

elik[®]

ELECTRICAL STEEL



CLIK TEAM

CARRY YOUR EXPECTATION

FURTHER

About CLIK

Who we are?

CLIK® is a solution provider for projects and special steel users.

What we do?

- a) Providing electrical steel products
 - ✓ Oriented electrical steel
 - ✓ Non-Oriented electrical steel
 - ✓ Ultra-thin electrical steel
- b) Combining flexibly engineering, procurement and fabrication.
- c) Offering cost-effective solutions to your projects through our integration in the supply chain.

Why CLIK?

- a) Trusted quality. Mature quality control from raw material sourcing, slitting and cutting to downstream supply of motor cores, EI cores as well as tooling services.
- b) One-stop solution with full dimensions and grades of cores and motors.
- c) New product development for your bespoke sizes and grades.
- d) Professional team with 25+ years' experience and proven supply records.
- e) Global team with local service.



Oriented Electrical Steel

Applications:

- Transformers
- Power generators
- Shunt reactors
- Wound cores



Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss (W/kg)	Magnetic polarization (T)
General oriented electrical steel	CLIK23-110	0.23	7.65	1.10	1.87
	CLIK23-120			1.20	1.80
	CLIK27-110	0.27	7.65	1.10	1.80
	CLIK27-120			1.20	1.87
	CLIK27-130			1.30	1.87
	CLIK30-120	0.30	7.65	1.20	1.87
	CLIK30-130			1.30	1.86
	CLIK30-140			1.40	1.80
	CLIK35-135	0.35	7.65	1.35	1.80
	CLIK35-145			1.45	1.85
	CLIK35-155			1.55	1.85
HiB	CLIK23-085	0.23	7.65	0.85	1.87
	CLIK23-090			0.90	1.90
	CLIK23-095			0.95	1.89
	CLIK23-100			1.00	1.89
	CLIK27-090	0.27	7.65	0.90	1.88
	CLIK27-095			0.95	1.91
	CLIK27-100			1.00	1.90
	CLIK27-120	0.30	7.65	1.20	1.89
	CLIK30-100			1.00	1.88
	CLIK30-105			1.05	1.92
	CLIK30-110			1.10	1.88
	CLIK30-120	0.35	7.65	1.20	1.91
	CLIK35-115			1.15	1.88
	CLIK35-125			1.25	1.88
CLIK35-135			1.35	1.88	
Domain refined HiB	CLIK23-080	0.23	7.65	0.80	1.91
	CLIK23-085			0.85	1.90
	CLIK23-090			0.90	1.90
	CLIK23-095			0.95	1.89
	CLIK27-085	0.27	7.65	0.85	1.91
	CLIK27-090			0.90	1.91
	CLIK27-095			0.95	1.90

Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss (W/kg)	Magnetic polarization (T)
Domain refined HiB	CLIK27-100	0.27	7.65	1.00	1.90
	CLIK27-120			1.20	1.89
	CLIK30-100	0.30	7.65	1.00	1.92
	CLIK30-105			1.05	1.91
	CLIK30-120			1.20	1.90

