment for roof systems

	Order width				
Order length	**2500 mm**	**2501 - 3000 mm**	**3001 - 3500 mm**	**3501 - 4000 mm**	**4001 - 4500 mm**
2000 - 2500 mm	472 kg	503 kg	535 kg	566 kg	598 kg
2501 - 3000 mm	503 kg	537 kg	572 kg	607 kg	641 kg
3001 - 3500 mm	534 kg	571 kg	609 kg	647 kg	685 kg
3501 - 4000 mm	580 kg	623 kg	665 kg	708 kg	750 kg
4001 - 4500 mm	611 kg	657 kg	703 kg	748 kg	794 kg
4501 - 5000 mm	642 kg	691 kg	740 kg	789 kg	838 kg
5001 - 5500 mm	689 kg	742 kg	796 kg	850 kg	903 kg
5501 - 6000 mm	707 kg	762 kg	817 kg	873 kg	928 kg

Quantity determination

Number of slats

Order length	Number of slats	Stack length
2000 mm	7	566 mm
2178 mm	8	582 mm
2398 mm	9	640 mm
2618 mm	10	698 mm
2838 mm	11	756 mm
3058 mm	12	814 mm
3278 mm	13	872 mm
3498 mm	14	930 mm
3718 mm	15	988 mm
3938 mm	16	1046 mm
4158 mm	17	1104 mm
4378 mm	18	1162 mm
4598 mm	19	1220 mm
4818 mm	20	1278 mm
5038 mm	21	1336 mm
5258 mm	22	1394 mm
5478 mm	23	1452 mm
5698 mm	24	1510 mm
5918 mm	25	1568 mm

Order length:

- The order length in the table is the dimension with the smallest possible length equalization plates and hence corresponds to the optimum order dimension (except order length 2000 mm).

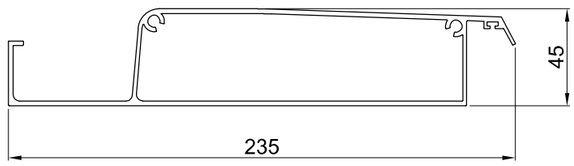
Stack length:

- The stack length refers to electrical distribution on the crossbeam in field c.
- If the electrical distribution is implemented on the crossbeam in field a, the stack length increases by 105 mm.

Details

L70, slat

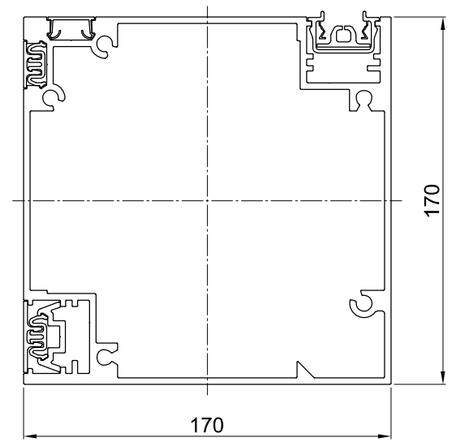
PDF DWG



74365

L60/L70, pole

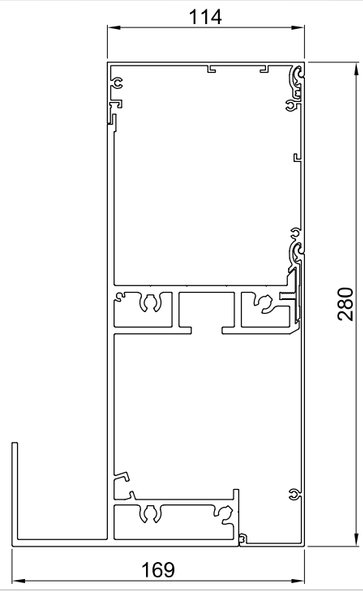
PDF DWG



74369

L60/L70, crossbeam a/c

PDF DWG



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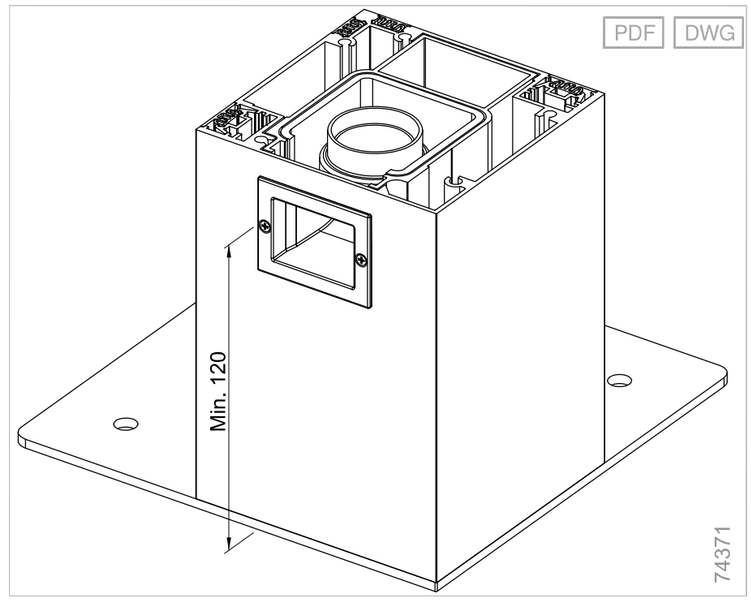
L60/L70, position of drainage, rectangular

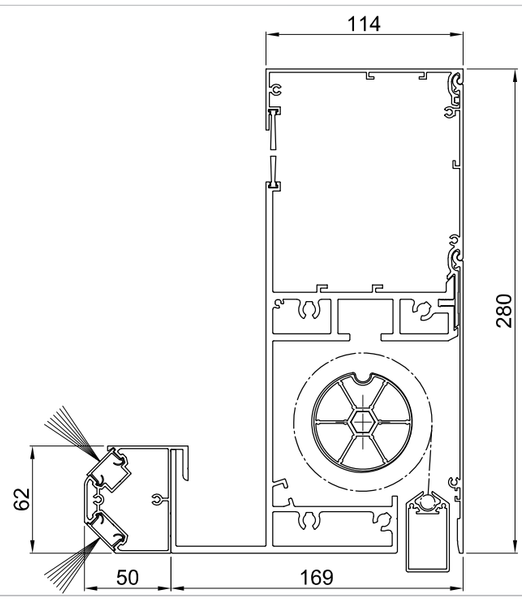
PDF DWG



74371

L70, crossbeam b/d, optional LED profile

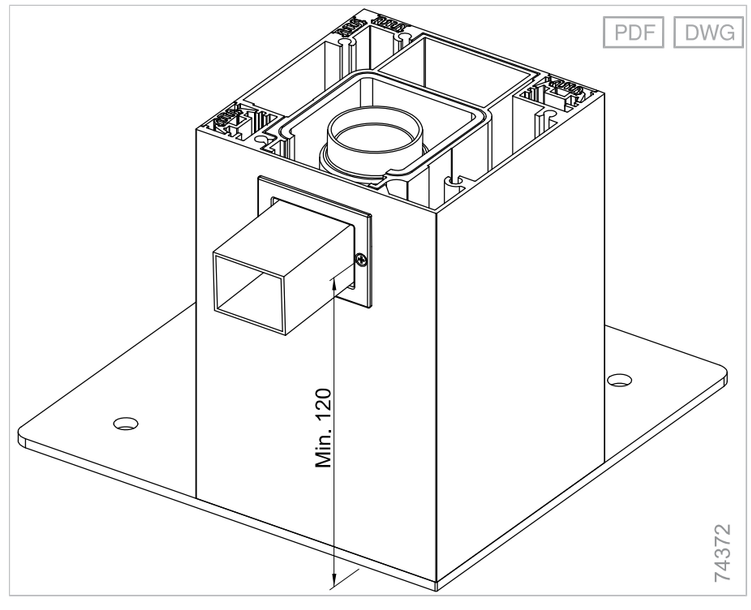
PDF DWG



74363

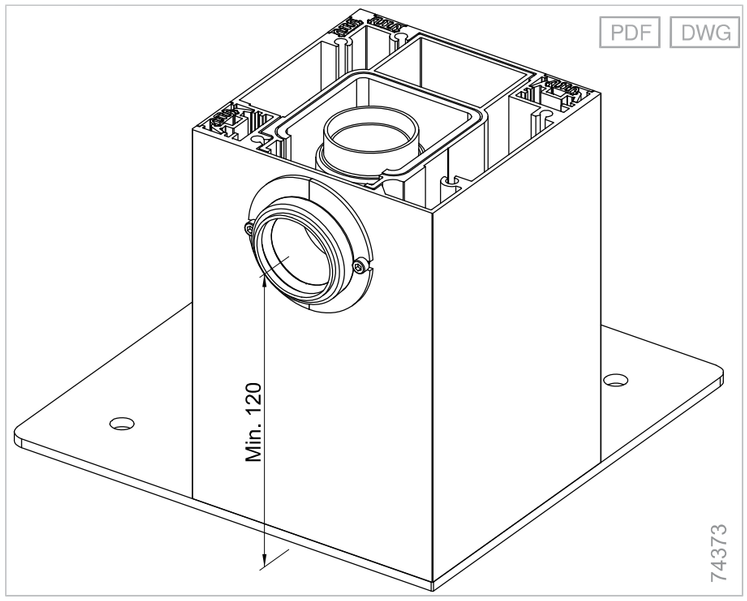
L60/L70, position of drainage, rectangular, optional waterspout

