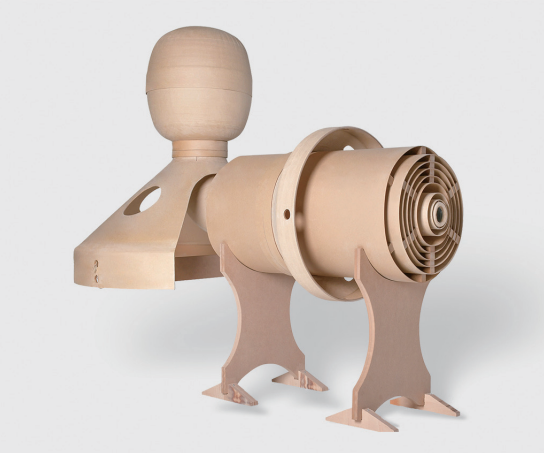
HV Moulded Components

HV Moulded Components are manufactured in a variety of processes from dry to wet sheet material and they can meet the highest requirements needed for use in electric apparatus.

Types		Characteristics	Applications
Assembly lead exits		Based on 100% imported electrical grade unbleached wood pulp, they have high purity, high tightness, high tensile strength, good electrical performance, uniform density, good absorption performance, relative dielectric constant and good compatibility with transformer oil.	HV moulded components can be widely used in large-scale power transmission and transformation equipment such as EHV/UHV power transformers, reactors. Oil-immersed power and distribution transformers.
L-shaped clamping insulatings			
No-glued screw rods/nuts			
Wet method angle rings	Split anhedral rings		
	Resolving anhedral rings		
Wet method special-shaped parts	Lead angle ring piece		
	Insulation barrel		
	Elbows and bins		
	Other wet-shaped parts		
Insulation structural parts	Strips and spacers		
	Corrugated cardboard		
	Electrostatic base rings		
	Iron yoke insulating end rings		
	Shield rings		
	Other structural parts		

Assembly Lead Exits



This product includes an equalizing tube that passes through the winding outlet, an equalizing ball set between the equalizing tube and the terminal of the wiring sleeve, and the equalizing tube and the terminal of the wiring sleeve are respectively placed inside the equalizing ball. By connecting the connector with the fastener set inside the equalizing ball, the equalizing tube and outer paper insulation tube outside the high-voltage lead makes the electric field around the lead more uniform, thereby improving the shape of the lead electrode, reducing electric field concentration, increasing the safety factor, and effectively solving the outlet structure problem of the high-voltage winding of the high-voltage high-capacity transformer.

Specifications

- AC: 400kV/500kV/750kV/1000kV/1100kV;
- DC: ± 220kV, ± 400kV, ± 500kV, ± 600kV;

No-Glued Screw Rods/Nuts

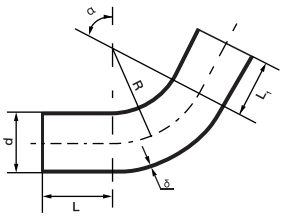
No-glued adhesive insulation paper screw rods are important components used for connecting and fixing key insulation structural components of ultra-high voltage transformers. This product is used in conjunction with no-glued adhesive insulation paper nuts to meet the requirements for fixing and insulation of connecting components of key parts of ultra-high voltage transformers under alternating electric fields.

Standard

- Nominal diameters: Φ12, Φ16, Φ20, Φ24, etc;
- The corresponding standard thread: M12, M16, M20, M24, etc;

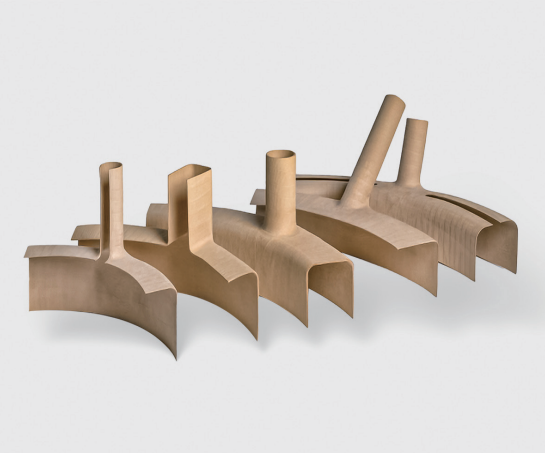
Elbows and Bins

Insulation for export systems, wet-laid by hand.

