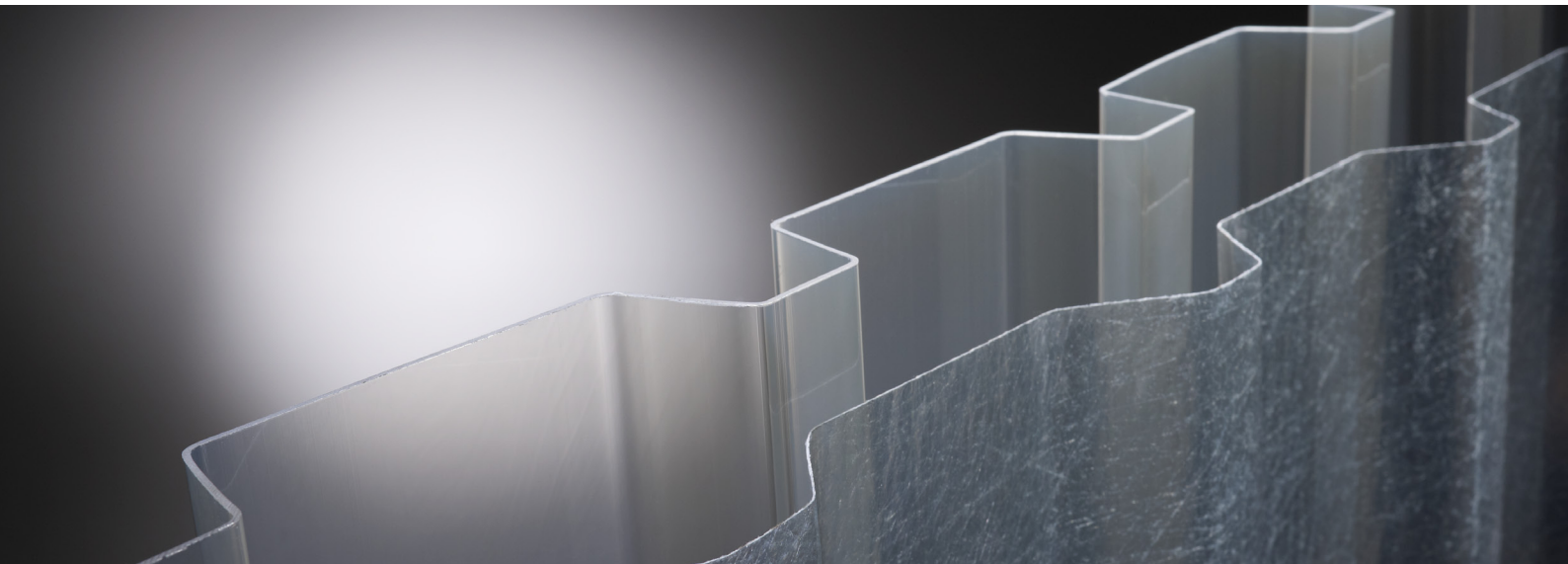


Münker

METALLPROFILE



Transparent panels



www.muenker.com

Polyester transparent panels

Description

Polyester trapezoidal transparent panels are moulded from fibreglass and polyester resin using a continuous lamination process. The special shaping process results in very narrow tolerances according to the given profile. As a thermoset material, polyester offers excellent temperature and deformation resistance.

Areas of application

Polyester trapezoidal transparent panels are predominantly used for exposing wall and roof surfaces to light in hall construction. The wide range of different profiles enables the panels to be used with panels made from different materials, such as steel and aluminium, which have the same shape.

In practice, this means the extremely cost-effective and problem-free provision of daylight.

Supply lengths

In general, trapezoidal transparent panels are produced in the length that the customer requires. A max. supply length of 6000mm should not be exceeded for transportation and processing reasons.

Thicknesses and colours

Polyester trapezoidal transparent panels are supplied in the standard version with a material thickness of approx. 0.7mm to approx. 1.00mm (nominal thickness). The manufacturing process requires high tolerances. The trapezoidal transparent panels are supplied as "transparent natural" versions as standard.