PDF DWG

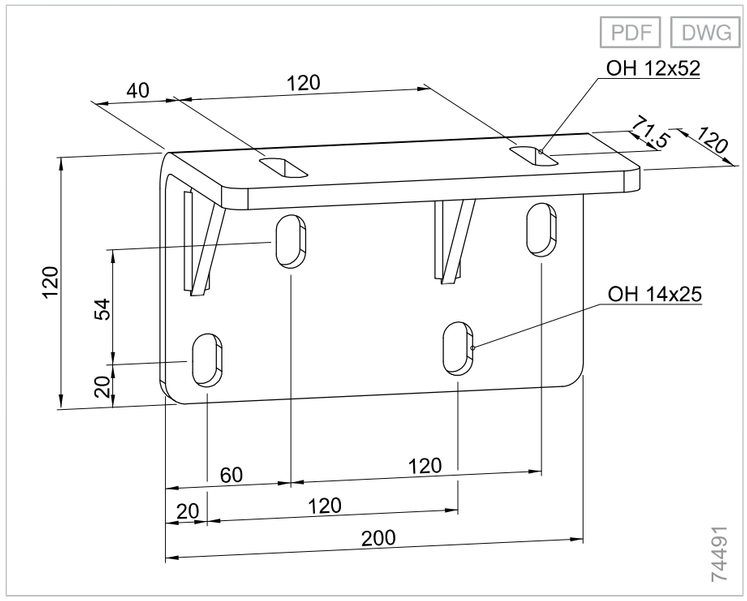


74372

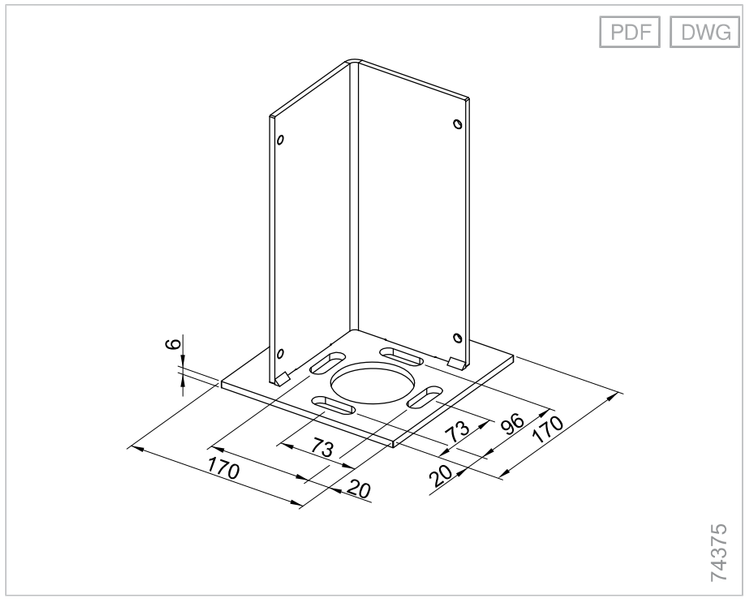
L60/L70, position of drainage, on-site



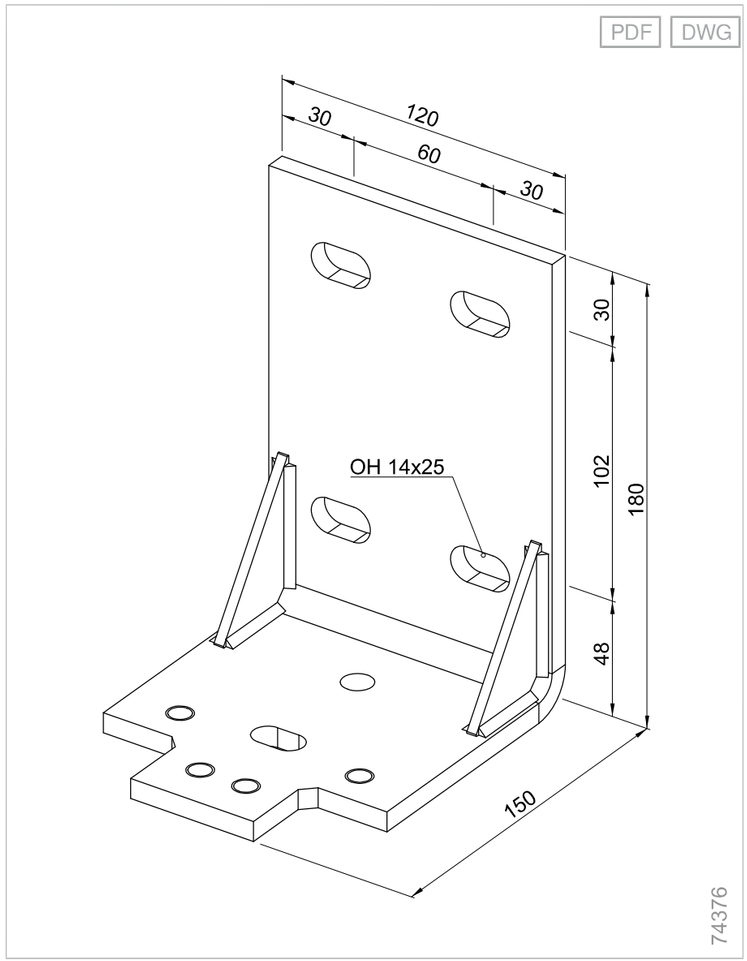
L60/L70, offset wall console



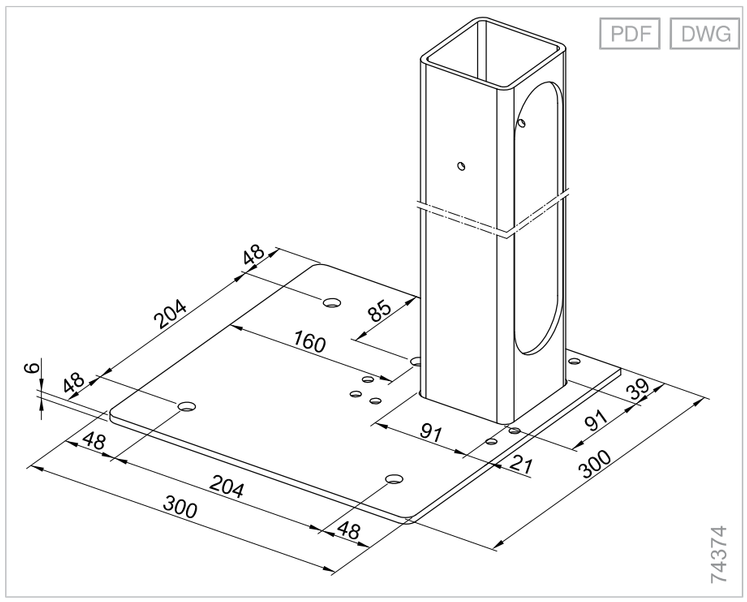
L60/L70, internal base plate



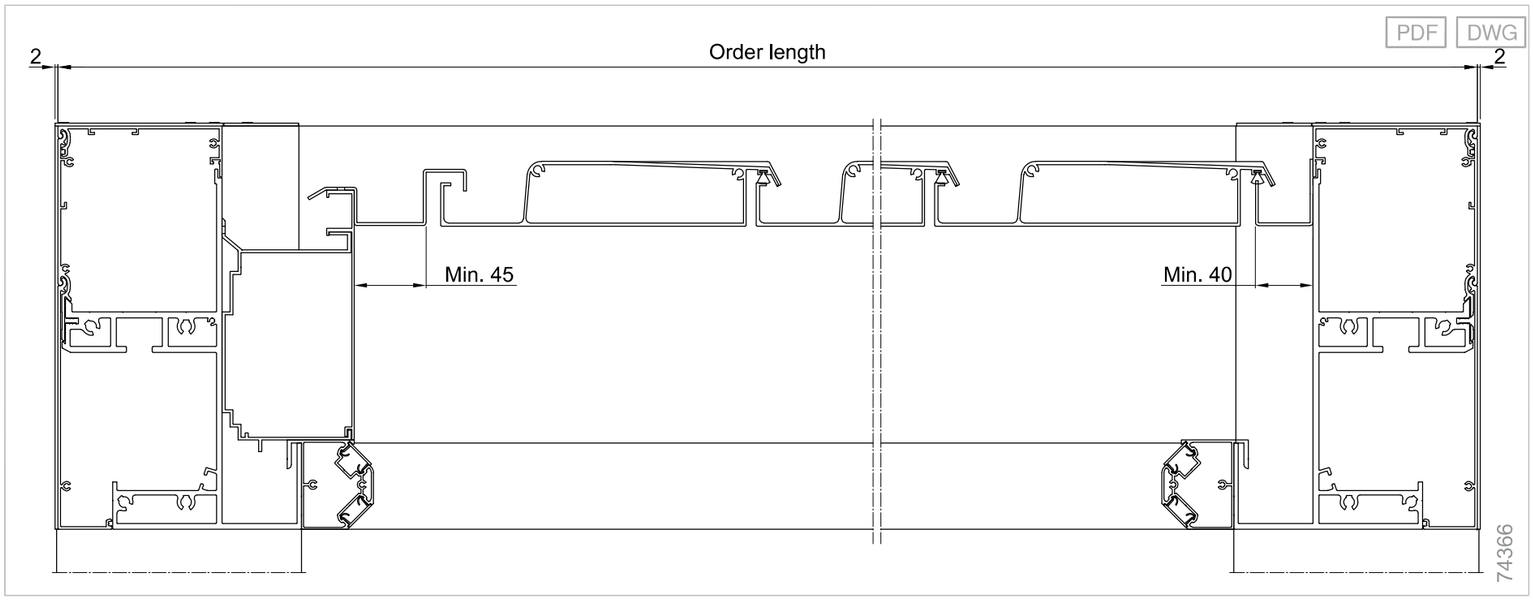
L60/L70, wall console



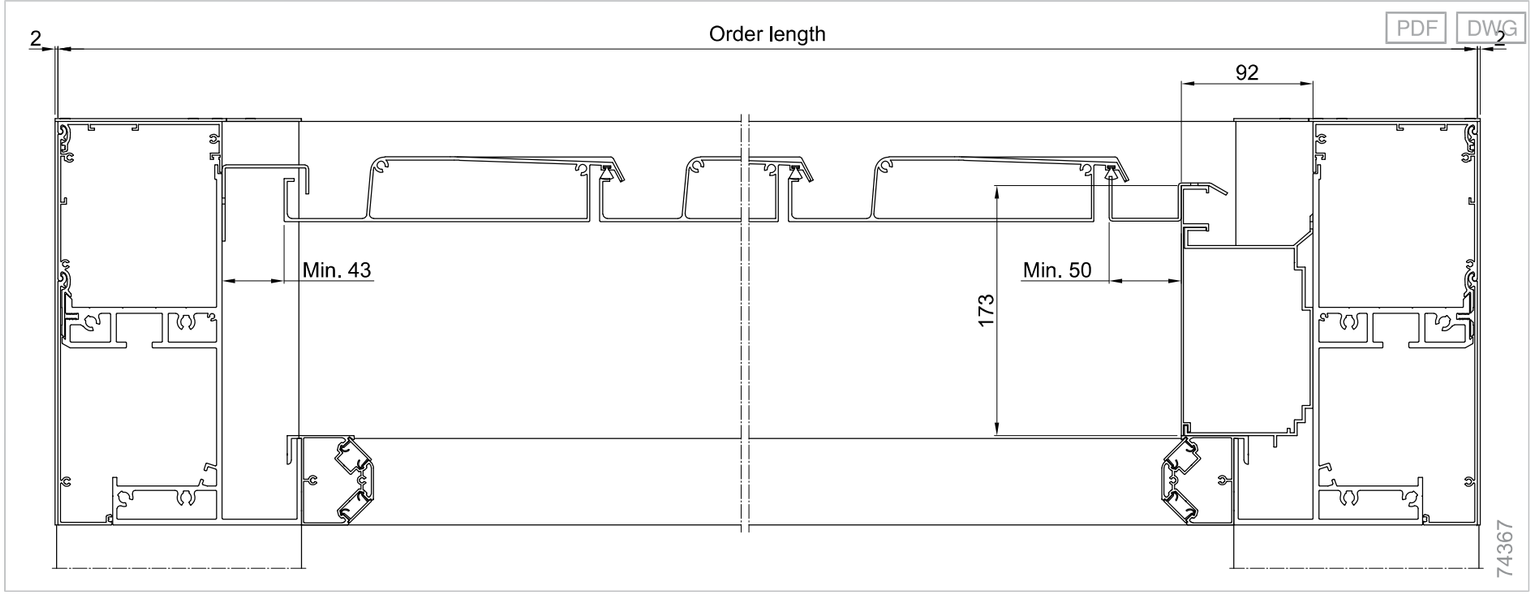
L60/L70, base plate corner installation



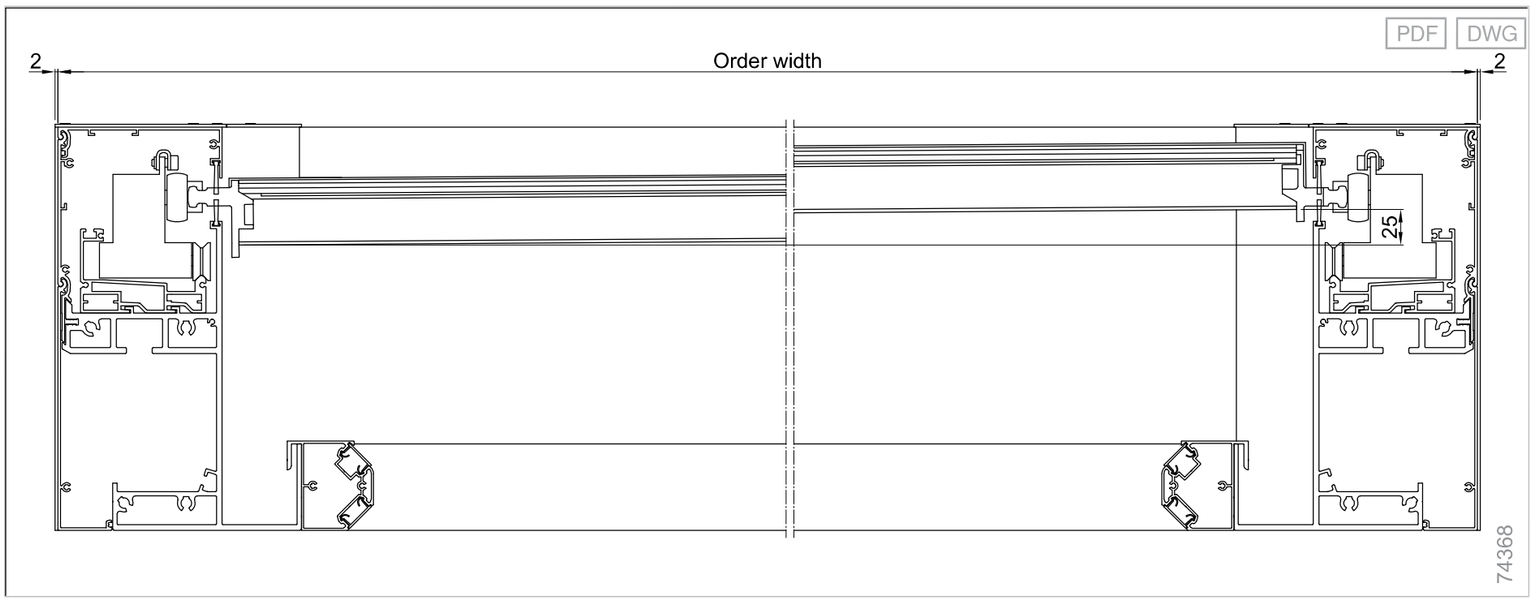
L70, length compensation plates, electrical distribution, crossbeam a