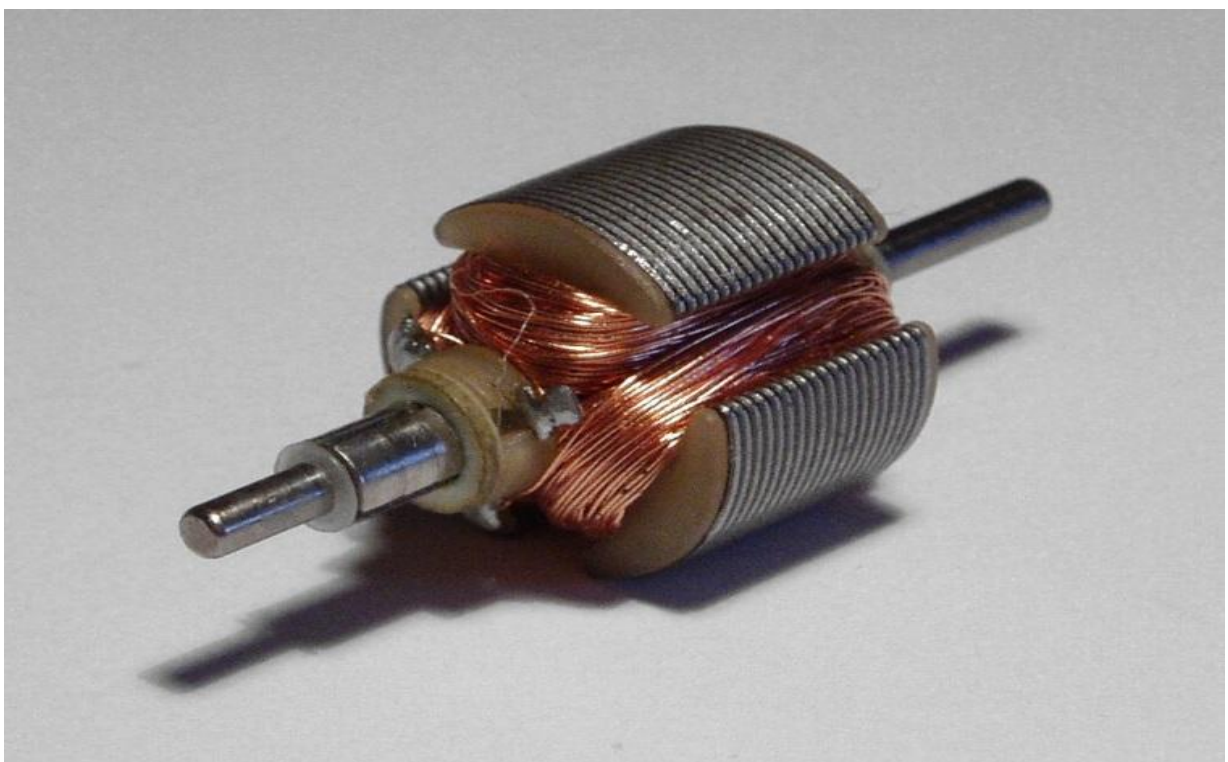
HiB global standards equivalents

CLIK	EN 10107	ASTM A876	JIS C2553
CLIK23-085	M085-23P*		23 R 085
CLIK23-090	M090-23P*	23 Q 054	23 P 090
CLIK23-095	M095-23P*		23 P 095
CLIK23-100	M100-23P	23 P 060	23 P 100
CLIK27-090	M090-27P*		27 R 090
CLIK27-095	M095-27P*	27 Q 057	27 R 095
CLIK27-103	M103-27P	27 P 066	27 P 100
CLIK30-100	M100-30P*		
CLIK30-105	M105-30P		30 P 105
CLIK30-111	M111-30P		30 P 110



Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Resistivity (μΩ-cm)	Core loss (W/Kg)		Magnetic polarization (T)
					P _{1.0/400}	P _{1.5/400}	
Ultra-thin electrical steel	CLIK15-1650	0.15	7.65	46		14.0	1.80
	CLIK15-1700					15.0	1.80
	CLIK15-1800					16.0	1.80
	CLIK18-700	0.18	7.65	46	6.60		1.80
	CLIK18-760				6.80		1.80
	CLIK18-820				7.20		1.80
	CLIK18-900				8.00		1.78
	CLIK20-760	0.20	7.65	46	6.80		1.80
	CLIK20-820				7.20		1.80
	CLIK20-900				8.00		1.78
	CLIK20-1000				9.00		1.75

Type	Thickness (mm)	Minimum slit width (mm)	Max width as rolled (mm)	Max width, with slit edge(mm)
Ultra-thin electrical steel	0.15	5.08	444.5	431.8
	0.10	5.08	431.8	419.1
	0.05			
	0.025			



