



isovac®



Premium quality
with reduced carbon footprint

isovac®
greentec steel

ELECTRICAL STEEL – isovac®

Range of supply
January 2026

FULLY PROCESSED ELECTRICAL STEEL

Steel grade	Magnetic sample direction	Specific total loss at 50 Hz ¹⁾			Magnetic polarization at 50 Hz ¹⁾						Mechanical sample direction	0.2 % yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]
		1.0 T P10 [W/kg]	1.5 T P15 [W/kg]		2500 A/m J25 [T]		5000 A/m J50 [T]		10000 A/m J100 [T]				
isovac® fully processed													
EN 10106 ²⁾		P10 typ.	P15		J25		J50		J100			R _{p0.2} min.	R _m
			max.	typ.	min.	typ.	min.	typ.	min.	typ.			
isovac® 235-35 A	Long. + Trans.	0.95	2.35	2.20	1.49	1.52	1.60	1.62	1.70	1.75	Transverse	430	535 - 615
isovac® 250-35 A	Long. + Trans.	0.95	2.50	2.20	1.49	1.52	1.60	1.62	1.70	1.75	Transverse	430	535 - 615
isovac® 270-35 A	Long. + Trans.	1.05	2.70	2.50	1.49	1.55	1.60	1.64	1.70	1.76	Transverse	325	455 - 535
isovac® 300-35 A	Long. + Trans.	1.15	3.00	2.65	1.49	1.56	1.60	1.64	1.70	1.76	Transverse	335	465 - 545
isovac® 330-35 A	Long. + Trans.	1.25	3.30	2.85	1.49	1.55	1.60	1.64	1.70	1.76	Transverse	345	475 - 555
isovac® 270-50 A	Long. + Trans.	1.10	2.70	2.50	1.49	1.53	1.60	1.62	1.70	1.75	Transverse	430	545 - 625
isovac® 290-50 A	Long. + Trans.	1.10	2.90	2.50	1.49	1.53	1.60	1.62	1.70	1.75	Transverse	430	545 - 625
isovac® 310-50 A	Long. + Trans.	1.25	3.10	2.85	1.49	1.57	1.60	1.66	1.70	1.77	Transverse	330	460 - 540
isovac® 330-50 A	Long. + Trans.	1.25	3.30	2.90	1.49	1.56	1.60	1.65	1.70	1.77	Transverse	335	465 - 545
isovac® 350-50 A	Long. + Trans.	1.40	3.50	3.20	1.50	1.57	1.60	1.65	1.70	1.77	Transverse	290	435 - 515
isovac® 400-50 A	Long. + Trans.	1.50	4.00	3.45	1.53	1.58	1.64	1.66	1.74	1.78	Transverse	300	450 - 530
isovac® 470-50 A	Long. + Trans.	1.85	4.70	4.15	1.54	1.60	1.64	1.68	1.74	1.80	Transverse	280	430 - 510
isovac® 530-50 A	Long. + Trans.	2.05	5.30	4.60	1.56	1.61	1.65	1.70	1.75	1.81	Transverse	265	395 - 475
isovac® 600-50 A	Long. + Trans.	2.20	6.00	4.85	1.57	1.62	1.66	1.70	1.76	1.81	Transverse	275	395 - 475
isovac® 700-50 A	Long. + Trans.	2.30	7.00	5.05	1.60	1.62	1.69	1.71	1.77	1.82	Transverse	280	400 - 480
isovac® 800-50 A	Long. + Trans.	2.85	8.00	6.05	1.60	1.63	1.70	1.71	1.78	1.82	Transverse	245	360 - 440
isovac® 940-50 A	Long. + Trans.	2.80	9.40	5.95	1.62	1.66	1.72	1.74	1.81	1.85	Transverse	250	355 - 435
isovac® 310-65 A	Long. + Trans.	1.30	3.10	2.95	1.49	1.54	1.60	1.64	1.70	1.76	Transverse	430	550 - 630
isovac® 330-65 A	Long. + Trans.	1.30	3.30	2.95	1.49	1.54	1.60	1.64	1.70	1.76	Transverse	430	550 - 630
isovac® 350-65 A	Long. + Trans.	1.45	3.50	3.30	1.49	1.56	1.60	1.65	1.70	1.77	Transverse	330	460 - 540
isovac® 400-65 A	Long. + Trans.	1.60	4.00	3.60	1.49	1.57	1.60	1.66	1.70	1.77	Transverse	340	480 - 560
isovac® 470-65 A	Long. + Trans.	1.80	4.70	4.10	1.53	1.59	1.63	1.67	1.73	1.79	Transverse	305	450 - 530
isovac® 530-65 A	Long. + Trans.	1.80	5.30	4.10	1.54	1.59	1.64	1.67	1.74	1.79	Transverse	305	450 - 530
isovac® 600-65 A	Long. + Trans.	2.30	6.00	5.10	1.56	1.62	1.66	1.70	1.76	1.81	Transverse	290	435 - 515
isovac® 700-65 A	Long. + Trans.	2.55	7.00	5.70	1.57	1.63	1.67	1.71	1.76	1.82	Transverse	275	400 - 480
isovac® 800-65 A	Long. + Trans.	3.10	8.00	6.80	1.60	1.64	1.70	1.72	1.78	1.83	Transverse	240	360 - 440
isovac® 940-65 A	Long. + Trans.	3.10	9.40	6.80	1.60	1.64	1.70	1.72	1.78	1.83	Transverse	240	360 - 440
isovac® 1000-65 A	Long. + Trans.	3.10	10.00	6.80	1.61	1.64	1.71	1.72	1.80	1.83	Transverse	240	360 - 440
isovac® 1000-100 A	Long. + Trans.	3.55	10.00	8.45	1.58	1.63	1.68	1.72	1.76	1.83	Transverse	280	395 - 475

