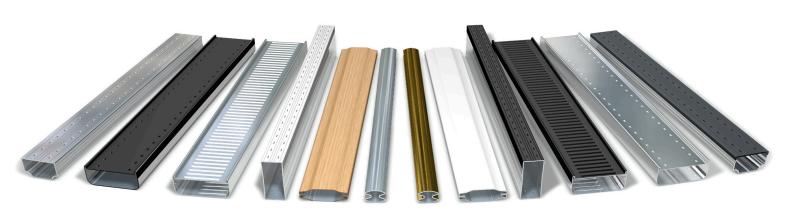


SPACERS - MUNTIN BARS - ACCESSORIES

At our factory in Wuppertal, we have been producing high quality spacer and muntin bars for the glass and window industry since 1949.





Unique: Coil-coating in our coating line

In our factory in Wuppertal, we have been producing high quality spacer and muntin bars for the glass and window industry since 1949: Quality made in Germany.

In the early 90's, we recognized, as pioneers in the production of aluminum spacers, the demand for action to reduce thermal conductivity using spacers with a glass edge seal. This resulted in the first warm-edge spacer in stainless steel in 1995.

Through the continuous development of stainless steel processing, we are the technological leader in producing stainless steel spacers today. In our opinion, this is the best warm-edge product on the market: Eco-friendly, dimension and UV stable, even in the most difficult conditions, visually attractive, and perfect to work with!

The experience we have gathered over decades and the long-term "know how" of our highly qualified employees ensures the best quality and satisfaction for our customers. Due to the demanding specifications and resulting processing characteristics on the roll forming machines of the raw material coil of the aluminum and stainless steel materials, our bars are a long-term guarantee for success and to reduce your warranty risks.

Using our unique coil-coating process on our especially developed strip coating line, we have provided over the

years, an outstanding quality in the field of colored spacer and muntin bars.

We split the coils to exactly the needed widths on our own splitting line, in order to manufacture our products on our 9 roll forming lines with the lowest tolerance values in the market.

Being able to make our own tools allows us to react quickly to your individual requirements and to find the perfect solution for you.

Naturally, you can order the various necessary accessory parts quickly and easily, whether they are connectors and corner angles for spacer or the range of connecting elements for our exclusive muntin bars.

In this brochure, you will find an overview of our wideranging products. In case you are unable to find the right product for your requirements, please get in touch with us. We make your wishes our challenge and will be happy to find a satisfactory solution together with you. Our EDP-aided warehouse system enables quick delivery and custom making of various products for you.

We are looking forward to becoming your partner!

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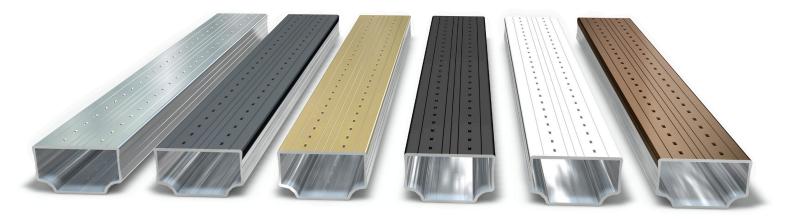
Our promise of quality.



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Aluminum spacer bars: standard or custom made: a wide range of products and with all our experience.

There are years of HELIMA experience behind the development of aluminum spacers.

Whether as the bendable standard-profile or custom made for special requirements, we offer our customers a high quality modular design for all individual applications.

The following products are available for the ALUTEC range:

SERIE S	SERIE F	SERIE W
Aluminum spacers for modern industrial glass manufacture	Colored spacer bars, painted using our unique coil- coating process	Specially pre-treated, super soft spa- cer bars for use in the model sector



In the range of colored spacer and muntin bars, through our unique coil-coating process in our own strip coating line which was developed exclusively for this purpose, we offer a high quality product for which we have been known worldwide for decades.



