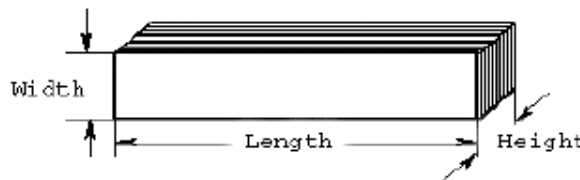


POWERLITE® forms are made by stacking iron-based Metglas® amorphous alloy 2605SA1 ribbons or laminations. The laminations are ld together by an adhesive rated for a continuous operating temperature of 155°C. The amorphous alloy itself has a higher continuous operating temperature. These forms offer a unique combination of high saturation induction (1.56 T), high permeability and low core loss.

POWERLITE® forms can be used in medium frequency (<20 kHz) and high power (300 to 500 kW) inverters. These have core losses lower than those of 3% or 6% Si steels.

Properties Metglas Alloy 2605SA1

Typical ribbon thickness (µm) 23	Saturation Induction (T) 1.56
Density (g/cm ³) 7.18	Electrical Resistivity (µΩ•cm) 1307
Thermal expansion Coef. (ppm/°C) 7.6	Curie Temperature (°C) 399
Crystallization Temperature (°C) 508	Continuous Operating Temperature (°C) 155



FORM Dimensions

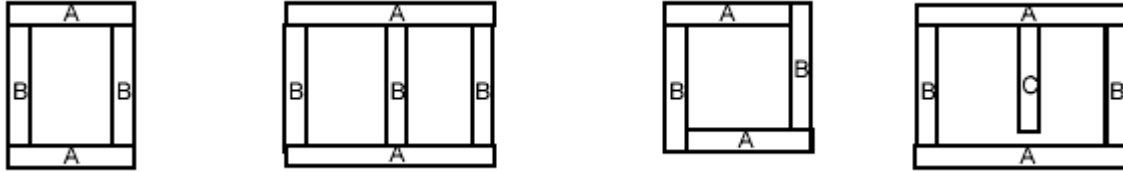
	Min, mm	Max, mm	Tolerance, mm
Length, L	50	300	± 0.5
Width, W	20	50	± 0.5
Height, H	10	100	± 0.2

Stacking factor = 89 ± 2%

Cross-sectional area of the form = W x H x 0.89/100 cm²

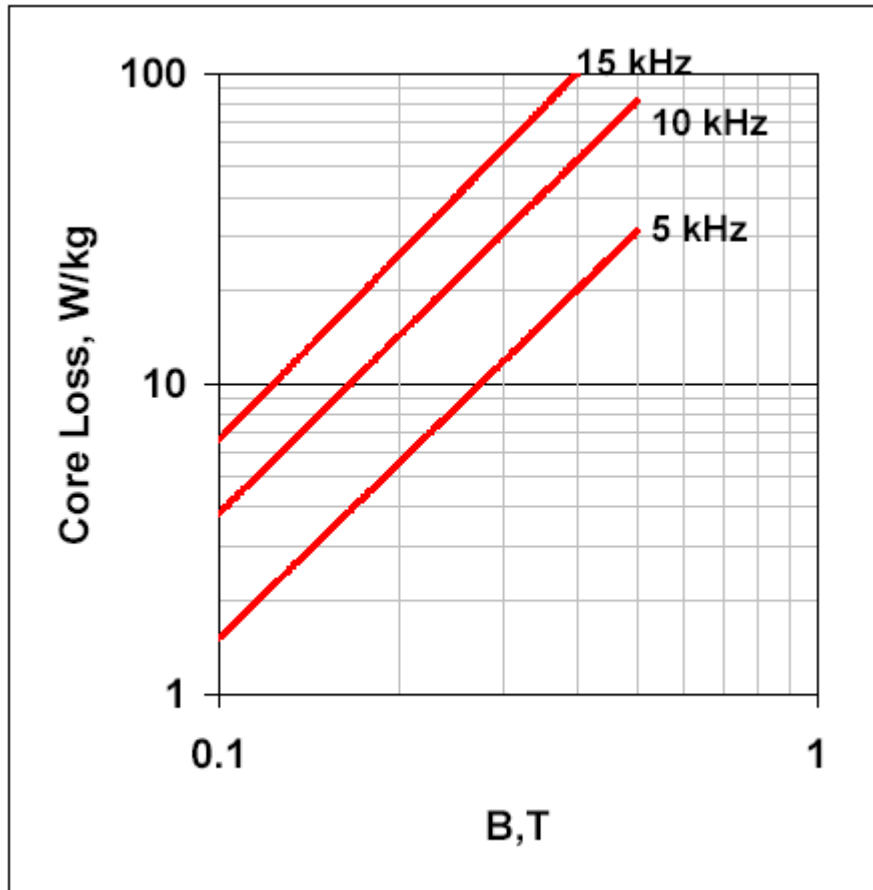
Mass of the form = L x W x H x 0.89 x 7.18 / (1000 x 1000) kg

The forms can be configured into various shapes such as shown below schematically. These special shapes allow for multiple near-zero gaps with reduction in fringe flux and hence, core loss.



Core Loss (Preliminary data)

The final shape influences the actual core loss. The butt joint in the final shape is expected to increase the total core loss.



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