

Specifications of Electrical Steel

Steel Sheet	Nominal thickness:0.5-0.65mm Nominal width:800-1250mm
Steel Coil	Inner diameter:Ø508 or Ø608mm
	Weight <10t,or customizable
Grade	50W470,50W540,50W600,50W700,50W800 non-oriented electric steel coil for energy efficient motor
Edge	Rolled edge (Trimmed during pickling,left untrimmed during annealing)

Tolerances of Dimensions

Item	Standard	Internal control
Permissible Thickness Tolerance	0.50±0.040mm	0.50±0.040mm
Longitudinal Thickness Tolerance	0.025mm	0.015mm
Transverse Thickness Tolerance	0.020mm	0.010mm

Magnetic Properties

Grade	Theoretical Density (kg/dm³)	Iron Loss P15/so(W/kg)		Magnetic Flux Density Bso(T)		Min. Stacking Factor
		Standard	Internal Control	Standard	Internal Control	
50W470	7.70	≤4.7	≤4.0	≥1.64	≥1.64	0.97
50W530	7.70	≤5.3	≤4.3	≥1.65	≥1.65	
50W600	7.75	≤6.0	≤4.7	≥1.66	≥1.66	
50W700	7.80	≤7.0	≤5.3	≥1.69	≥1.69	
50W800	7.80	≤8.0	≤6.0	≥1.70	≥1.70	

Coating Quality

Coating Thickness	0.8-1.2g/m²
Surface Insulation Resistance	≥2009/mm²
Coating Adhesion	Bend diameter of 10 mm,Grade A
Corrosion Resistance	Surface corrosion area ≤5% after 5 hours of testing
Heat Resistance	No peeling after 2 hours at 750℃ under nitrogen protection

Chemical Composition of Cold Formed Steel

Grade	C	Mn	P	S
SPHC	≤0.15	≤0.60	≤0.050	≤0.050
SPHD	≤0.10	≤0.50	≤0.040	≤0.040
SPHE	≤0.10	≤0.50	≤0.030	≤0.035

Mechanical Properties

Grade	Yield Strength (MPa)	Compressive Strength (MPa)	Elongation (%)	Hardness (HV)	Repeated Bending
50W470	260-269	≥380	≥16	≥137	≥30
50W530	262-273	≥360	≥16	≥130	≥30
50W600	265-282	≥340	≥21	≥129	≥30
50W700	270-288	≥320	≥22	≥128	≥30
50W800	280-290	≥300	≥22	≥127	≥30