Transportation and storage

Polyester trapezoidal transparent panels must be stored dry and be completely protected against solar and heat radiation. Storage outdoors is therefore only possible in a very limited way. If storage outdoors is unavoidable, it is essential that the panels or packages are covered with white light- and moisture-repellent sheets. This covering should be sealed again during assembly and immediately after removing individual panels.

Drilling

Drill holes are made without high pressure using a sharpened drill bit. Due to the higher thermal expansion of profile panels compared to other materials, drill holes must be made sufficiently large. The expansion coefficient is approx. 3-4 mm/m.

Mounting

The mounting of trapezoidal transparent panels can take place using standard hexagonal screws with sealing washers. However, the diameter of the sealing washer must be at least 25mm. Calottes and/or spacers should be used for mounting onto the raised rib. You can find the maximum mounting distances in the appendix for the table on page 4.

Bearing surfaces

All bearing surfaces must be white, otherwise a build-up of heat can be created by solar radiation under the panel. If not observed, this can result in deformations and, over the long term, discolouration with simultaneous material damage.

Accessibility

Trapezoidal transparent panels cannot be walked on!

The trapezoidal transparent panels may only be walked on using running boards which extend over at least two purlins. In doing so, the relevant accident prevention regulations must be observed.

The panels themselves may not under any circumstances be walked on! There is a severe risk of falling!

Cleaning

Dirt can only be removed using a mild detergent solution. Under no circumstances may abrasive or corrosive additives be used. Rinse with clear water after cleaning.

Surface finishing

All trapezoidal transparent panels can generally be equipped with a high-quality surface finish ex works which prevents premature leakage of the fibreglass and more severe soiling of the outside associated with this.

Technical data

Transmission factor visible light: approx. 80%

Infrared: approx. 80%

Ultraviolet: almost 0 %

Density: approx. 1.2 g/cm²

Temperature resistance up to 100°C (short-term, with no stress)

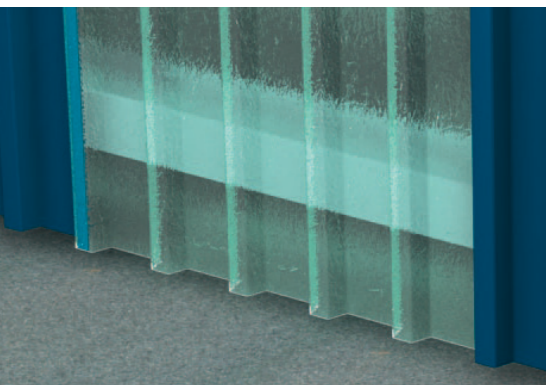
Fire behaviour: normally inflammable, B2, according to DIN 4102, Part 1, without burning droplets.

Length tolerances

The following tolerances are possible for the order lengths due to temperature differences and machine-based cutting procedures:

Lengths up to: 2 / 4 / 6 / 8 m

Tolerance: +/- 4 / 6 / 10 / 14 mm



Münker polyester trapezoidal transparent panel tables

Strength approx. 1.00 mm, matching the trapezoidal steel profiles		Load values Roof purlin spacing in mm with a snow load of				max. recommended distance between supports Bar spacings wall in mm for building height			
Profile	Panel width mm	S 0,75 KN/m ²		S 1,00 KN/m ²		up to 8 m		8 to 20 m	
		Inner span	End span	Inner span	End span	Inner span	End span	Inner span	End span
M20/220	1170	900	700	800	600	1050	800	900	700
M35/207	1075	1100	850	1000	750	1350	1050	1150	900
M40/183	960	1300	1000	1150	900	1550	1200	1300	1000
M40/333	1045	1000	750	900	700	1200	950	1050	800
M50/250	1060	1500	1150	1350	1050	1800	1400	1500	1200

Please find the bearing widths in the load table for trapezoidal profiles at www.muenker.com.

The values listed in the tables apply to multi-span girders for closed buildings in accordance with DIN 1055, B14, para. 4.

The values must be determined for higher loads, e.g. in areas at risk of storms or with high levels of snow, as well as in the areas on the outside of the building, in structures that are not closed or when used as single-span girders. The max. usage temperatures must also be observed. Mounting distances are based on the rib division.