OUR PRODUCT

Tightest manufacturing tolerances in measuring profiles	Security through digital measuring devices when using statistical process control
Surface condition	Suitable for use with all customary sealants
Processability	Bendability through selective use of raw materials, as well as continual steering and control of the manufacturing parameters
Perforation openings (diffusion openings)	The profiles are suitable for downstream/upstream filling with desiccate
No worry of Fogging with our colored products	All volatiles baked off at temperatures of over 230 degrees C
Shoulders are clean and free of coloring	Secure sealing of the butyl flanks
Custom made products	Individual color and surface coating using our own coil-coating process
Certification	Meeting all relevant quality specifications, safety standards, as well as customer demands is ensured by comprehensive tests and QC certification

YOUR ADVANTAGES

HELIMA products save you time and money!

Rigidity of large spacer frames	Our high frequency weld adds to the rigidity of this product. This should help you in both handling on a butyl extruder and frame placement to maintain your siteli- ne specifications – no more pulling the frame of the glass and cleaning up the butyl due to sagging spacer.
Straight steel connector fit to the spacer	All HELIMA sizes are in millimeters closest to the fraction requested. Straight steel connectors are all made to fit millimeter sizes. This means a very tight fit with no pull apart while butyling or handling. Fraction spacers can be too tight or too loose.
Straightness and no twist	HELIMA spacers are made on our own rollformers built in-house. These are very expensive rollformers compared to competitive machines. We form with many stations. This means we control tolerances and eliminate any bow or twist in the spacer length. This helps everywhere from the automated desiccant filler eyes to trailing edge errors on the bender
Virgin alloy aluminum	Competitive products are recycled aluminum. Virgin alloy means we can specify elongation and tensile strength properties that are not possible with recycled metal. This means we bend much better with true 90-degree bends for true rectangular shapes. The most bendable spacer on the market!
High frequency weld	We melt the aluminum and fuse the metal back together. The weld on the back side is stronger than the aluminum itself. No more seam splitting on top of the spacer when bending, drilling or punching for muntins.

OUR PRODUCT RANGE

	Dimensions in mn	ı		Thickness o	f Wall in mm	
Size	Width	Height	0,30	0,35	0,37	0,40
4	3,8	6,6		•		
5	4,5	6,6		•	٠	٠
6	5,5	6,6		•	•	٠
7	6,5	6,6		•		
8	7,5	6,6		٠	٠	٠
9	8,5	6,6		•	٠	٠
10	9,5	6,6		•	•	٠
11	10,5	6,6		•	•	٠
12	11,5	6,6	٠	•	•	٠
13	12,5	6,6	٠	•	٠	٠
14	13,5	6,6	٠	•	٠	٠
15	14,5	6,6	٠	•	•	٠
16	15,5	6,6	٠	•	٠	٠
18	17,5	6,6		•	٠	٠
19	18,5	6,6			•	
20	19,5	6,6		•	٠	٠
22	21,5	6,6			٠	٠
24	23,5	6,6			٠	٠



Stainless steel spacers: Our reliable and eco-friendly warm-edge solution

In the early 90's, we recognized, as pioneers in the production of aluminum spacers, the demand for action to reduce thermal conductivity using spacer bars with a glass edge seal. This resulted in the first warm-edge spacer in stainless steel in 1995.

By further developing stainless steel processing, we are the technology leader in the production of stainless steel spacers today.

In our opinion, this is the best warm-edge product on the market: Eco-friendly, dimension and UV stable even under difficult conditions, visually attractive, and perfect to work with!

Stainless steel has a significantly lower thermal expansion than, for example, plastic. Thus, our stainless steel spacers are particularly suitable for large insulation glazing panes in regions where the levels of heat stress and UV exposure are particularly high. Due to the stability of the edge sealant, the warranty risks are noticeably minimized.

OUR PRODUCT

Reduced loss of energy	Increase in temperature up to about 8° C on the glass-frame-edge seal, thereby noticeably reducing condensation resistance in the edge region
Processability	Bendability through selective use of raw materials, as well as continual steering and control of the manufacturing parameters
Custom made product	Individual color and surface coating using our own coil-coating process
Tightest manufacturing tolerances in measuring profiles	security through digital measuring devices when using statistical pro- cess control (SPC)
Perforation openings (diffusion openings)	The profiles are suitable for downstream/upstream filling with desiccate
Weld seam method	Completely closed solid weld down entire length of bar, gas imper- vious due to high frequency welding technique. Any weld errors are avoided by means of integrated eddy-current test technologies
Surface condition	suitable for use with all customary sealants
No worry of Fogging with our colored products	All volatiles baked off at temperatures of over 230 degrees C
Shoulders are clean and free of coloring	secure sealing of the butyl flanks