Allowable tolerance of the dimension and shape

Width (mm)	Thickness (mm)	Allowable thickness tolerance (mm)	Horizontal Thickness Tolerance (mm)	Allowable Width Tolerance (mm)	Unsmoothness %	Edge burning amount (mm)	2m bend (mm)
800-1100	0.15	±0.02	≤0.02	+1.5 0	≤1.5	≤0.02	≤1.0
	0.18						
	0.20						
	0.23						
	0.27	±0.03					
	0.30						
	0.35						



Non-oriented electrical steel

Applications:

- Magnetic bearing
- Aviation
- Automotive Vehicles
- Transformers
- High speed pumps and compressors
- Generators



Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{1.5/50} (W/kg)	Magnetic polarization B ₅₀₀₀ (T)
General Non-oriented electrical steel	CLIK35-210	0.35	7.60	2.10	1.62
	CLIK35-230			2.30	1.62
	CLIK35-235			2.35	1.62
	CLIK35-250			2.50	1.62
	CLIK35-270			2.70	1.62
	CLIK35-300		7.65	3.00	1.62
	CLIK35-360			3.60	1.63
	CLIK35-400			4.00	1.64
	CLIK35-440			4.40	1.65
	CLIK35-550			5.50	1.64
	CLIK50-230	0.50	7.60	2.30	1.62
	CLIK50-250			2.50	1.62
	CLIK50-270			2.70	1.62
	CLIK50-290			2.90	1.62
	CLIK50-310		7.65	3.10	1.62
	CLIK50-330			3.30	1.62
	CLIK50-350			3.50	1.62
	CLIK50-400			4.00	1.63
	CLIK50-470			4.70	1.64
	CLIK50-530			0.50	7.70
	CLIK50-540	5.40	1.65		
	CLIK50-600	7.75	6.00		1.66
	CLIK50-700	7.80	7.00		1.70
	CLIK50-800		8.00		1.70
	CLIK50-1000	7.85	10.00		1.70
	CLIK50-1300		13.00		1.70
	CLIK65-310	0.65	7.60		3.10
	CLIK65-330			3.30	1.60
	CLIK65-350			3.50	1.60
	CLIK65-400		7.65	4.00	1.62
CLIK65-470	4.70			1.64	
CLIK65-530	5.30			1.64	
CLIK65-600	7.75		6.00	1.66	

Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{1.5/50} (W/kg)	Magnetic polarization B ₅₀₀₀ (T)
General Non-oriented electrical steel	CLIK65-700	0.65	7.75	7.00	1.67
	CLIK65-800		7.80	8.00	1.70
	CLIK65-1000			10.00	1.69
	CLIK65-1300		7.85	13.00	1.69
	CLIK100-600	1.0	7.60	6.00	1.63
	CLIK100-700		7.65	7.00	1.64
	CLIK100-800		7.70	8.00	1.66
	CLIK100-1000		7.80	10.00	1.68

Type	Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{1.0/50} (W/kg)	Magnetic polarization B ₂₅₀₀ (T)
For relay and electromagnetic switch	CLIK70-340	0.70	7.65	3.40	1.48
	CLIK70-380			3.80	1.48
	CLIK75-400	0.75		4.00	1.48
	CLIK80-420	0.80		4.20	1.48
	CLIK80-450			4.50	1.48



High induction Non-oriented electrical steel

Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{1.5/50} (W/kg)	Magnetic polarization B ₅₀₀₀ (T)
CLIK35-230	0.35	7.65	2.30	1.66
CLIK35-250		7.65	2.50	1.67
CLIK35-300		7.70	3.00	1.69
CLIK50-300	0.50	7.65	3.00	1.67
CLIK50-350		7.70	3.50	1.70
CLIK50-470		7.75	4.70	1.72
CLIK50-600		7.75	6.00	1.72
CLIK50-800		7.80	8.00	1.74
CLIK50-1000		7.85	10.00	1.75