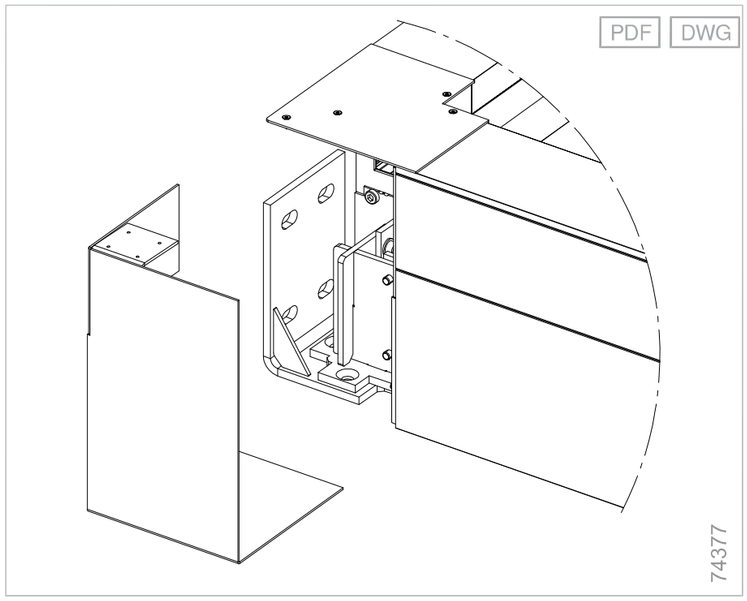
L70, length compensation plates, electrical distribution, crossbeam c



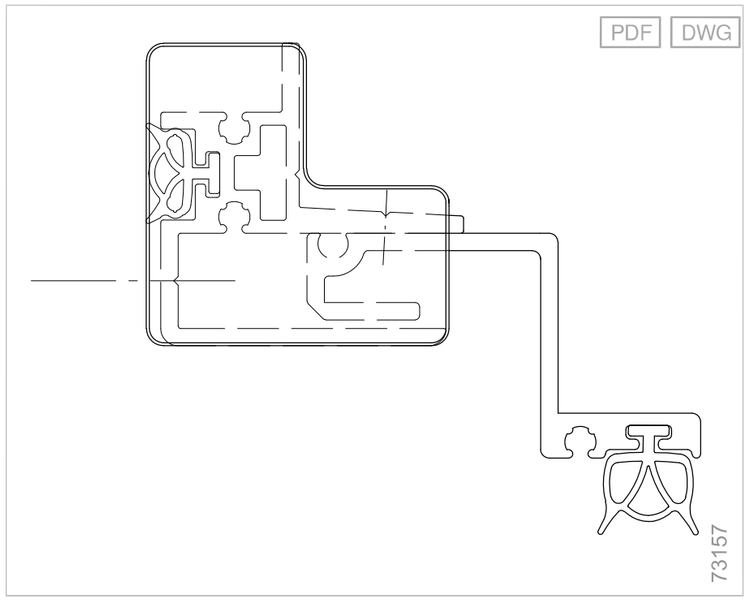
L70, slat inclination



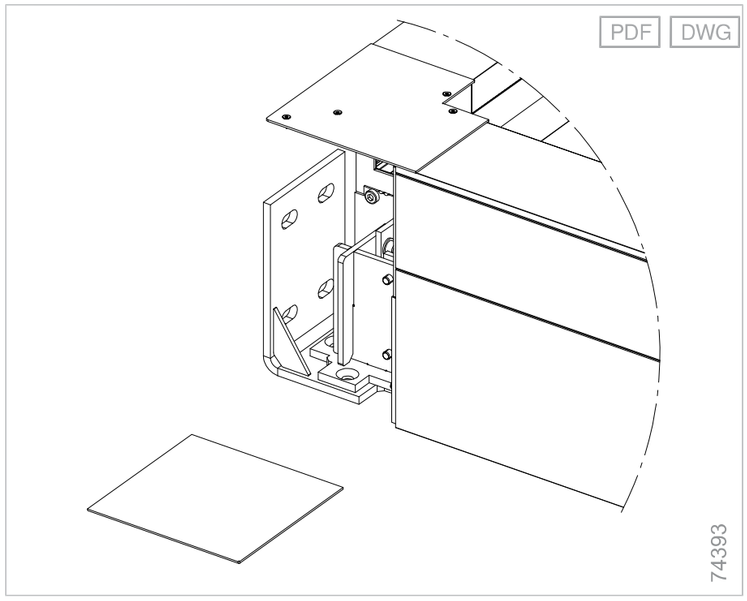
L60/L70, wall console, lateral trim panel



Wall connection profile with small rain hood - L50/L60/L70



L60/L70, wall console, lateral facing, inner angle



Additional product information

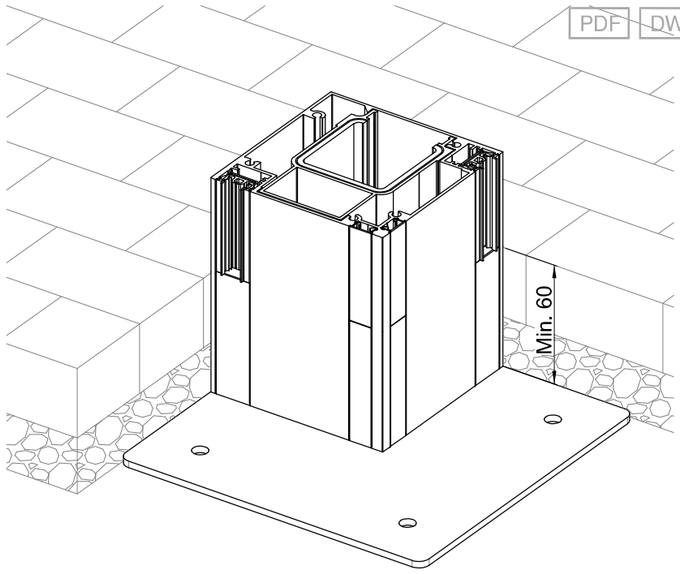
Pole installation options

Ground installation with frost-proof on-site foundation, see slat roof guidelines (IVRSA).