¹⁾ Magnetic measurement pursuant to DIN EN 60404-2

²⁾ Steel grade designation deviates from standard

FULLY PROCESSED ELECTRICAL STEEL

Steel grade	Magnetic sample direction	Specific total loss at 50 Hz ¹⁾			Magnetic polarization at 50 Hz ¹⁾						Mechanical sample direction	0.2 % yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]
		1.0 T P10 [W/kg]	1.5 T P15 [W/kg]		2500 A/m J25 [T]	5000 A/m J50 [T]		10000 A/m J100 [T]					
isovac® fully processed high-perm													
EN 10106 ²⁾		P10 typ.	max.	typ.	min.	typ.	min.	typ.	min.	typ.		R _{p0.2} min.	R _m
isovac HP 210-35 A	Long. + Trans.	0.90	2.10	2.05	1.49	1.56	1.60	1.65	1.70	1.77	Transverse	410	510 - 590
isovac HP 235-35 A	Long. + Trans.	0.95	2.35	2.15	1.49	1.58	1.60	1.67	1.70	1.78	Transverse	345	460 - 540
isovac HP 250-35 A	Long. + Trans.	1.00	2.50	2.30	1.49	1.59	1.60	1.68	1.70	1.79	Transverse	315	440 - 520
isovac HP 270-35 A	Long. + Trans.	1.10	2.70	2.50	1.49	1.60	1.60	1.69	1.70	1.80	Transverse	325	455 - 535
isovac HP 230-50 A	Long. + Trans.	1.00 ³⁾	2.30 ³⁾	2.20 ³⁾	1.49 ³⁾	1.57 ³⁾	1.60 ³⁾	1.66 ³⁾	1.70 ³⁾	1.77 ³⁾	Transverse	420	530 - 610
isovac HP 250-50 A	Long. + Trans.	1.05	2.50	2.35	1.49	1.57	1.60	1.66	1.70	1.78	Transverse	420	535 - 615
isovac HP 270-50 A	Long. + Trans.	1.10	2.70	2.50	1.49	1.58	1.60	1.67	1.70	1.78	Transverse	350	475 - 555
isovac HP 290-50 A	Long. + Trans.	1.20	2.90	2.65	1.49	1.60	1.60	1.69	1.70	1.80	Transverse	320	445 - 525
isovac HP 310-50 A	Long. + Trans.	1.25	3.10	2.75	1.49	1.60	1.60	1.69	1.70	1.80	Transverse	325	455 - 535
isovac HP 330-50 A	Long. + Trans.	1.30	3.30	2.95	1.49	1.62	1.60	1.70	1.70	1.81	Transverse	280	425 - 505
isovac HP 350-50 A	Long. + Trans.	1.45	3.50	3.20	1.50	1.63	1.60	1.72	1.70	1.82	Transverse	235	390 - 470
isovac HP 400-50 A	Long. + Trans.	1.55	4.00	3.45	1.53	1.66	1.64	1.74	1.74	1.84	Transverse	245	400 - 480
isovac HP 600-50 A	Long. + Trans.	2.40	6.00	5.10	1.57	1.68	1.66	1.76	1.76	1.86	Transverse	215	335 - 415
isovac HP 330-65 A	Long. + Trans.	1.35	3.30	3.10	1.49	1.60	1.60	1.69	1.70	1.80	Transverse	320	445 - 525
isovac HP 350-65 A	Long. + Trans.	1.40	3.50	3.20	1.49	1.59	1.60	1.68	1.70	1.79	Transverse	320	450 - 530
isovac HP 470-65 A	Long. + Trans.	1.90	4.70	4.15	1.53	1.66	1.63	1.74	1.73	1.85	Transverse	245	400 - 480
isovac® fully processed high-strength													
EN 10106 ²⁾		P10 typ.	max.	typ.	min.	typ.	min.	typ.	min.	typ.		R _{p0.2} min.	R _m
isovac 470-50 A HS	Long. + Trans.	1.70	4.70	3.70	1.54	1.56	1.64	1.65	1.74	1.77	Transverse	490	595 - 675
isovac 350-65 A HS	Long. + Trans.	1.40	3.50	3.15	1.49	1.54	1.60	1.63	1.70	1.75	Transverse	440	565 - 645
isovac 530-65 A HS	Long. + Trans.	1.85	5.30	4.00	1.54	1.55	1.63	1.64	1.74	1.76	Transverse	475	590 - 670