Stress-relief and annealing high induction products

Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{1.5/50} (W/kg)	Magnetic polarization B ₅₀₀₀ (T)
CLIK35-300	0.35	7.80	3.00	1.73
CLIK50-300	0.50	7.75	3.00	1.72
CLIK50-350		7.80	3.50	1.74

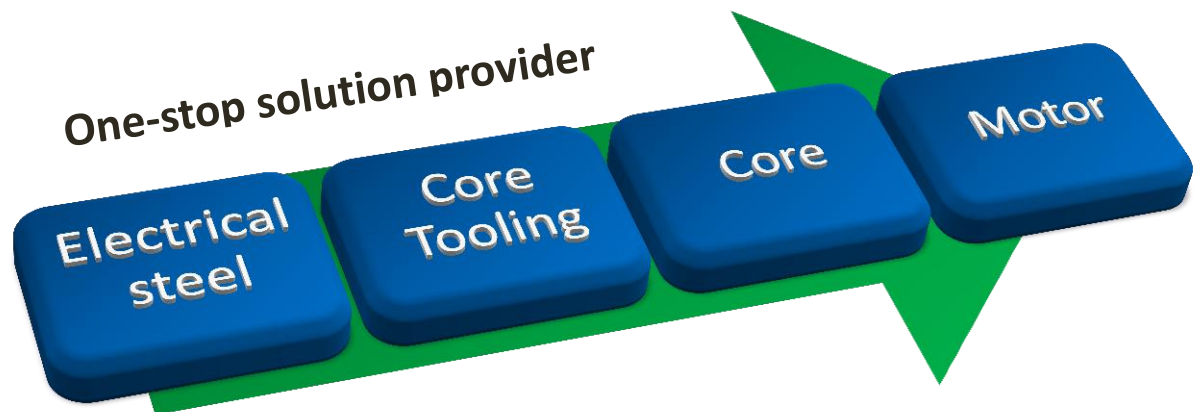


Thin gauge products

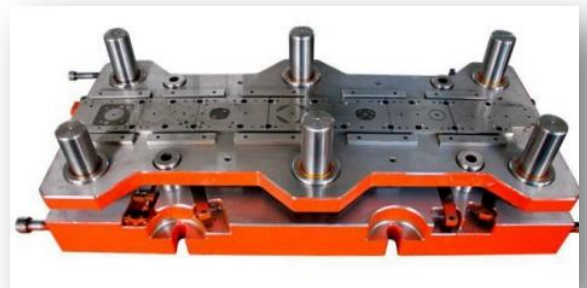
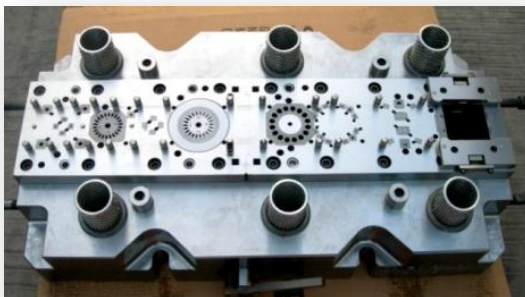
Grade	Thickness (mm)	Density (Kg/dm ³)	Core loss P _{10/400} (W/kg)
CLIK10-1300	0.10	7.65	13.0
CLIK12-1350	0.127	7.65	13.5
CLIK15-1000	0.15	7.60	10.0
CLIK18-1430	0.178	7.65	14.3
CLIK20-1200	0.20	7.60	12.0
CLIK20-1300		7.65	13.0
CLIK25-1400	0.25	7.60	14.0
CLIK25-1700		7.65	17.0
CLIK27-1500	0.27	7.60	15.0
CLIK27-1800		7.65	18.0
CLIK30-1600	0.30	7.60	16.0
CLIK30-1800		7.65	18.0



CLIK focus on creating value for customers through our integration in the supply chain. More than the raw material, CLIK is dedicated to providing the one-stop solution for you, including varieties of core tooling, cores and motors.



Core Tooling



Core



Motor



Trusted by our customers



中国航天科工集团公司
CHINA AEROSPACE SCIENCE & INDUSTRY CORP.



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