Mounting examples

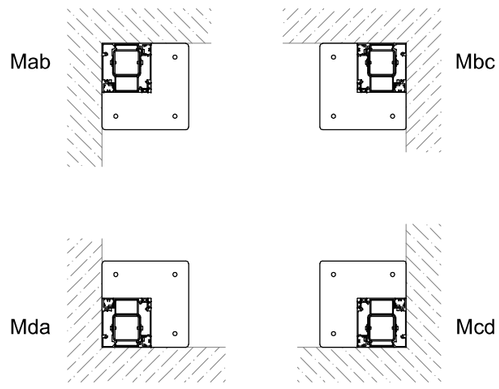
L60/L70, floor recess, separation cut

PDF DWG



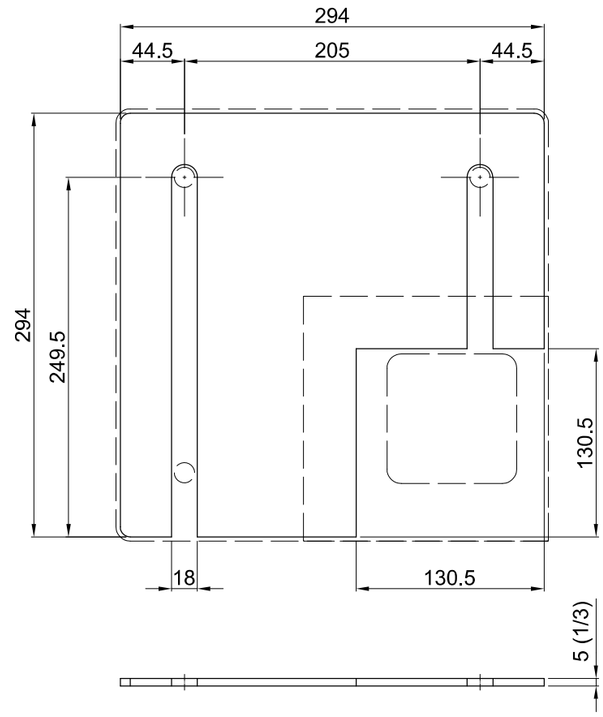
L60/L70, base plate corner installation

PDF DWG



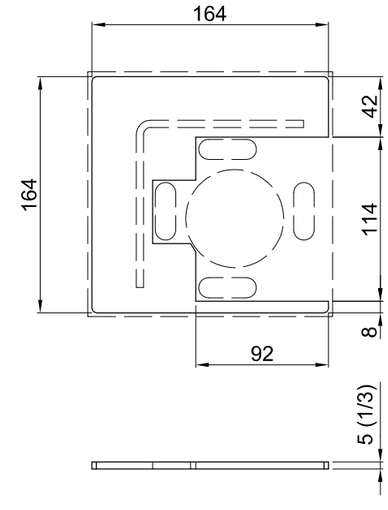
L60/L70, shim plate

PDF DWG

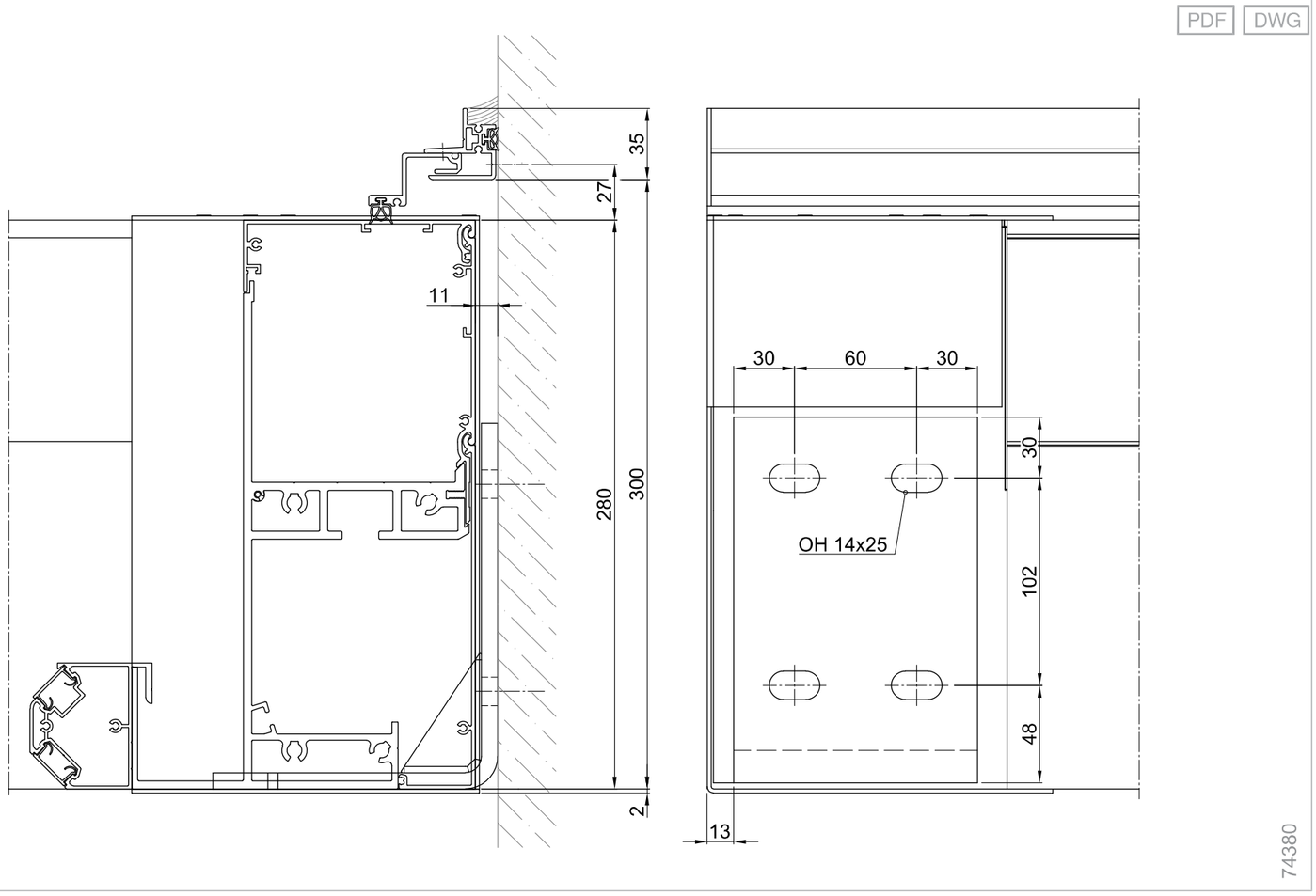


L60/L70, quarter shim plate

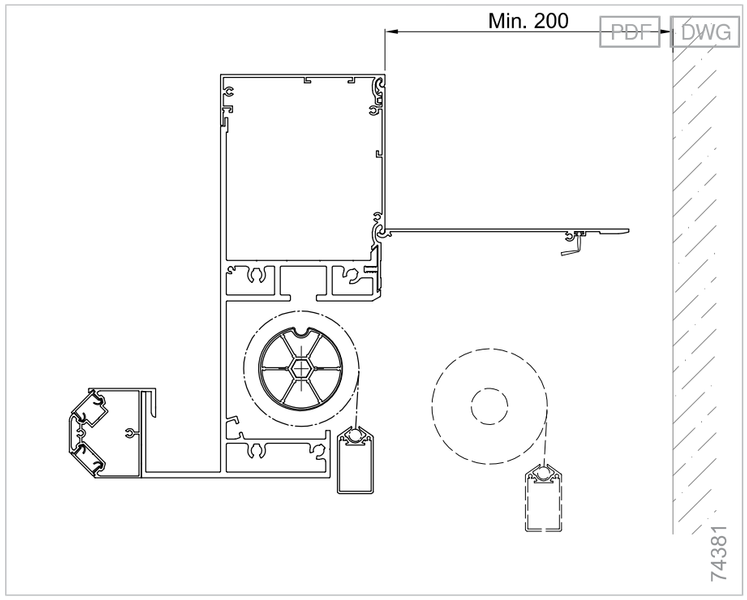
PDF DWG



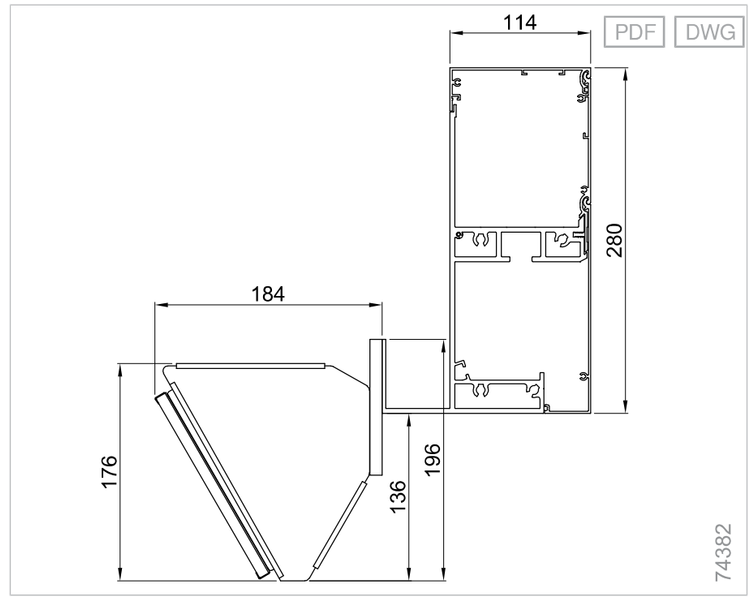
L60/L70, wall connection



L60/L70, awning with easyZIP guidance, refurbishment

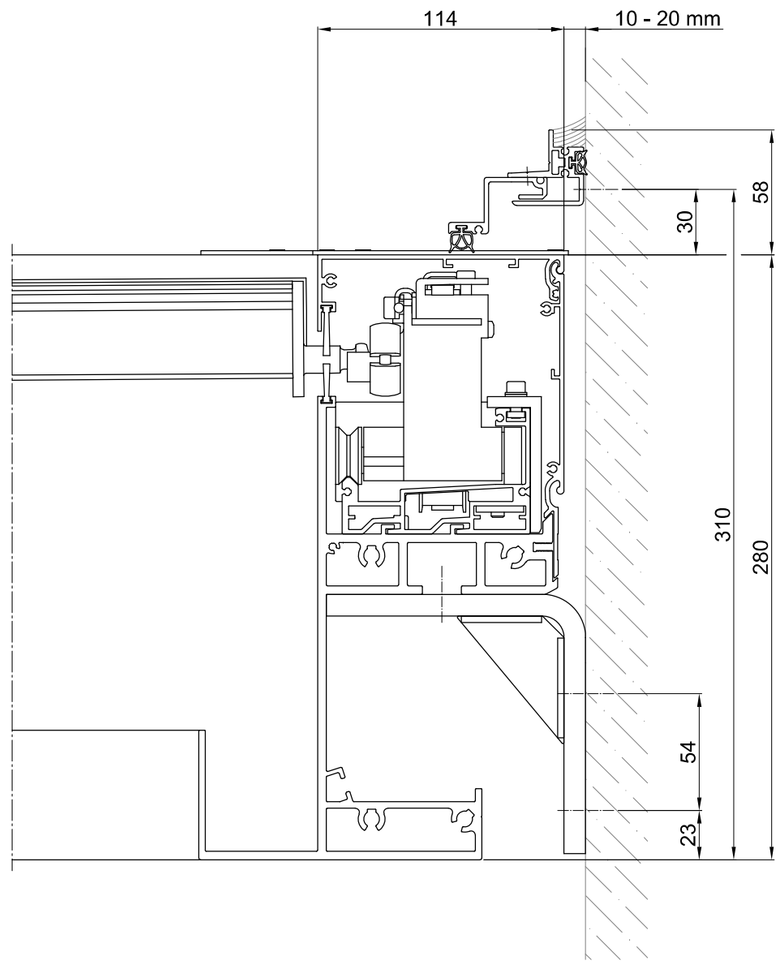


L60/L70, Design radiant heater



L60/L70, Free-installation with offset wall console

PDF DWG



In the case of the Free installation version with offset wall console, the beam cover is omitted, creating a gap between the beam and the installation point. Angle bracket or cover on request.

Roof systems

Slat roofs Lamaxa L70 Line

Elegantly connected

Shading of very large areas: With a central pole, several units can be elegantly lined up along the long as well as the short side.

Combinable

Double the flexibility: Combinations of the L60 (tiltable slats) and L70 (tiltable and movable slats) make individual solutions a possibility.

Year-round use

Protection in all weather: Depending on the type, the incidence of light can be adjusted to several levels with the tilting and moving slats – from a fully unobstructed view of the sky all the way to a complete closure of the slat roof.

Construction limit values

Maximum order width	9000 mm
Maximum order length	12000 mm
Maximum order area	54 m^2