YOUR ADVANTAGES

Available in all colors with our patented pre-painted coil system. Standard colors: Black, White	The .008" wall thickness product is extremely rigid which makes for easy frame sightline placement
Shoulder height is large enough to desiccant fill on an automated system instead of creating a hole on the sealant side of the spacer	Solid Laser Weld. Most laser weld products have a stitch or spot type weld. HELIMA's laser weld is solid line on the shoulder of the spacer. Very rigid and no weld splitting when bending



OUR PRODUCT RANGE

C	Dimensions in mr	n	Thicknes	s of Wall
Size	Width	Height	0,17	0,20
6	5,5	7		٠
8	7,5	7	٠	٠
10	9,5	7	٠	٠
12	11,5	7	٠	٠
14	13,5	7	٠	٠
15	14,5	7	٠	٠
16	15,5	7	٠	٠
18	17,5	7	٠	٠
20	19,5	7	٠	٠







Our wide-ranging choice of muntin bars are in many sizes and colors. Let your creativity go wild!

We enable you to access unique design solutions with the range DESIGNTEC for windows with muntin bars – which today are in demand more than ever:

Traditional or modern – endless individuality which will satisfy all wishes; style and grace without compromising quality and functionality.

Because DESIGNTEC are quality products that ensure a long lasting value: excellent manufacture, high stability, and visual consistency over many years. With this product you will have an attractive product range which will also offer new opportunities in interesting new markets.

DESIGNTEC covers three product families:

Sprosse 2000, unique muntin bars for decorative glazing with our patented connectors and also our Duplex Series. They are matched in a way that will fulfill all requirements for both glazing bar windows and decorative glazing.

The product families and elements available to order for the connectors as well as for the edge seal, are the result of excellent material properties.