¹⁾ Magnetic measurement pursuant to DIN EN 60404-2
²⁾ Steel grade designation deviates from standard
³⁾ Eroded edges

FULLY PROCESSED ELECTRICAL STEEL

Steel grade	Magnetic sample direction	50 Hz	Specific total loss ¹⁾ at 400 Hz				700 Hz	Magnetic polarization ¹⁾ at 50 Hz						Mechanical sample direction	0.2 % yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]	Elongation A ₈₀ [%]
		1.5 T P15 [W/kg]	1.0 T P10 [W/kg]		1.5 T P15 [W/kg]		1.0 T P10 [W/kg]	2500 A/m J25 [T]		5000 A/m J50 [T]		10000 A/m J100 [T]					
isovac® automotive grades																	
EN 10303 ²⁾		P15 typ.	P10 max. typ.		P15 max. ³⁾ typ.		P10 typ.	J25 min. typ.		J50 min. typ.		J100 min. typ.			R _{p0.2} min.	R _m	A ₈₀ min.
isovac HP NO25-13 Y420	Long. + Trans.	2.10	13.00	12.60	35.00	29.40	28.50	1.48	1.55	1.59	1.65	1.69	1.77	Longitudinal	420	510 - 590	9
isovac HP NO27-14 Y420	Long. + Trans.	2.15	14.00	13.30	38.00	31.05	30.30	1.48	1.56	1.59	1.66	1.69	1.78	Longitudinal	420	520 - 600	12
isovac HP NO30-15 Y420	Long. + Trans.	2.10	15.00	14.25	41.00	33.70	33.35	1.48	1.56	1.59	1.65	1.69	1.77	Longitudinal	420	515 - 595	11
isovac HP NO30-16 Y370	Long. + Trans.	2.40	16.00	15.40	43.00	35.80	35.35	1.48	1.59	1.59	1.68	1.69	1.79	Longitudinal	370	470 - 550	17
isovac HP NO30-19 Y320	Long. + Trans.	2.25	19.00	15.70	47.00	37.95	37.20	1.49	1.58	1.60	1.67	1.70	1.79	Longitudinal	320	410 - 490	13
isovac HP NO35-18 Y420	Long. + Trans.	2.25	18.00	16.35	43.00	38.55	38.80	1.49	1.57	1.60	1.66	1.70	1.78	Longitudinal	420	535 - 615	16
isovac HP NO35-19 Y370	Long. + Trans.	2.45	19.00	17.60	50.00	41.40	41.75	1.49	1.59	1.60	1.68	1.70	1.79	Longitudinal	370	475 - 555	18
isovac NO35-22 Y460	Long. + Trans.	3.00	22.00	18.30	55.00	43.30	42.50	1.49	1.53	1.60	1.62	1.70	1.74	Longitudinal	460	570 - 650	17
isovac NO35-26 Y500	Long. + Trans.	3.80	26.00	21.35	58.00	49.60	47.10	1.49	1.54	1.60	1.63	1.70	1.75	Longitudinal	500	585 - 665	18