Order here

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Art.-Nr. 2072962

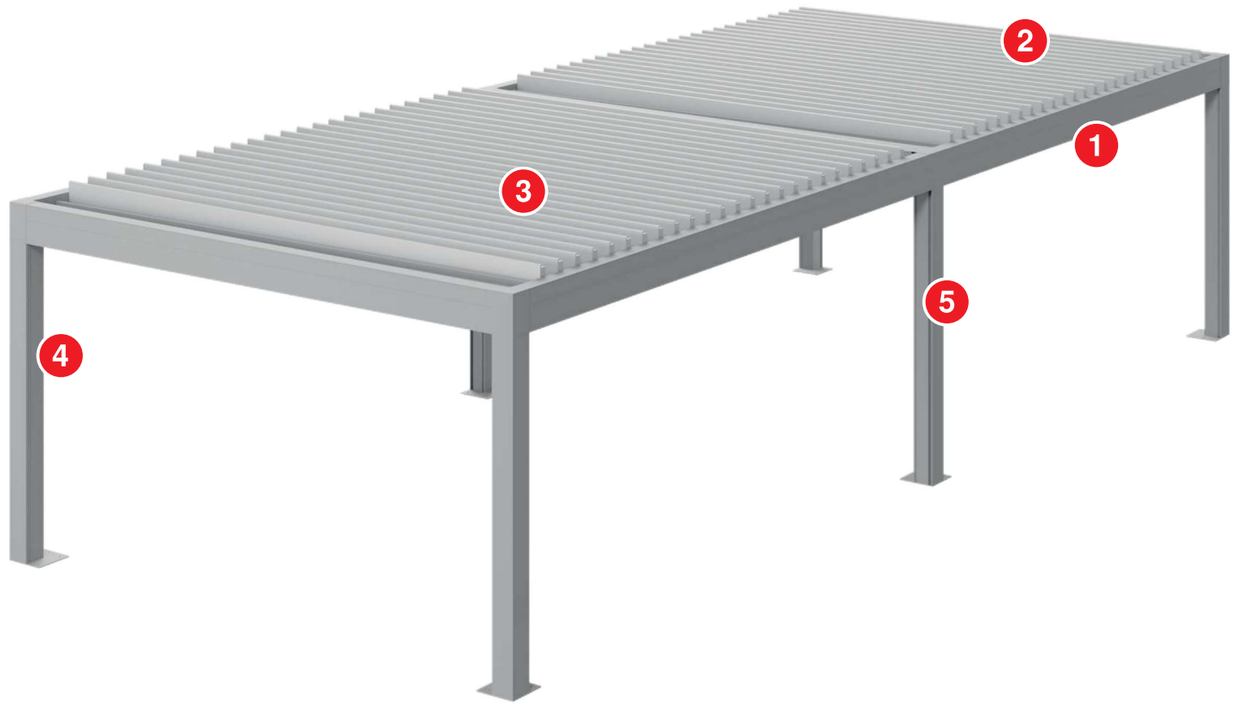
WAREMA tools

Sun Shading Planner

see "Navigating the document", Page 5

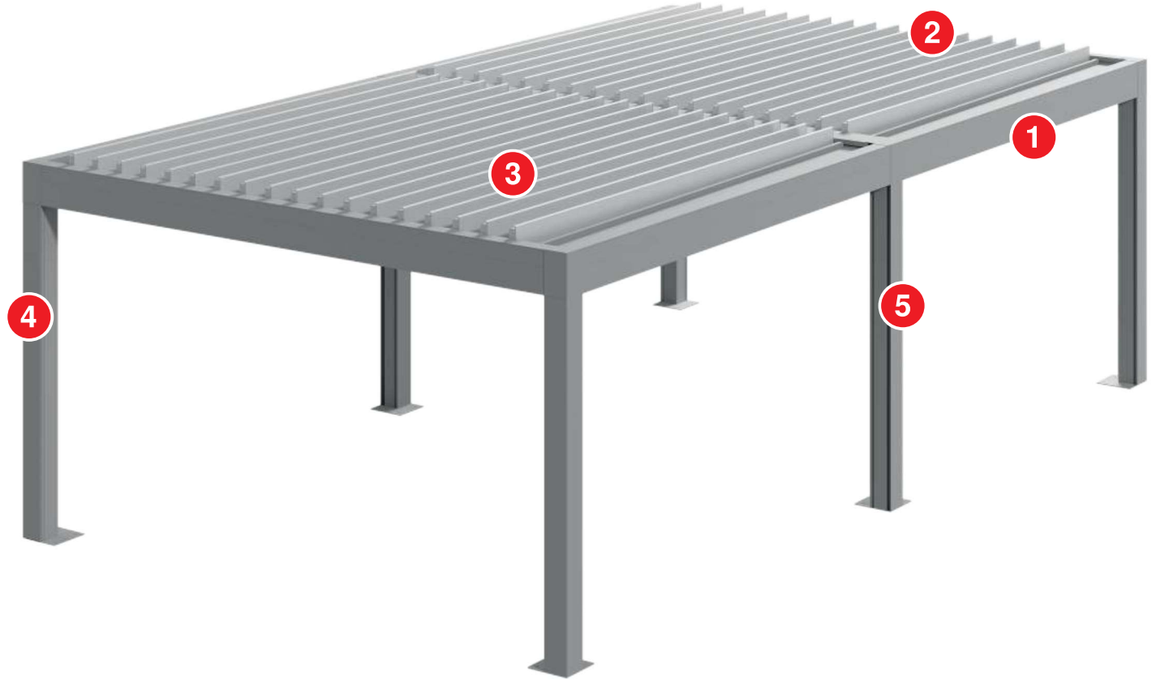
Components

Lamaxa Line - L60/L70



1	Crossbeam with tilting mechanics	4	Pole
2	Crossbeam with motor	5	Middle pole
3	Slats		

Lamaxa Line - L60/L70



1	Crossbeam with motor	4	Pole
2	Crossbeam with tilting mechanics	5	Middle pole
3	Slats		

Slat

Slat - L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	235 mm
Height	45 mm
Swivelling range	0 - 135 °

Pole

Pole - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	170 mm
Height	170 mm

Installation options:

- Ground installation with frost-proof, on-site foundation.
- The grout for filling the clearance is not included in the scope of delivery when threaded rods are used.

Floor recess and separation cut:

- For a floor recess, we recommend the use of a separation cut in the inspection parts to allow for inspection without dismantling the floor.
- If the floor recess does not have a separation cut, the easyZIP guidance inlays and the integrated LED strips reach the bottom edge of the pole profile.
- Floor recesses with a separation cut must be at least 60 mm.

Centre pole - L60/L70 Line

Material	Aluminium, extruded
Surface	Powder-coated
Width	170 mm
Height	170 mm

Installation options:

- Ground installation with frost-proof, on-site foundation.
- The grout for filling the clearance is not included in the scope of delivery when threaded rods are used.

Floor recess and separation cut:

For a floor recess, we recommend the use of a separation cut in the inspection parts to allow for inspection without dismantling the floor. If the floor recess does not have a separation cut, the easyZIP guidance inlays and the integrated LED strips reach the bottom edge of the pole profile.

Pole, optional

Pole guide rails - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	170 mm
Height	170 mm

If an easyZIP awning is installed in a field in which a wall console is installed, a separate pole is required below the wall console. Inward or outward drainage through guide rail poles possible. Only corner base plate possible.

Base plate

Base plate - corner installation L60/L70

Material	Galvanised steel
Surface	Plain
Optional surface	Powder-coated
Width	300 mm
Height	300 mm

Base plate - internal L60/L70

Material	Galvanised steel
Surface	Plain
Optional surface	Powder-coated
Width	170 mm
Height	170 mm

Since the material thickness is generally visible, the internal base plate should be coated if there is no floor recess.

Crossbeam

Crossbeam - L60/L70

Material	Aluminium, extruded
Surface	Powder-coated
Width	169 mm
Height	280 mm

Electrical distribution on the crossbeam

Material	Aluminium, extruded
Surface	Powder-coated
Width	91,5 mm
Height	174 mm

Drainage

Drainage in pole - L60/L70 Line

- Drainage through drainpipe in pole
- If each roof crown is smaller than 16 m^2, one drainage point per roof is sufficient to comply with an average rainfall event r5/2 = 350 l/(s ha). If a roof crown is ≥ 16 m^2, it must be equipped with a second drainage point.
- To withstand average rainfall, three drainage points are sufficient for a total area of up to 54 m^2 if each roof is equipped with a separate drainage point plus a third common drainage point at the centre pole.

Position of drainage outlet:

- Possible on every pole
- Drainage and electronics/connecting lines must always be installed in separate poles.
- On the outsides of the poles or downward
- Min. height: 150 mm/height: 40 mm (for internal base plates)
- Max. height: 250 mm below the headroom

Note: Downward drainage through base plate:

When planning and measuring, please note that the concrete foundation must be very precisely manufactured if downward drainage through the base plate is required!

Wall connection profile, optional

Wall connection profile with small rain hood

Material	Aluminium, extruded
Surface	Powder-coated
Width	54 - 65 mm
Height	48 mm
Dimensions, notes	The adjustment range in the depth between rain hood and wall connection profile is up to 11 mm.

The on-site sealing is the responsibility of the specialist partner; if necessary, the commissioning of a plumbing company is recommended.

Field of application:

- Terrea K50
- Terrea K70
- Perea P20 (up to an angle of 10°)
- Lamaxa L50/L60/L70

Console, optional

Wall console - Lamaxa L60/L70

Material	Galvanised steel
Surface	Powder-coated
Width	120 mm
Height	180 mm
Depth	140 mm

- Use in corner as pole replacement.
- A maximum of two poles can be replaced by wall consoles.
- For a concrete mounting substructure; adapter plates are required for other substructures.
- The wall console protrudes 11 mm beyond the order width and order length. This results in a gap of 11 mm between the crossbeam and the wall.
- For inner angle wall consoles, the lateral corner area is not covered by profiles.

Offset wall console - Lamaxa L60/L70

Material	Aluminium, extruded
Width	200 mm
Height	120 mm
Depth	120 mm

- For attachment to Tb and/or Td.
- Use in corner as pole replacement or as Free installation.
- A maximum of 4 poles can be replaced by offset wall consoles.
- For a concrete mounting substructure; adapter plates are required for other substructures.
- In the case of the Free installation version with offset wall console, the beam cover is omitted, creating a gap between the beam and the installation point. Angle bracket or cover on request.

Drive variants

- Motor

Motor

- WMS-LP (WMS)

see "Drive variants", Page 201

Colours

- WAREMA Colour World, Highlight category, fine texture surface quality
- WAREMA Colour World, Variation category, fine texture surface quality

Colours, optional:

- WAREMA Colour World

see "Colours and finishes", Page 10

Notes

Notes on product configuration
Series-mounted units:

- If the distance between the facade and the centre pole is ≥ 300 mm, integrated awnings with easyZIP guidance can be installed in the fields adjacent to the centre pole. If the distance is < 300 mm (minimum distance 10 mm), no easyZIP awnings can be installed in the adjacent fields (retrofitting is also not possible).
- Generally, unit coupling (drive coupling) is not possible.
- Flush closures allow two slat roofs to be centrally mounted in-series on one common pole.
- The two slat roofs can overlap either at the order width or order length and have the same closing and extension direction (no counter-rotation).
- The electrical distribution of the respective units is located on the crossbeam. The corresponding connecting line is required in a pole adjacent to the electrical distribution.
- If both electrical distributions are positioned on the overlapping crossbeams, the on-site power supply is possible via a centre pole.
- A combination of L60 and L70 is possible in both joint directions.
- It is possible to integrate easyZIP or LEDs into any side of the pole (but not below the double crossbeam in the joint area).
- RGB lighting of both units can be learned in to an RGB hand-held transmitter.
- One drainage point per 16 m^2 of roof area is sufficient per unit. Three drainage points are sufficient for a total area of up to 54 m^2 if each roof is equipped with a separate drainage point plus a third common drainage point at the centre pole.

Notes on installation
Limit position learning:

The WAREMA Smart programming cable is required to set the motor limit positions.

Notes on operation
To ensure convenient and fast operation of the slat roof, we recommend WMS WebControl pro (control via smartphone, tablet, etc.) and WMS Weather station plus in order to use the control modes (e.g. sun control).

Supplementary accessories

- Design radiant heater
- Lamaxa lighting
- Integrated awnings with easyZIP guidance
- Additional pole - L60/L70
- Glass sliding system SL20e
- Sliding shutters - L50/L60/L70
- Power socket

see "Supplementary accessories", Page 143

Construction limit values

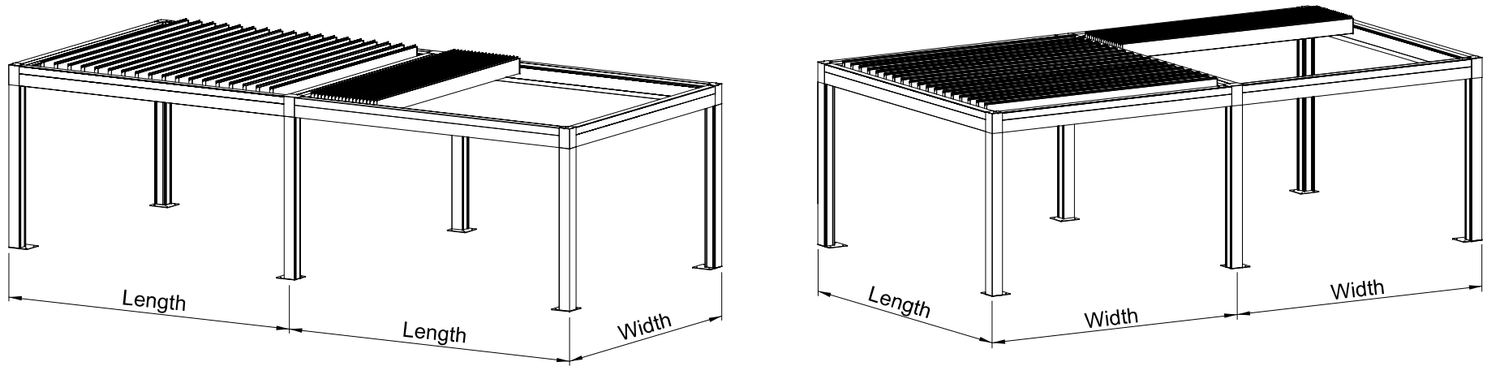
Configuration variants	Minimum order width	Maximum order width	Minimum order length	Maximum order length	Maximum order area	Minimum headroom	Maximum headroom
Slat							
Slat - L70	2500 mm	9000 mm	2000 mm	12000 mm	54 m^2	2350 mm	2700 mm

Dimension determination

The headroom of each pole can be ordered individually (e.g. in case of a sloping finished floor).