Rib division up to 99mm fitting to every third rib

Rib division 100 to 185mm fitting to every second rib

Rib division 186 to 250mm fitting to every

Mounting takes place on every bar and every purlin. The low rib is mounted in the wall area, the high rib in the roof area. It is essential that the area between the supports is also fixed in place where there is side covering of two profile panels. Where there are high suction loads, e.g. on the outsides of buildings, for buildings in areas that promote torsion, for open buildings etc., additional fixation points may be required.

Please contact our Technical department about this.

PVC transparent panels

Description

PVC trapezoidal transparent panels are moulded continuously out of a PVC moulding mixture. The special shaping process results in very narrow tolerances according to the given profile for a thermoplast.

Areas of application

PVC trapezoidal transparent panels are predominantly used to expose wall surfaces to light. They are only of limited use for roof surfaces. The wide range of different profiles enables the panels to be used with panels made from different materials, such as steel and aluminium, which have the same shape.

In practice, this means the extremely cost-effective and problem-free provision of daylight.

Supply lengths

Various profiles are in stock and available at short notice in pre-determined lengths. All other lengths can be provided at short notice in pre-determined lengths up to max. 6000mm on request. A max. supply length of 6000mm should not be exceeded for transportation and processing reasons.

Thicknesses and colours

PVC trapezoidal transparent panels are supplied with a material thickness of approx. 1.2mm to approx. 1.5mm (nominal thickness), depending on the profile. The trapezoidal transparent panels are supplied as clear versions as standard.

Transportation and storage

PVC trapezoidal transparent panels must be stored dry and be completely protected against solar and heat radiation. Storage outdoors is therefore only possible in a very limited way. If storage outdoors is unavoidable, it is essential that the panels or packages are covered with white light- and moisture-repellent sheets. This covering should be sealed again during assembly and immediately after removing individual panels.

Temperature resistance

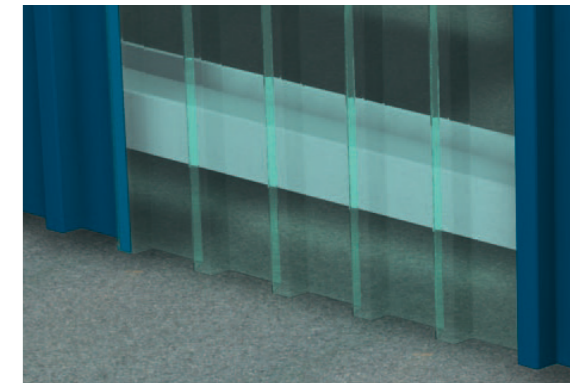
Attention! PVC transparent panels are only temperature resistant up to 65°C (short-term, with no stress).

Drilling

Drill holes are made without high pressure using a sharpened drill bit. Due to the higher thermal expansion of profile panels compared to other materials, drill holes must be made sufficiently large. The expansion coefficient is approx. 3-4 mm/m.

Mounting

The mounting of trapezoidal transparent panels can take place using standard hexagonal screws with sealing washers. However, the diameter of the sealing washer must be at least 25mm. Calottes and/or spacers should be used for mounting onto the raised rib. You can find the maximum mounting distances in the appendix for the table on page 7.





Bearing surface

All bearing surfaces and transverse seams must be white, otherwise a build-up of heat can be created by solar radiation under the panel. If not observed, this can result in deformations and, over the long term, discolouration with simultaneous material damage.

Accessibility

Trapezoidal transparent panels cannot be walked on!

The trapezoidal transparent panels may only be walked on using running boards which extend over at least two purlins. In doing so, the relevant accident prevention regulations must be observed.

The panels themselves may not under any circumstances be walked on! There is a severe risk of falling!

Cleaning

Dirt can only be removed using a mild detergent solution. Under no circumstances may abrasive or corrosive additives be used. Rinse with clear water after cleaning.

Resistance against chemicals

PVC trapezoidal transparent panels are resistant to many chemicals used in buildings. A detailed resistance list is available on request.