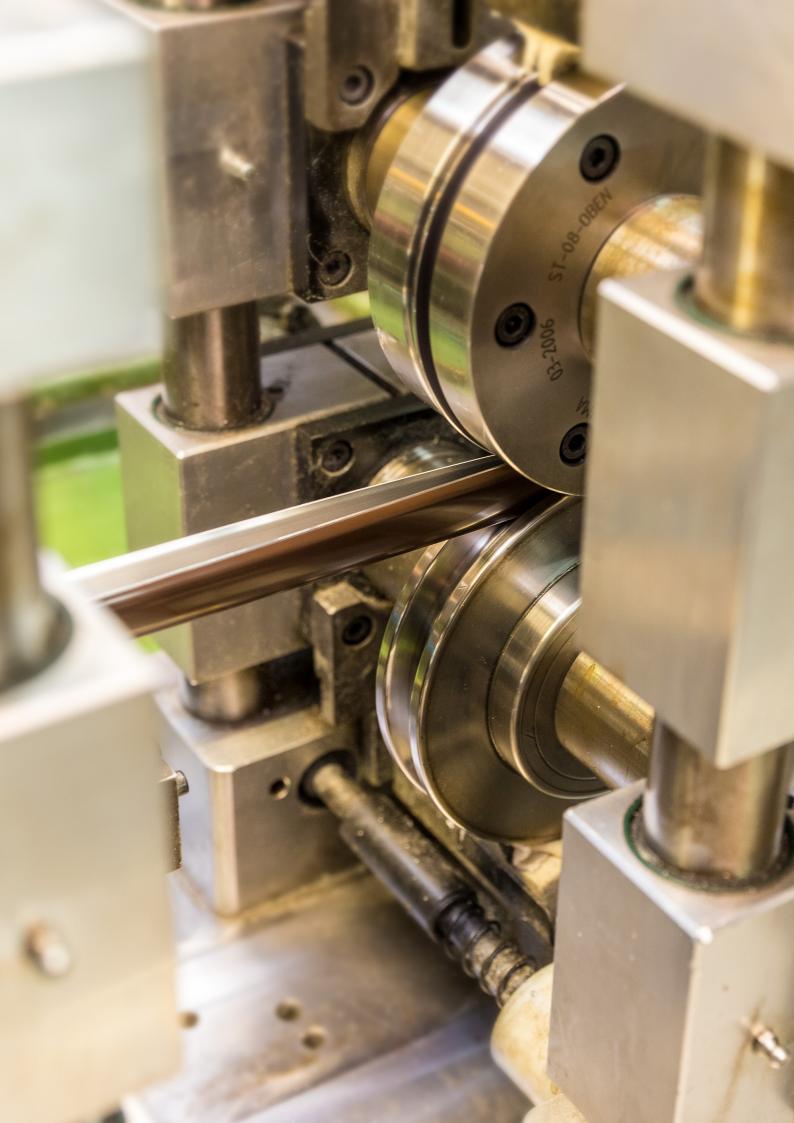
OUR PRODUCT

Excellent production based on material selection, molding, processing	Completely closed, stable weld seam guaranteed by high frequen- cy welding technique and electronic welding technique	High vibrational stability while also reducing weight
Grid connections	Tightest production tolerances for high quality workmanship	Perfect to use with all known gla- zing bar milling machines
No fogging in the coating area due to volatiles baked off at tem- peratures of 230° C	Special colors available to on request (the whole RAL and eloxal color range deliverable)	Two-color muntin bars can be delivered

YOUR ADVANTAGES

A comprehensive program of practice-oriented, dimensioned muntin bars	Special sizes are available upon request
Individual bar frame production with precisely fitted connecting elements	HELIMA long-term delivery and system guarantee
Best UV resistance	Best quality to minimize customer complaints
Individual color design	No fogging, no volatile component



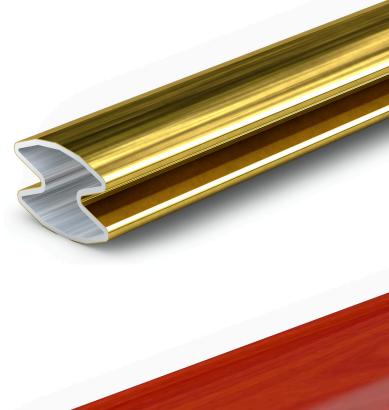


OUR PRODUCT RANGE

KPG/ Decorative muntin bars			
Design	Length in mm		
8 x 1,5	4		

Sprosse 2000				
Design	Length in mm			
18 x 8	5			
26 x 8	5			
45 x 8	5			

Duplex/Profile/Viennese Bar				
Dimension in mm	Length mm			
9,5 x 15	5			
9,5 x 18	5			
9,5 x 20	5			
9,5 x 24	5			
9,5 x 30	5			
11,5 x 18	5			
11,5 x 20	5			
11,5 x 24	5			
11,5 x 30	5			









Connectors, corner angles, bar intersections and more – always perfectly connected

We have what you need to produce the best possible solutions and have developed a comprehensive modular system of optimally suitable accessories.

A matter of course for us:

First class adaptability, value retaining, long lasting, highly flexible application. That way you can access an all-around system solution, which has an excellent manufacturing service and can be safely relied upon.

YOUR ADVANTAGES

Machine or manual processing	Usable in all production facilities	Guaranteed for unproblematic adaptability to your system
Easy handling	High dimensional tolerances	High retaining forces
100% avoidance of granule loss with straight connectors and cor- ner connectors	Straight connectors with granule outlet or stop	Adaptability for every application because of the large variety of products
Individual packaging units	Spacers are pre-assembled on request	For every use, a perfect solution

The very best consultation through years of experience:

Particularly when choosing connection elements, it is not always easy to find the perfect solution from among the variety on offer. Many years of experience have enabled our employees to offer individual and professional advice on the choice of your accessories.



CONNECTORS

Design	Straight Connectors	Corner Angles
3,8		٠
4,5	٠	٠
5,5	٠	٠
6,5	٠	٠
7,5	٠	٠
8,5	٠	٠
9,5	٠	٠
10,5	•	٠
11,5	٠	٠
12,5	•	٠
13,5	۰	٠
14,5	٠	۰
15,5	۰	۰
17,5	٠	۰
18,5	۰	۰
19,5	٠	٠
21,5	٠	۰
23,5	٠	•



CONNECTORS

Design	Straight Connectors			
	0,17	0,20		
5,5		٠		
7,5	٠	٠		
9,5	٠	٠		
11,5	٠	٠		
13,5	٠	٠		
14,5	٠	٠		
15,5	٠	٠		
17,5	٠	٠		
19,5	٠	٠		