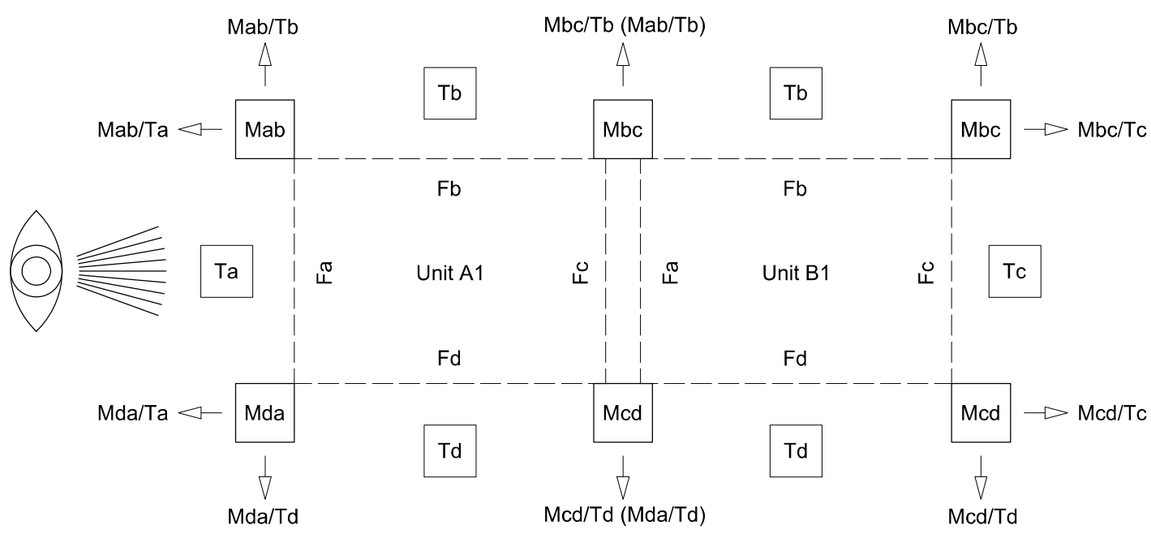
L70, Lamaxa Line

PDF DWG



Top view of the position/connection points - Lamaxa Line L50/L60/L70

PDF DWG

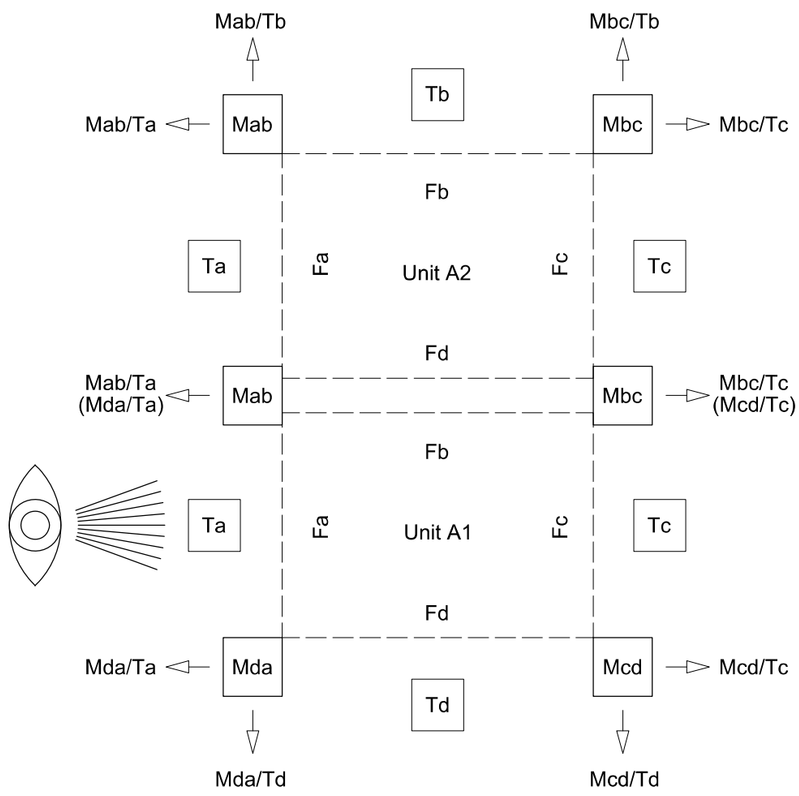


F Field

M Point of installation (pole or wall connection)

T Crossbeam

Top view of the position/connection points - Lamaxa Line L50/L60/L70

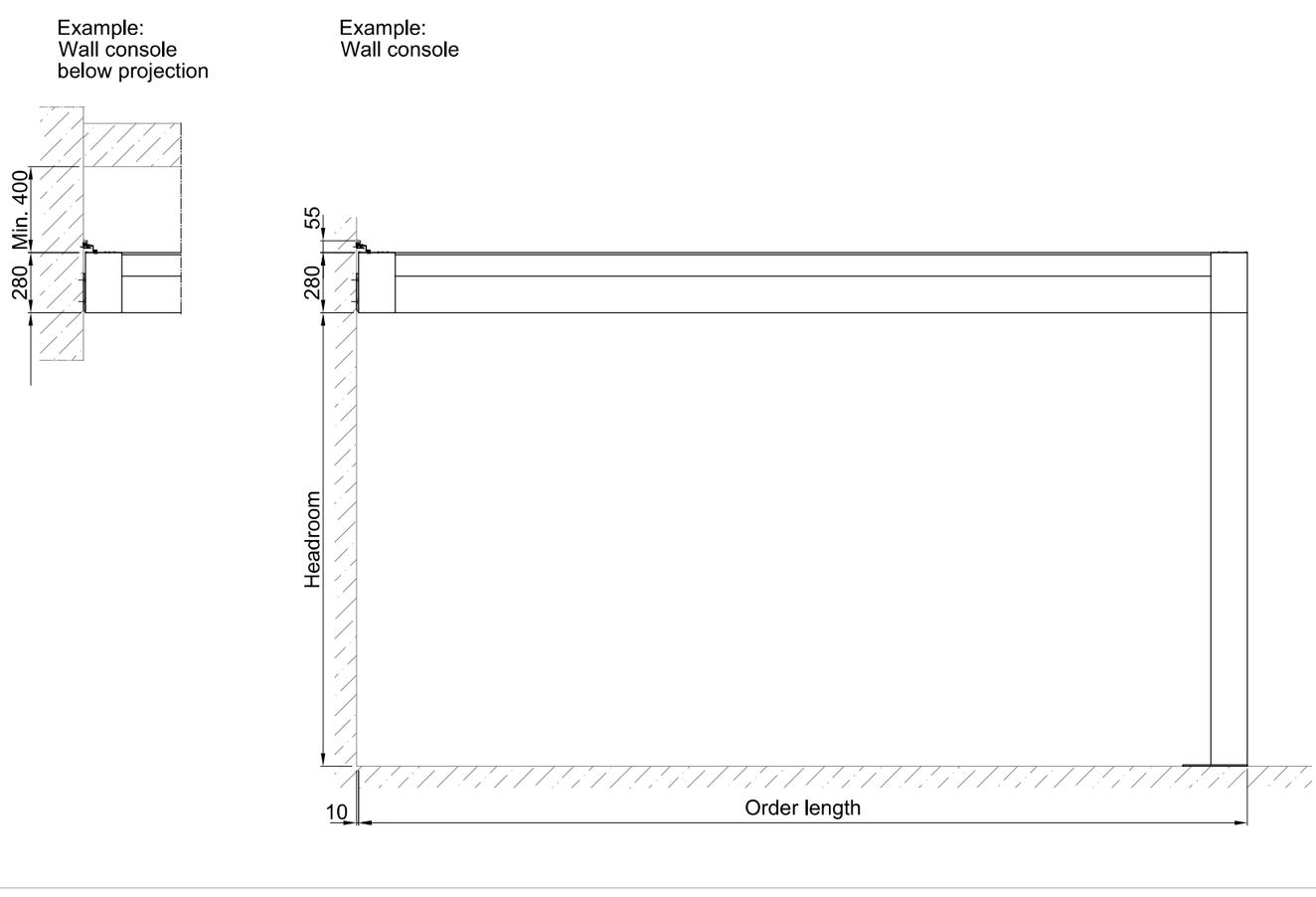


F Field

M Point of installation (pole or wall connection)

T Crossbeam

L60/L70 Line, wall connection, wall console



Quantity determination

Number of slats

Order length	Number of slats	Stack length
2000 mm	7	566 mm
2178 mm	8	582 mm
2398 mm	9	640 mm
2618 mm	10	698 mm
2838 mm	11	756 mm
3058 mm	12	814 mm
3278 mm	13	872 mm
3498 mm	14	930 mm
3718 mm	15	988 mm
3938 mm	16	1046 mm
4158 mm	17	1104 mm
4378 mm	18	1162 mm
4598 mm	19	1220 mm
4818 mm	20	1278 mm
5038 mm	21	1336 mm
5258 mm	22	1394 mm
5478 mm	23	1452 mm
5698 mm	24	1510 mm
5918 mm	25	1568 mm

Order length:

- The order length in the table is the dimension with the smallest possible length equalization plates and hence corresponds to the optimum order dimension (except order length 2000 mm).

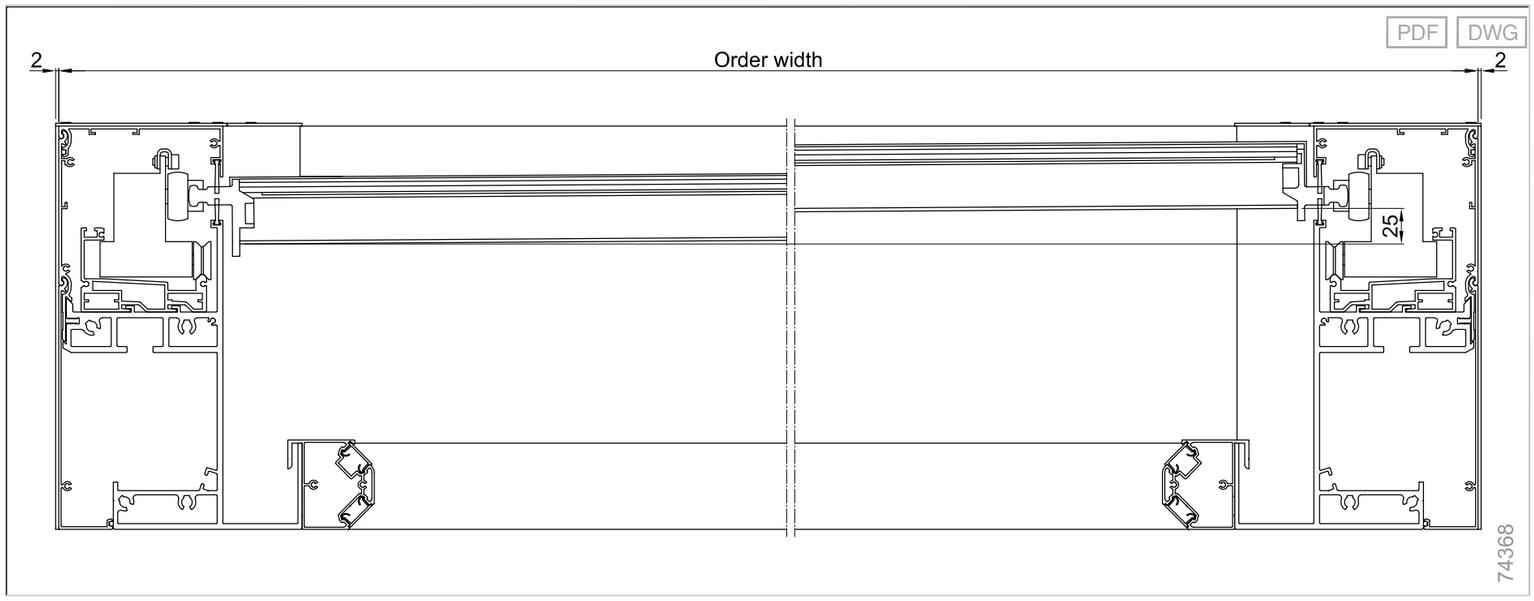
Stack length:

- The stack length refers to electrical distribution on the crossbeam in field c.
- If the electrical distribution is implemented on the crossbeam in field a, the stack length increases by 105 mm.