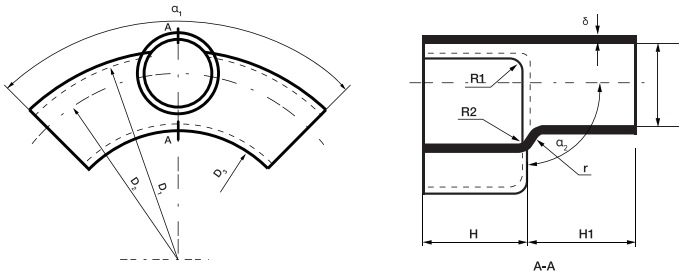


Dimension (mm)	Size	d	L	L1	R	δ	α
	Tolerance	+3	+5	+5	+4	+1.5	$\pm 3^0$
		0	-2	-2	0	0	0

Lead Angle Ring Piece



The lead angle rings are suitable for the upper and lower outlet parts of the coil, all of which are made by hand.



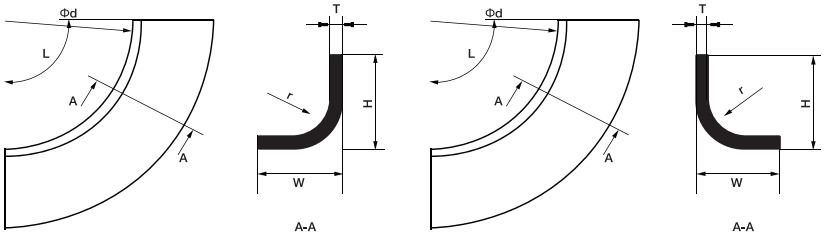
Dimensional Tolerance

Unit: mm

Size	H	H1	B	D1	D2	D3	d	K	R	r	5	a 1	a 2
Tolerance	0 -3	0 -3	0 -3	0 -5	±2 -	±5 -	+2 -1	±3	+4 0	+10 0	+1.5 0	±20 -	±20 -

Wet Method Angle Rings

Directly molded using high-quality wet paper blanks, the products have uniform density, flat surface, suitable for placing the insulation at the upper and lower edges of the coil parallel to the equipotential surface, which can shorten the insulation distance of the coil.



Resolving anhedral rings

Split anhedral rings

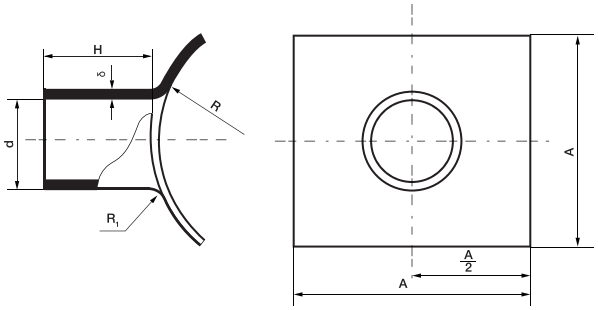
Dimensional Tolerance

Unit: mm

Size	W	H	r		T		
			<40	>40	1.0	1.5	2.0
Tolerance	+2	+2	+3	+5	+0.2	+0.3	+0.4
	-2	-2	-3	-5	0	0	0

Insulation Barrel

Insulation for export systems, wet-laid by hand.