KPG – 8 X 1.5 CONNECTORS



Dimension in mm	ion in mm S		on	Co	olor
Patent Connector Anodized	Loose	Slit	Clip	Gold	Silver
PV 810	٠	٠	٠	٠	٠
PV 811	٠			٠	٠
PV 818		٠		٠	٠
PV 890		•	٠	٠	٠
Patent Connector Coated	Loose	Slit	Clip	Lead	White
PV 810		٠	٠	۰	۰
PV 811		٠		٠	٠
PV 818				٠	٠
PV 890		٠	٠	٠	٠
Poly-connector	Cross	Y-90°	Connection		
8 x 1,5mm	٠	•	٠		



PV 810



PV 811



PV 818



PV 890



Cross POLY



Y-90° POLY



End Piece POLY

SPROSSE 2000 CONNECTORS

2		/
	//	

Dimension in mm	Cross	т	Y 90°	End Piece	End Plug	Cutter	Steel Pins	Disc
1808 A	٠			٠	٠			
1808		٠	٠	٠	٠	٠	٠	٠
2608	٠	٠	٠	٠	٠	•	٠	٠
4508		٠		٠	٠	٠	٠	٠



Cross POLY



T-Connector



Y 90° POLY



End Piece POLY



End Plug POLY



Cutter-Connector



Steel Pins



Disc POLY

DUPLEX CONNECTORS



Measurements	Cross	Cross with Reduction Pad	End Piece	Disc	Reduction Pad
9,5 x 15		٠	٠		٠
9,5 x 18	٠	٠	٠	٠	
9,5 x 20	٠	٠	٠	٠	٠
9,5 x 24	٠	٠	٠	٠	٠
9,5 x 30	٠	٠	٠	٠	
11,5 x 18	٠	۰	٠	٠	
11,5 x 20	٠	٠	٠	٠	٠
11,5 x 24	٠	۰	٠	٠	٠
11,5 x 30	٠	٠	٠	٠	٠

Custom dimensions available on request



Cross Duplex



End Piece Duplex





Disc Duplex

Reduction Pad



Since our founding in 1949, our greatest asset has been HELIMA quality. A self-developed and certified quality of management provides the basis for the success of our company, and for our customers.

Every employee is dedicated to this common goal. From a comprehensive quality control of the raw material reception to the continuously monitored production process, to quality assurance of the finished product in our plant and with our customers.

Every process is fully monitored, evaluated, and documented. Our quality management system is in accordance with the requirements of DIN EN ISO 9001, and since December 2004, is certified through the TÜV NORD CERT Ltd. Furthermore, our products from the group ALUTEC and NIROTEC are certified with the RAL Mark of Quality.

Our products are subject to regular control through the IFT Rosenheim and naturally, we are CEKAL certified.

Our quality is never compromised and can be counted on by you and by your customers.

You may find the certificates on our website under www.helima.de. We would be happy to send you copies at your request.





nirotec





OUR SERVICE FOR YOU!

Optimal packaging is far more than protecting goods on their way to you. The profile lengths you have ordered fit in perfectly, the infrastructure of your warehouse has been taken into account, and the requirements of your production are coordinated. In order to consider all factors sufficiently, we will gladly advise you on your dispatch decisions.

Naturally, we will organize deliveries wherever they must go. Whether free of charge for minimum quantities or costeffective standard transport, or – in urgent cases – by air freight: We undertake the required transport documentation and necessary INCOTERMS delivery conditions.

OUR SERVICE FEATURES

Flexible order processing accor- ding to the client's wishes	Various profile lengths on request	Stackable packaging in container, cardboard box, or crate
Individual dispatch for customers from the cost-effective standard transport, to transport by air freight	Transport documentation and the necessary INCOTERMS delivery conditions	Short and flexible delivery times
Free of charge delivery with mini- mum quantities	Packed in banded form or loose	Assistance and advice by telepho- ne at your location

It is very important for us to maintain personal contact. Only together with you can we find the perfect solution for your assignments. Best Quality, decades long experience and first class service – this is what HELIMA and all our committed employees represent!



OUR SERVICE FOR YOU!

Coil-coating



Splitting



Rollform welding



Quality control



Logistics / Dispatch





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