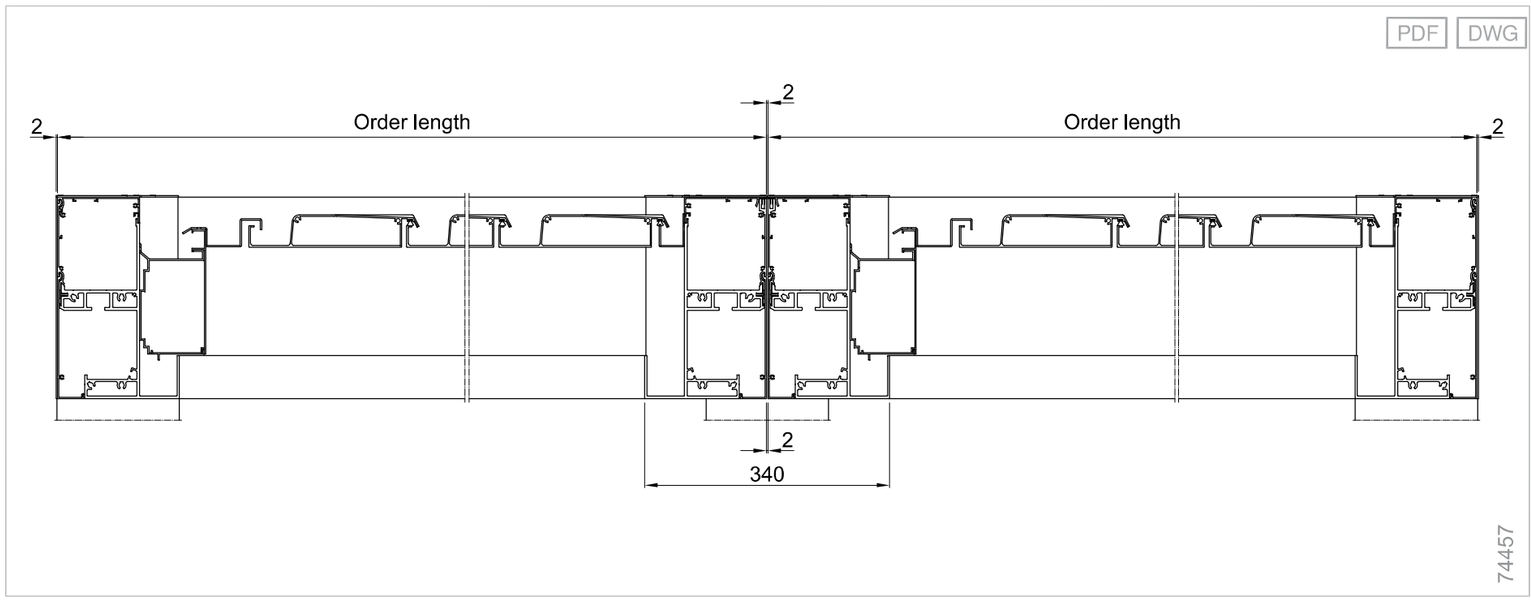
Optimum order length for Lamaxa L60/L70 Line = roof crown