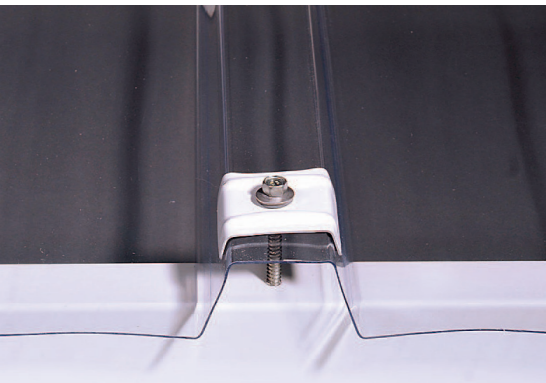
Technical data

- Transmission factor visible light: approx. 90%
- Infrared: approx. 90%
- Ultraviolet: almost 0 %
- Density: approx. 1.4 g/cm²
- Temperature resistance up to 65°C (short-term, with no stress)
- The panels offer enhanced impact resistance in accordance with DIN 53453.
- Fire behaviour: hardly inflammable, B1, according to DIN 4102, Part 1, without burning droplets.
- At temperatures above 200°C, closed openings are opened with the material to extract smoke and fumes.

Length tolerances

The following tolerances are possible for the order lengths due to temperature differences and machine-based cutting procedures:

- Lengths up to: 2 / 4 / 6 / 8 m
- Tolerance: +/- 4 / 6 / 10 / 14 mm



Münker PVC trapezoidal transparent panel tables

Strength approx. 1.20 mm to approx. 1.50mm, matching the trapezoidal steel profiles		Load values Roof purlin spacing in mm with a snow load of				max. recommended distance between supports Bar spacings wall in mm for building height			
Profile	Panel width mm	S 0,75 KN/m ²		S 1,00 KN/m ²		up to 8 m		8 to 20 m	
		Inner span	End span	Inner span	End span	Inner span	End span	Inner span	End span
M35/207	1075	1150	900	1050	800	1400	1100	1200	950
M40/183	960	1350	1050	1200	950	1600	1250	1350	1050
M40/333	1045	1050	800	950	750	1250	1000	1100	850
M50/250	1060	1550	1200	1400	1100	1850	1450	1550	1250

		Load values Roof purlin spacing in mm with a snow load of				max. recommended distance between supports Bar spacings wall in mm for building height			
Profil	Thickness mm	S 0,68 KN/m ²		S 0,88 KN/m ²		up to 8 m		8 to 20 m	
		Centre span	End span	Centre span	End span	Centre span	End span	Centre span	End span
M35.1/207	1500	1150	900	1060	830	1300	1050	1150	900
M40.1/183	1500	1560	1220	1430	1120	1700	1350	1500	1200

Please find the bearing widths in the load table for trapezoidal profiles at www.muenker.com.

The values listed in the tables apply to multi-span girders for closed buildings in accordance with DIN 1055, B14, para. 4.

The values must be determined for higher loads, e.g. in areas at risk of storms or with high levels of snow, as well as in the areas on the outside of the building, in structures that are not closed or when used as single-span girders. The max. usage temperatures must also be observed. Mounting distances are based on the rib division.

Rib division up to 99mm fitting to every third rib

Rib division 100 to 185mm fitting to every second rib

Rib division 186 to 250mm fitting to every

Mounting takes place on every bar and every purlin. The low rib is mounted in the wall area, the high rib in the roof area. It is essential

that the area between the supports is also fixed in place where there is side covering of two profile panels. Where there are high suction loads, e.g. on the outsides of buildings, for buildings in areas that promote torsion, for open buildings etc., additional fixation points may be required.

Please contact our Technical department about this.

Lichtplatten Polycarbonat

Description

Polycarbonate trapezoidal transparent panels are moulded continuously out of a polycarbonate moulding mixture. The special shaping process results in very narrow tolerances according to the given profile for a thermoplast.

Areas of application

Polycarbonate trapezoidal transparent panels are predominantly used for exposing wall and roof surfaces to light in hall construction. The wide range of different profiles enables the panels to be used with panels made from different materials, such as steel and aluminium, which have the same shape.

In practice, this means the extremely cost-effective and problem-free provision of daylight.

Supply lengths

Various profiles are in stock and available at short notice in pre-determined lengths. All other lengths can be provided at short notice in pre-determined lengths up to max. 6000mm on request. A max. supply length of 6000mm should not be exceeded for transportation and processing reasons.