¹⁾ Magnetic measurement pursuant to DIN EN 60404-2

²⁾ Steel grade designation deviates from standard

³⁾ not binding

SEMI-PROCESSED ELECTRICAL STEEL

		Magnetic values after final annealing								according to EN 10341				
Steel grade	Magnetic sample direction	Specific total loss at 50 Hz ¹⁾		Magnetic polarization at 50 Hz ¹⁾						Mechanical sample direction	0.2 % yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]		
		1.0 T P10 [W/kg]	1.5 T P15 [W/kg]	2500 A/m J25 [T]	5000 A/m J50 [T]	10000 A/m J100 [T]								
isovac® semi-processed high-perm														
EN 10341 ²⁾		P10 typ.	P15 max. typ.	J25 min. typ.	J50 min. typ.	J100 min. typ.					R _{p0.2} min.	R _m		
isovac® HP290-50KHE	Long. + Trans.	On request	On request	On request	On request	On request				Transverse	On request	On request		
isovac® HP310-50KHE	Long. + Trans.	1.20	3.10 3.00	1.54 1.58	1.62 1.66	1.72 1.77				Transverse	395	445 - 525		
isovac® semi-processed high-efficiency														
EN 10341 ²⁾		P10 typ.	P15 max. typ.	J25 min. typ.	J50 min. typ.	J100 min. typ.					R _{p0.2} min.	R _m		
isovac® 340-50KHE	Long. + Trans.	1.20	3.40 3.00	1.54 1.58	1.62 1.66	1.72 1.77				Transverse	395	445 - 525		
isovac® 420-50KHE	Long. + Trans.	1.45	4.20 3.55	1.57 1.61	1.65 1.69	1.75 1.80				Transverse	370	405 - 485		
isovac® 450-50KHE	Long. + Trans.	1.45	4.50 3.55	1.57 1.61	1.65 1.69	1.75 1.80				Transverse	370	405 - 485		
isovac® 520-65KHE	Long. + Trans.	1.90	5.20 4.75	1.57 1.60	1.65 1.69	1.75 1.80				Transverse	370	410 - 490		
isovac® semi-processed														
EN 10341 ²⁾		P10 typ.	P15 max. typ.	J25 min. typ.	J50 min. typ.	J100 min. typ.					R _{p0.2} min.	R _m		
isovac 560-50 K	Long. + Trans.	2.05	5.60 4.60	1.58 1.63	1.66 1.72	1.76 1.83				Transverse	415	455 - 535		
isovac 660-50 K	Long. + Trans.	2.30	6.60 5.30	1.62 1.64	1.70 1.72	1.79 1.84				Transverse	370	405 - 485		
isovac 800-65 K	Long. + Trans.	2.85	8.00 6.80	1.62 1.64	1.70 1.72	1.79 1.84				Transverse	380	410 - 490		
isovac 1000-65 K	Long. + Trans.	3.25	10.00 7.85	1.60 1.65	1.68 1.73	1.78 1.84				Transverse	285	325 - 405		
isovac 1800-100 K	Long. + Trans.	5.40	18.00 14.75	1.60 1.64	1.68 1.72	1.78 1.84				Transverse	280	315 - 395		

¹⁾ Magnetic measurement pursuant to DIN EN 60404-2
²⁾ Steel grade designation deviates from standard

