



KHEDDA
INSULATIONS

The quality of Insulation materials used and it's disposition in the manufacture of a transformer determines the life of the transformer. Electrical, mechanical and thermal conditions play a vital role in the design of the insulation system for transformers.

Thermal class of insulation is determined by the selection of operating levels of temperature while in service. In a good design, proper cooling arrangement of coils and windings and an effective heat transfer system ensure the adequacy of the insulation for the thermal class of application.

Electrical stresses of fluctuating magnitudes and durations occur during lightning over voltages, switching over voltages (transitional in nature) and during abnormal system conditions besides normal routine operations (at power-frequency). Effect of electro magnetic forces on the coils during the passage of fault currents is worse when coils are in asymmetric axis. With a view to impart the best features in insulation components for withstanding the above electrical and mechanical stresses, our components make use of the best raw materials, matching the international standards, manufactured by Senapathy Whiteley Ltd., rounding of the edges to avoid fluffy fibers and maintaining close dimensional tolerances in thickness to ensure axial symmetry during coil manufacture.

From the angle of thermal consideration, axial ducts are provided between windings and the effectiveness of cooling is dependent on the dimensional stability of the spacers.

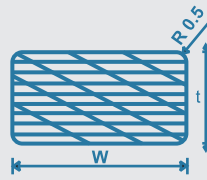


SIZED RECTANGULAR STRIPS

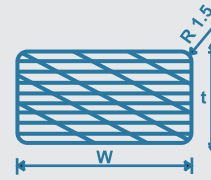


W = 5 to 100mm ± 0.5mm
 t = 1 to 4mm ± 0.1mm
 L = 1000mm to 3000mm ± 100mm

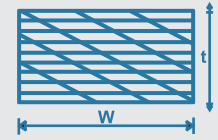
RECTANGULAR STRIPS



Min	Max
W = 10mm	95mm
t = 1.5mm	3mm
t ≤ 4mm	± 0.1mm
t 4 - 6mm	± 0.15mm
t > 6mm	± 0.2mm



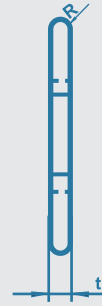
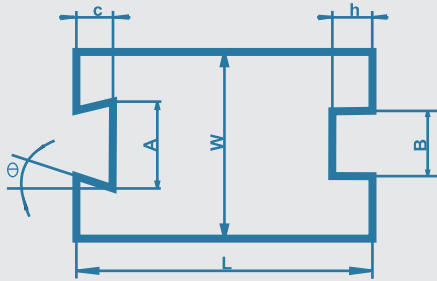
Min	Max
W = 6mm	95mm
t = 2mm	12mm



Min	Max
W = 8mm	150mm
t = 1mm	40mm
t	1-40mm ± 0.2mm

L = 1000mm - 3000mm ± 100mm

COIL SPACERS

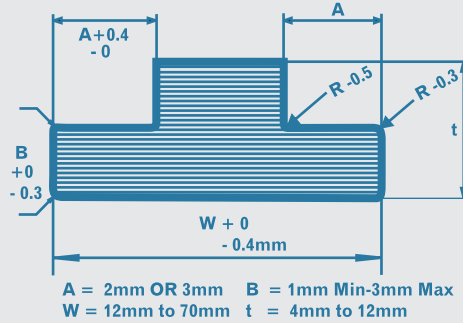
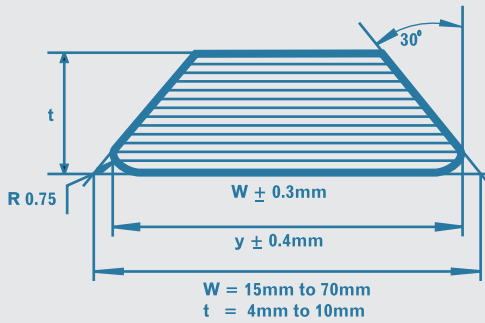


R 0.5 for t ≤ 2
 R 1.5 for s > 2

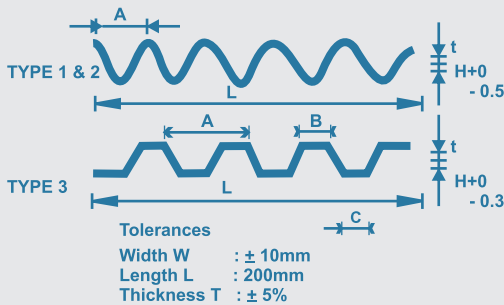
θ = 30° OR Suit Customer requirement

A = 18mm
 B = 20mm
 C = 4 - 8mm
 t = 1 - 4mm
 W = 30 - 50mm
 L = 25 - 150mm

TRAPEZOIDAL WEDGES & T-STRIPS FOR LOCKING COIL SPACERS

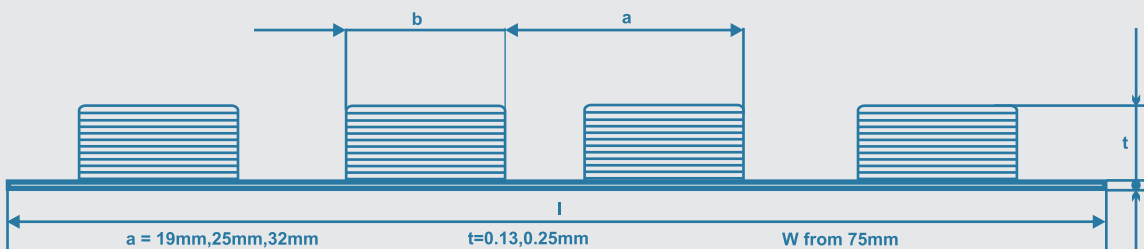


CORRUGATED BOARDS



TYPE	Width W mm	Length L mm	Thickness t mm	Height H mm	A	B	C
1	1500	2700	1.0	3.5	10	-	-
2	1500	2500	1.5	6.5	13	-	-
3	1500	2500	1.0	3.5	17	6	8

CLACK BAND



The manufacturing range includes trapezoidal or T-shaped locking strips to position and align the coil spacers during winding and to effectively support the coils during faults. Corrugated boards suitable for winding cylinders between coils inherently provide axial ducts for cooling. Where further strengthening is required during winding, strips can be used to bolster the corrugations, to contain the electro magnetic forces, if required.

Clamping rings possessing high compressive strength and components from densified wood are also manufactured to cater to customers specifications.

Continuous efforts are on to add to, and expand, our range of insulation components to cater to changing pattern of demand.



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