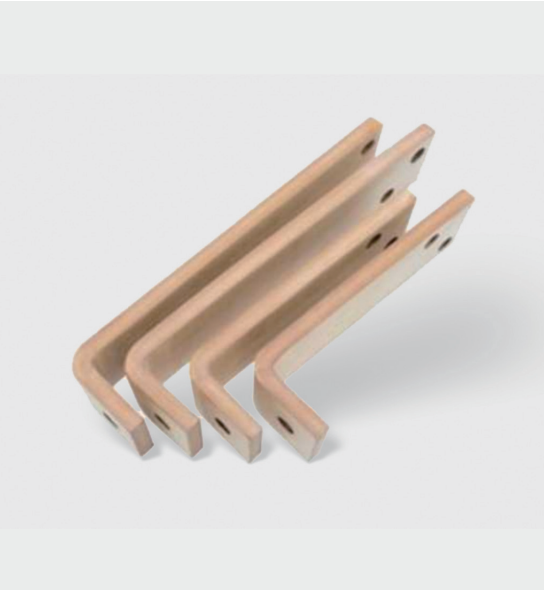


Dimensional Tolerance

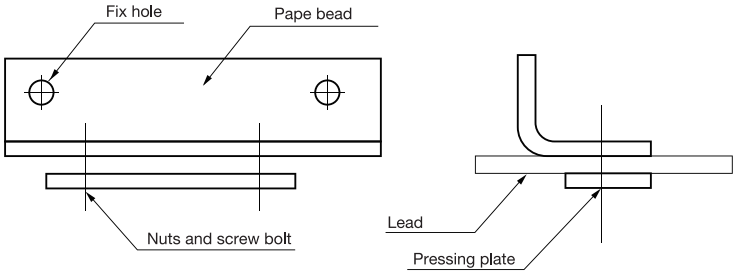
Unit：mm

Size	d	δ	H	R	R1	A
Tolerance	+3	+1.5	+10	±10	+10	±2
	0	0	0		0	

L-Shaped Clamping Insulatings

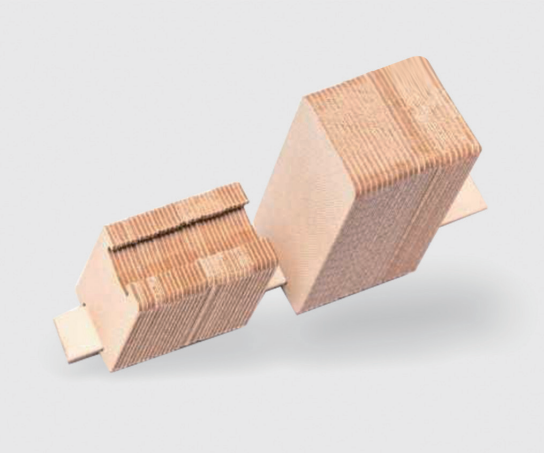


The "L" shaped clamping insulators, commonly known as paper corner plate are the ideal bracket and clamp insulation for oil immersed transformers. They have the characteristics of good insulation performance, high mechanical strength, and easy installation. In large transformers above 110kV, they exhibit advantages such as good straightness and less deformation, making them products that are difficult to be replaced by any other materials and also highly economical.



Note: Fixed holes and pressing plate parts can be punched or grooved, and users can customize according to their needs.

Strips and Spacers



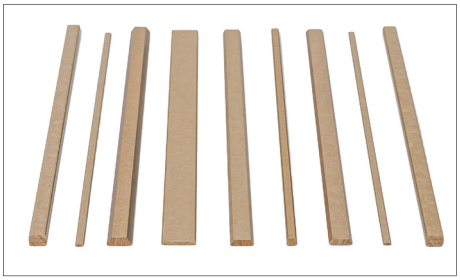
Strips and Spacers are used between the coils and between the winding layers to provide properly precise oil passages.

Technical Data Sheet

Item	Unit	Index
Moisture content	%	≤7.0
Density	g/cm^3	1. 15-1. 3
Shrinkage in thickness direction	%	≤6.0
Shrinkage in other directions	%	≤1.0
Compression ratio	%	≤4.0

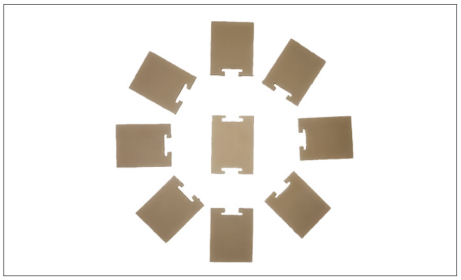
Strips

The strips mainly include: rectangular strips, T-shaped strips, dovetail strips, and special-shaped strips. The mechanical strength of dovetail strips is higher than that of type strips, and they are not easy to crack. There is a tendency to replace strips.

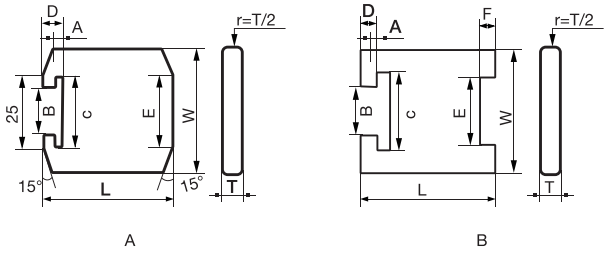


Spacers

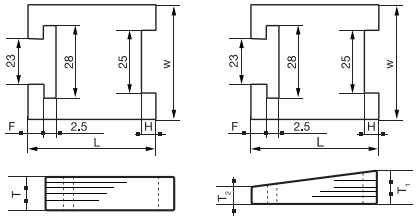
Spacers made of high density boards with high short- circuit strength are used in windings. They can be supplied in the final milled state. Milled spacers and strips with rounded edges prevent damages to the wire insulation.