Thicknesses and colours

Polycarbonate trapezoidal transparent panels are supplied with a material thickness of approx. 0.8mm to approx. 1.2mm (nominal thickness). The trapezoidal transparent panels are supplied as clear versions as standard.

Transportation and storage

Polycarbonate trapezoidal transparent panels must be stored dry and be completely protected against solar and heat radiation. Storage outdoors is therefore only possible in a very limited way. If storage outdoors is unavoidable, it is essential that the panels or packages are covered with white light- and moisture-repellent sheets. This covering should be sealed again during assembly and immediately after removing individual panels.

Drilling

Drill holes are made without high pressure using a sharpened drill bit. Due to the higher thermal expansion of profile panels compared to other materials, drill holes must be made sufficiently large. The expansion coefficient is approx. 3-4 mm/m.

Mounting

The mounting of trapezoidal transparent panels can take place using standard hexagonal screws with sealing washers. However, the diameter of the sealing washer must be at least 25mm. Calottes and/or spacers should be used for mounting onto the raised rib. You can find the maximum mounting distances in the appendix for the table on page 10.

Bearing surfaces

All bearing surfaces must be white, otherwise a build-up of heat can be created by solar radiation under the panel. If not observed, this can result in deformations and, over the long term, discolouration with simultaneous material damage.

Accessibility

Trapezoidal transparent panels cannot be walked on!

The trapezoidal transparent panels may only be walked on using running boards which extend over at least two purlins. In doing so, the relevant accident prevention regulations must be observed.

The panels themselves may not under any circumstances be walked on! There is a severe risk of falling!

Cleaning

Dirt can only be removed using a mild detergent solution. Under no circumstances may abrasive or corrosive additives be used. Rinse with clear water after cleaning.

Resistance against chemicals

PC trapezoidal transparent panels are resistant to many chemicals used in buildings. A detailed resistance list is available on request.

Technical data

Transmission factor visible light: approx. 90%

Infrared: approx. 90%

Ultraviolet: almost 0 %

Density: approx. 1.2 g/cm²

Temperature resistance up to 115°C (short-term, with no stress)

Fire behaviour: normally inflammable, B2, according to DIN 4102, Part 1.

At temperatures above 200°C, closed openings are opened with the material to extract smoke and fumes.

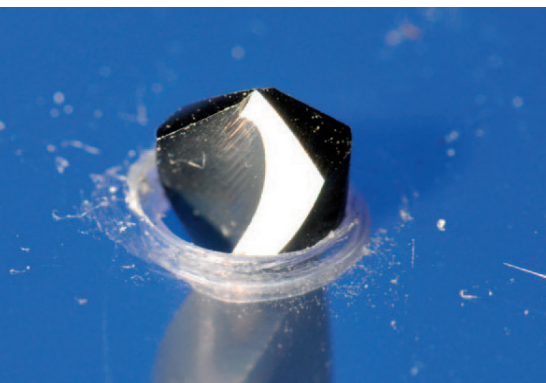
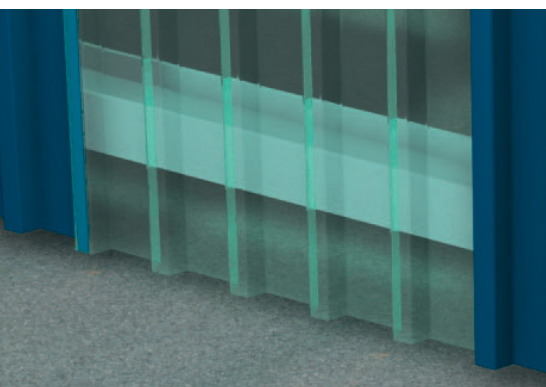
Length tolerances

The following tolerances are possible for the order lengths due to temperature differences and machine-based cutting procedures:

Lengths up to: 2 / 4 / 6 / 8 m

Tolerance: +/- 4 / 6 / 10 / 14 mm

An appropriate allowance may need to be taken into account when ordering.