HOT-ROLLED POLE SHEETS

				Elongation		Magnetic polarization at DC (Direct current) ¹⁾	
		0.2 % yield strength R _{p0.2} [MPa]	Tensile strength R _m [MPa]	A ₈₀ [%]	A ₅ [%]	5000 A/m J50 [T]	15000 A/m J150 [T]
Steel grade	Sample direction						
Hot-rolled pole sheets							
Standard grades according to EN 10265		R _{p0.2} min.	R _m min.	A ₈₀ min.	A ₅ min.	J50 min.	J150 min.
250-TG-180	Transverse	250	350	22	26	1.60	1.80
300-TG-180	Transverse	300	400	20	24	1.60	1.80
350-TG-179	Transverse	350	450	18	22	1.55	1.79
400-TG-179	Transverse	400	500	16	19	1.55	1.79
450-TG-179	Transverse	450	550	14	17	1.54	1.79
500-TG-179	Transverse	500	600	12	14	1.53	1.79
550-TG-178	Transverse	550	650	12	14	1.52	1.78
600-TG-178	Transverse	600	700	10	12	1.50	1.78
650-TG-178	Transverse	650	750	10	12	1.48	1.78
700-TG-178	Transverse	700	800	10	12	1.46	1.78
voestalpine special grade		R _{p0.2} min.	R _m min.	A ₈₀ min.	A ₅ min.	J50 min.	J150 min.
750-VA-175	Long. + Trans.	750	800	10	12	1.46	1.75

Measurement of fracture elongation: A₈₀ for thicknesses < 3 mm
A₅ for thicknesses ≥ 3 mm

¹⁾ Magnetic measurement pursuant to DIN EN 60404-4

INSULATING VARNISH SYSTEMS

Deliverable insulating varnish systems							
Product variant	Uncoated		C-3	Backlack	C-5		C-6
isovac®	✓		✓	✓	✓		✓

Range of properties for available insulating varnish systems						
Requirements	C-3		Backlack	C-5		C-6
Layer thickness	1 µm	2-4 µm	4 µm	1 µm	2-4 µm	3-8 µm
Insulation resistance	-	-	*	o	+	+
Resistance to annealing	-	-	-	+	o	o
Burn-off repair	-	-	-	o	o	+

- Not recommended

o Recommended

+

Highly recommended

* Not clear in as-delivered condition (B condition)

Indicated references are standard values. Limitations are possible depending on thickness.
Available insulating varnish systems and combinations of widths and thicknesses vary depending on the steel grade.

DIMENSIONS

Available dimensions: wide strip (coil)				
Product variant	Thickness [mm]	Width ¹⁾ [mm] max.	Outside diameter [mm] max.	Inside diameter [mm]
isovac®	0.25 - 1.00	1600	2000	600

Available dimensions: slit (slit strip)				
Product variant	Thickness [mm]	Strip width ¹⁾ [mm] min.	Outside diameter [mm]	Inside diameter [mm]
isovac®	0.25 - 1.00	19	850 - 2000	500 / 600

Available dimensions: cut-to-length (sheet)				
Product variant	Thickness [mm]	Width ¹⁾ [mm]	Length [mm]	Package weight [t] max.
isovac®	0.25 - 1.00	300 - 1550	300 - 5000	6
Hot-rolled pole sheets	2.00 - 12.00	900 - 1620	1500 - 14000	10

¹⁾ Indicated references are standard values. The available combinations of widths and thicknesses and supply forms vary depending on the steel grade and insulating varnish system. Limitations are possible depending on thickness.

This document provides an overview of the electrical steel products supplied by the voestalpine Steel Division. Other grades are available upon request. Please find further information and downloads under the following link:
www.voestalpine.com/isovac



Premium quality with reduced carbon footprint



Semi-processed electrical steel – greentec steel Edition

Max. carbon footprint 2.12 kg CO₂e per kg of steel ¹⁾

Fully processed electrical steel – greentec steel Edition

Max. carbon footprint 2.30 kg CO₂e per kg of steel ¹⁾

¹⁾ per EN 15804+A2 (EPD methodology) cradle to gate

All products, dimensions and steel grades listed in each voestalpine supply range are available as greentec steel Edition.

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