Spacers



Spacers(Milling)



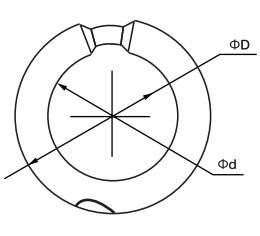
Dimensional Tolerance

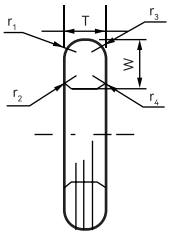
Unit: mm

Item	L	W	T	
			T1	T2
Size	≤220	≤80	≤30	≥2
Tolerance	±1	±1	±1.5	±1.5

Electrostatic Base Ring

It is used as core material for static wrapped metal strips, after high-precision shaped processing, and carefully chamfer corners.

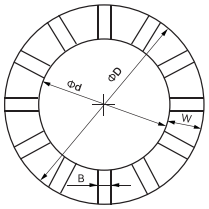


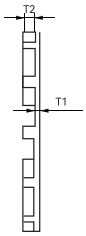


Dimension (mm)	Outer diameter (d)	Width (W)	Thickness (T)
	D ≤ 3150	W ≥ 15	T ≤ 120

Iron Yoke Insulating End Rings

They are used to support the end rings and they can also be made into a horseshoe shape.

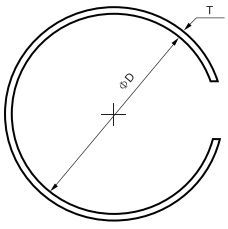


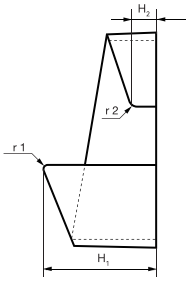


Dimension (mm)	Item	D	W	T1	T2
	Gaskets	≤ 3150	≥ 15	≤ 120	-
	Spacers	-	-	-	≤ 100

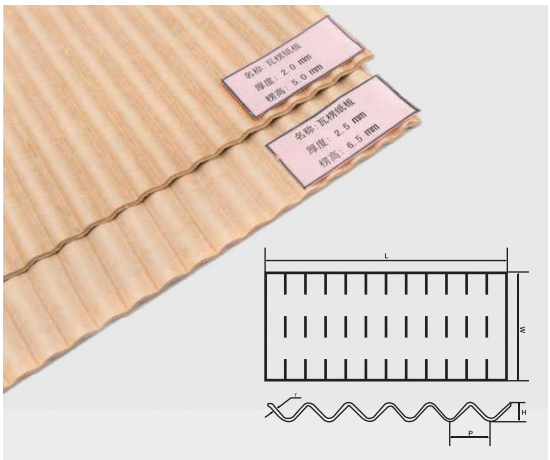
Shield Rings

Shield rings are mainly used as the casing of the end coil, and can be processed into trapezoidal and open styles.





Corrugated Cardboard



Corrugated cardboard is a commonly used oil gap insulation for small transformers.

Technical Data Sheet

Item	Unit	Standard Value	
		Average	Special
Moisture content	%	<7.0	/
Ash content	%	<0.8	/
Conductivity of aqueous extract	mS/m	<10.0	/
Yield strength	Kg/cm2	>11.0	>9.0

Important Notes

1. This product is a wood fiber product, which is hydrophilic and easy to absorb moisture. It should be kept from moisture during use and should pay attention to moisture, not be exposed to the air for a long time. If it is exposed to the air for a long time, it may cause:

1) Arching of the paper surface, which is due to the deformation of the paper surface after absorbing moisture, and can be eliminated in the process of distributing the paper. Products made of this product, such as electromagnetic wire, should also be protected from moisture;

2) After the paper surface absorbs moisture, the thickness of the paper may change, which may affect the appearance and size of the products made of this product.

2. When the paper is used to wind electromagnetic wire, there is a problem of winding due to frequent sharp turns, and the paper is easy to break. In the process of papermaking, the moisture content of the paper is appropriately increased, which will improve the toughness of the paper, but it may cause dark spots (commonly known as steam spots) on the paper surface, while the intrinsic quality of the paper such as insulation performance will not be affected.

3. This product should be properly stored to prevent the influence of rain, snow, ground moisture, acid, alkali and chemical gas, and the use environment should be kept clean and hygienic.