Münker polycarbonate trapezoidal transparent panel tables

Strength approx. 1.00 mm, matching the trapezoidal steel profiles		Load values Roof purlin spacing in mm with a snow load of				max. recommended distance between supports Bar spacings wall in mm for building height			
Profile	Panel width mm	S 0,75 KN/m ²		S 1,00 KN/m ²		upt to 8 m		8 to 20 m	
		Inner span	End span	Inner span	End span	Inner span	End span	Inner span	End span
M35/207	1075	1100	850	1000	750	1350	1050	1150	900
M40/183	960	1300	1000	1150	900	1550	1200	1300	1000
M40/333	1045	1000	750	900	700	1200	950	1050	800
M50/250	1115	1450	1100	1300	1000	1750	1350	1450	1050

Please find the bearing widths in the load table for trapezoidal profiles at www.muenker.com.

The values listed in the tables apply to multi-span girders for closed buildings in accordance with DIN 1055, B14, para. 4. The values must be determined for higher loads, e.g. in areas at risk of storms or with high levels of snow, as well as in the areas on the outside of the building, in structures that are not closed or when used as single-span girders. The max. usage temperatures must also be observed.

Mounting distances are based on the rib division.

Rib division up to 99mm fitting to every third rib

Rib division 100 to 185mm fitting to every second rib


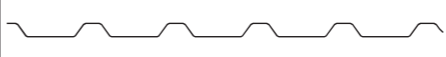

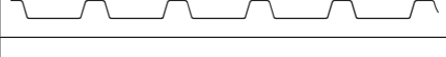
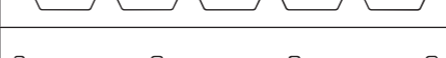


Rib division 186 to 250mm fitting to every

Mounting takes place on every bar and every purlin. The low rib is mounted in the wall area, the high rib in the roof area. It is essential that the area between the supports is also fixed in place where there is side covering of two profile panels. Where there are high suction loads, e.g. on the outsides of buildings, for buildings in areas that promote torsion, for open buildings etc., additional fixation points may be required.

Please contact our Technical department about this.

Münker transparent panels for roofs and walls

Product range

Profile	Profile diagramm	Material	Length (m)
M 20/220		Polyester	up to 6,00 m*
M 35/207		Polyester, PVC, Polycarbonate	up to 6,00 m*
M35.1/207		PVC	up to 6,00 m*
M 40/183		Polyester, PVC, Polycarbonate	up to 6,00 m*
M 40.1/183		PVC	up to 6,00 m*
M 40/333		Polyester, PVC, Polycarbonate	up to 6,00 m*
M 50/250		Polyester, PVC, Polycarbonate	up to 6,00 m*

Version	Polyester	PVC	Polycarbonate
Material	fibreglass and polyester resin	Polyvinyl chloride	Polycarbonate
Material strength** (nominal strength)	approx. 0,7 mm to 1,00 mm	approx. 1,2 to approx. 1,5 mm	approx. 0,80 to approx. 1,2 mm
Colours	transparent natural,	Clear	Clear
Temperature resistance	up to 100°C (short-term, with no stress)	Up to 65°C, (short-term, with no stress)	Up to 115°C, (short-term, with no stress)
Fire behaviour in accordance with DIN 4102 Part 1	B2 Normally inflammable, without burning droplets	B1 Hardly inflammable, without burning droplets	B2 Normally inflammable, without burning droplets

* Larger lengths available on request!

** Production-related tolerances in the material strengths do not represent a reason for complaint.

We also refer to the assembly guidelines issued by the IFBS, the Industrieverband für Baustysteme im Stahlleichtbau (industrial association for construction systems using lightweight steel construction methods).

Good reasons for choosing Münker transparent panels

- Transmission factor up to 90%
- UV protection up to 90%
- Can be used with panels made from different materials, such as steel and aluminium, which have the same shape
- Problem-free and cost-effective provision of daylight
- Light resistance and durability
- Security thanks to many years of experience
- Ready for assembly from the plant to the construction site

Münker

METALLPROFILE



Gewerbeparkstraße 19
51580 Reichshof-Wehnrath
Phone: +49 (0) 2265/9986-0
Telefax: w+49 (0) 2265/9986-800
info@muenker.com
www.muenker.com