Details

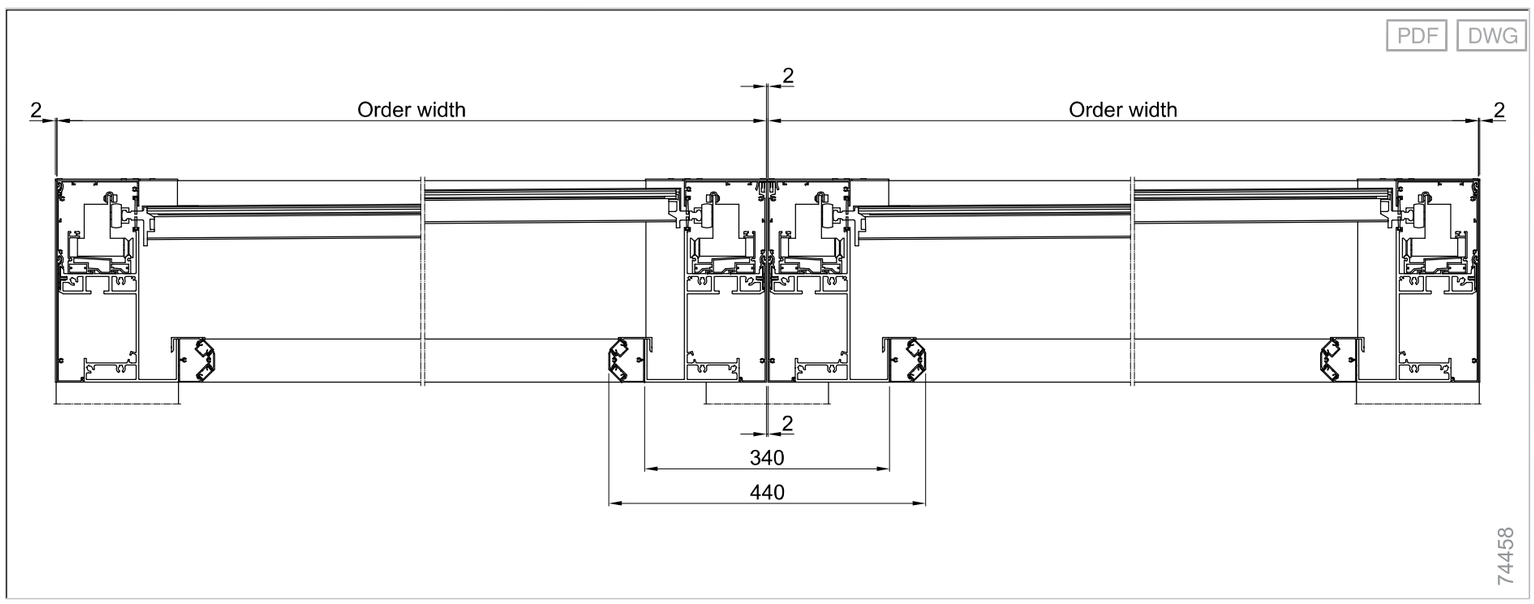
L70, slat inclination



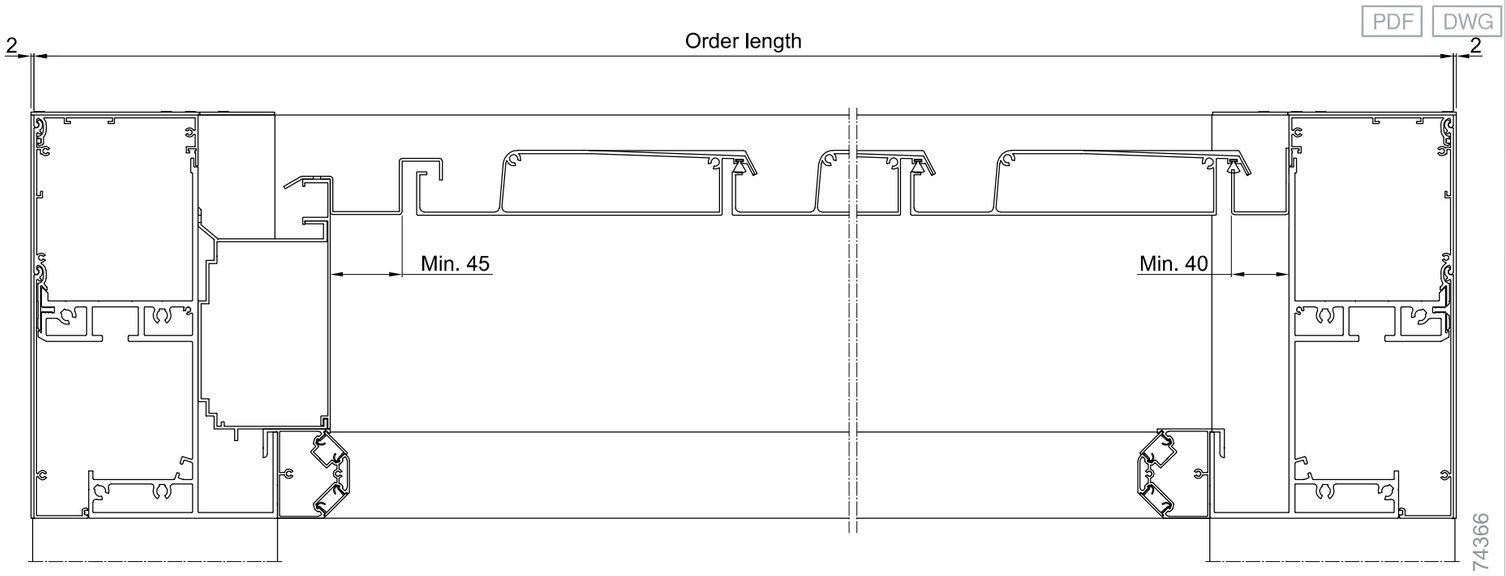
L70 Line, joint order width



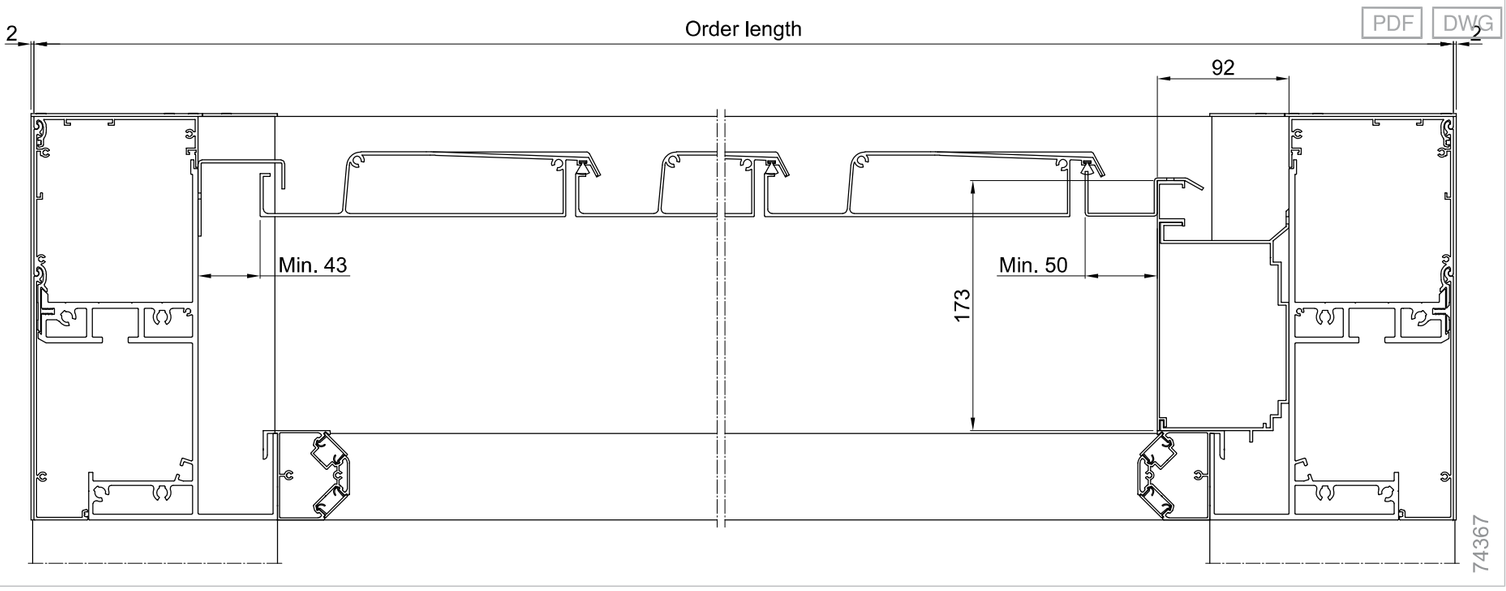
L70 Line, joint order length



L70, length compensation plates, electrical distribution, crossbeam a

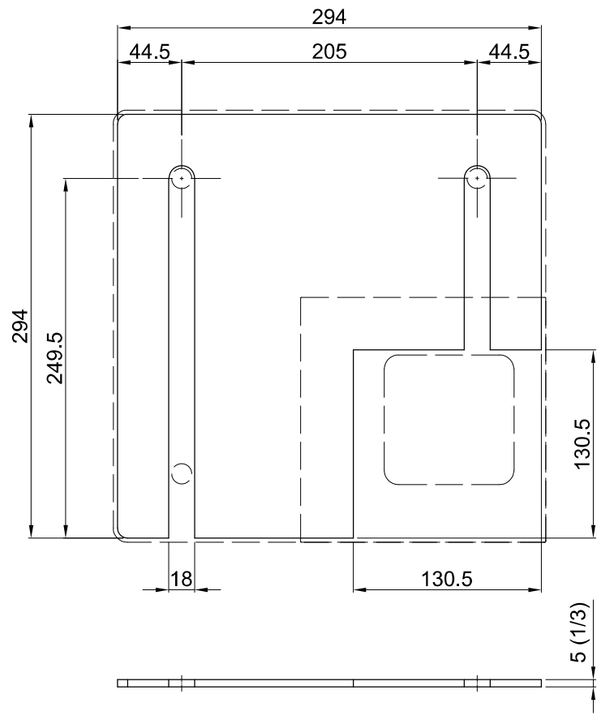


L70, length compensation plates, electrical distribution, crossbeam c



L60/L70, shim plate

PDF DWG



L60/L70, quarter shim plate

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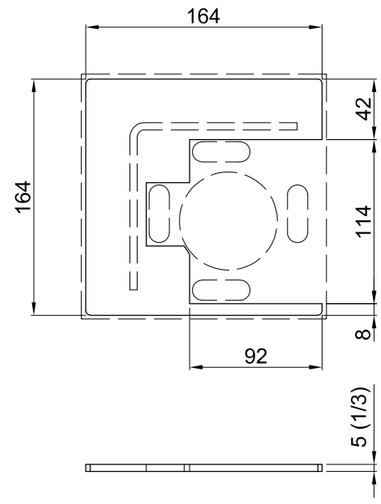


Additional product information

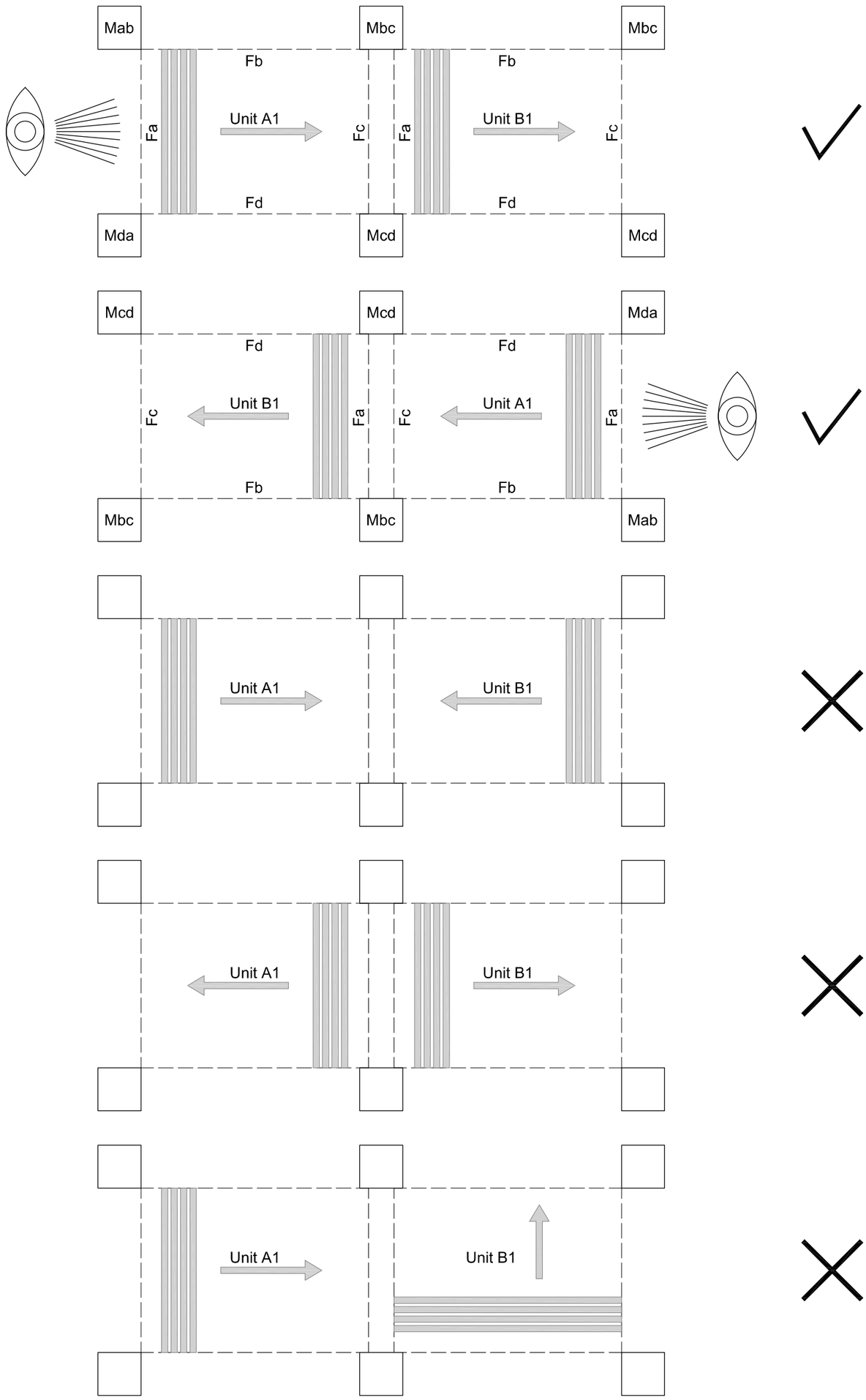
Pole installation options

Ground installation with frost-proof on-site foundation, see slat roof guidelines (IVRSA).

Mounting examples

Joint order width - Lamaxa Line L70

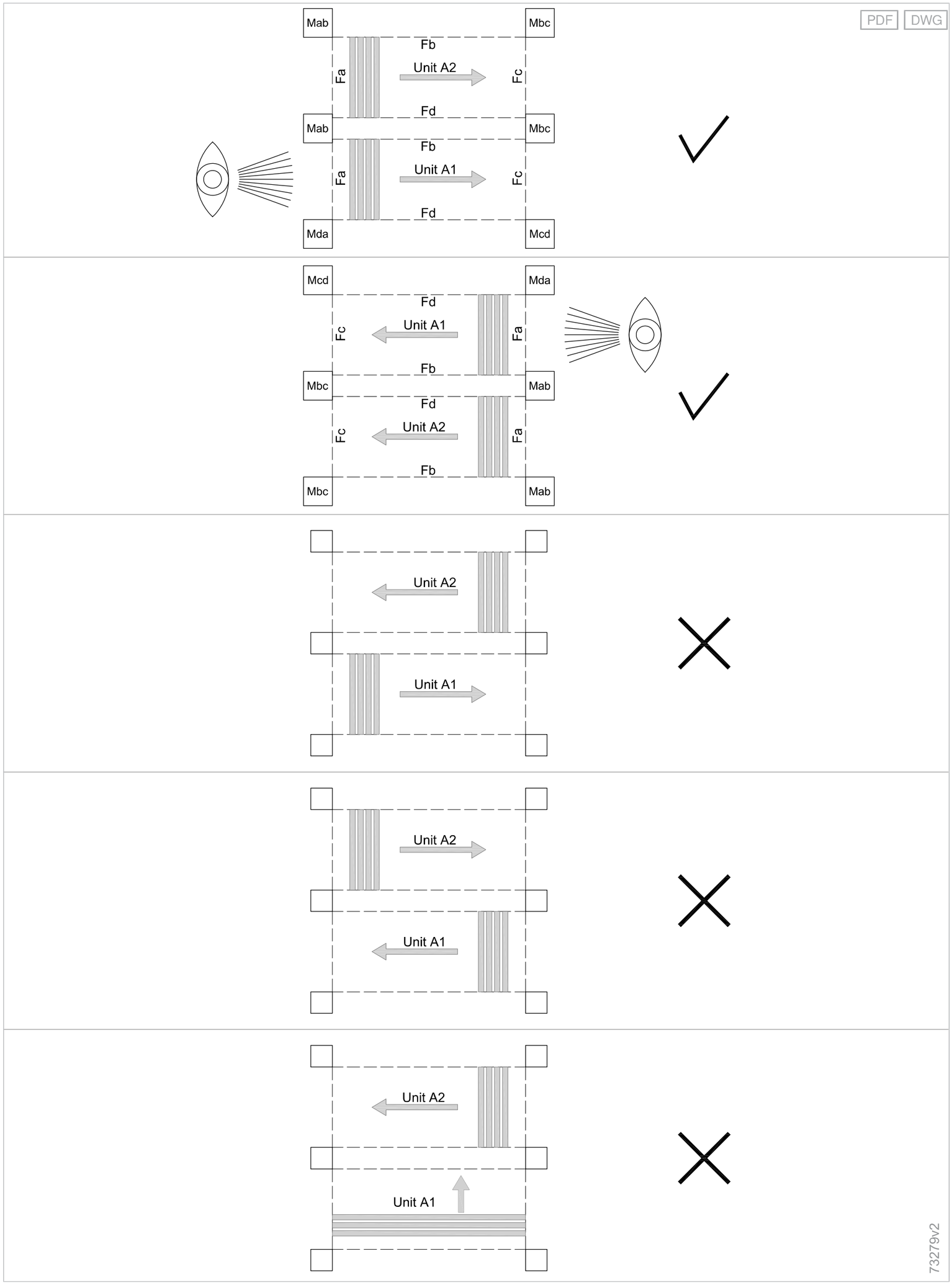
PDF DWG



P Position

Both units of a Lamaxa Line always have the same closing or extension direction. With joint order width, the unit A1 (Fc) is joined to unit B1 (Fa). With joint order length, the unit A1 (Fb) is joined to unit A2 (Fd). Counter-rotation is therefore not possible. The slats extend in the direction of Fc on an L70. On an L60 and L70, the slats close in the direction of Fc (closing direction).

Joint order length - Lamaxa Line L70



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