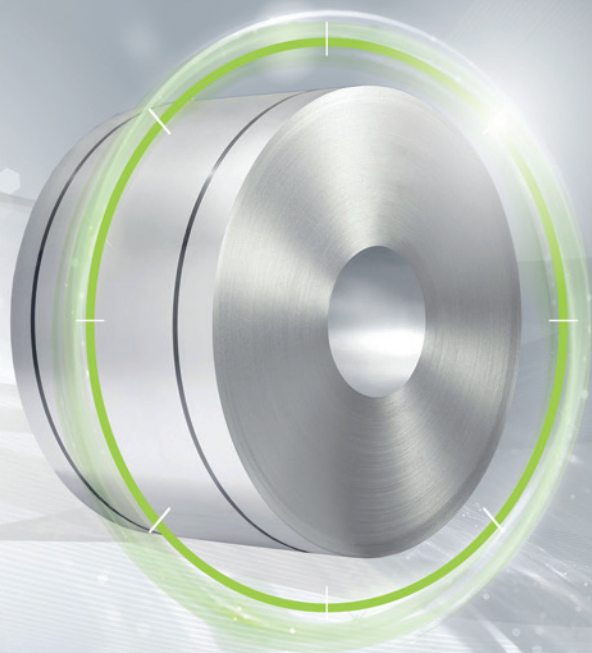


FULLY
PROCESSED

isovac high-perm 1300-100 A

The specialist with the highest permeability

Manufactured in the most modern production lines, this fully processed isovac® grade exhibits highly homogeneous properties across the width and length of the entire strip. The result is excellent and consistent processability in the manufacture of highly efficient electrical components.

The optimum adjustment of texture increases magnetizability and reduces core losses of isovac HP 1300-100 A. This increase in efficiency makes it possible to maintain the same level of performance while reducing component size and saving material, weight and costs. This also means that a higher level of performance can be achieved with the same component size.

Upon request, isovac HP 1300-100 A can be supplied with an electrical steel insulation system and can be used directly in as-delivered condition.

Convincing advantages:

- » Increased performance achieved by increasing torque based on higher magnetizability (improvement by up to 0.05 T at J25, J50, J100)
- » Possible cost optimization through less material usage, less weight and less space requirement resulting from downsizing while maintaining the same level of performance
- » Best processability through consistent mechanical properties and homogeneous, clean surfaces
- » Excellent stackability resulting from high dimensional accuracy in rolling direction and perpendicular to rolling direction (thickness tolerance)
- » Innovative electrical steel insulation systems upon request

voestalpine supplies isovac HP 1300-100 A, an electrical steel of the highest quality. We offer you a customer-focused overall package of products, service and logistics in addition to all the advantages of our integrated metallurgical facility and Steel Service Centers.

Grade named according to conventional international standards:

Grade named according to isovac®	DIN EN 10106		IEC 60404-8-4	JIS C2552	GOST 21427.2	ASTM A677	AISI	IS648	GB/T2521.1
	Material No.	Abbreviation							
isovac HP 1300-100 A	1.0897	M1300-100A	M1300-100A 5	100A1300	-	-	-	100C1300	-

Mechanical properties:

Tensile test according to DIN EN ISO 6892-1 and hardness according to DIN EN ISO 6507-1 (Typical values);
Test direction: Transverse

Grade named according to isovac®	Yield strength R_{eH} [MPa]	0.2 %-Yield strength $R_{p0.2}$ [MPa]	Tensile strength R_m [MPa]	Elongation A_{80} [%]	Hardness HV10 [-]
isovac HP 1300-100 A	250	230	380	37	123

Magnetic properties:

in as-delivered condition (Typical values)

Test direction: Mean value from longitudinal and transverse measurements at 50 Hz (60 Hz), single-sheet test

Grade named according to isovac®	Specific total loss				Magnetic polarization			Relative permeability 1.5 T μ_r [-]
	1.0 T P10		1.5 T P15		2500 A/m J25	5000 A/m J50	10000 A/m J100	
	50 Hz [W/kg]	60 Hz [W/lb]	50 Hz [W/kg]	60 Hz [W/lb]	[T]	[T]	[T]	
isovac HP 1300-100 A	3.60	2.20	8.50	5.19	1.67	1.75	1.86	2000

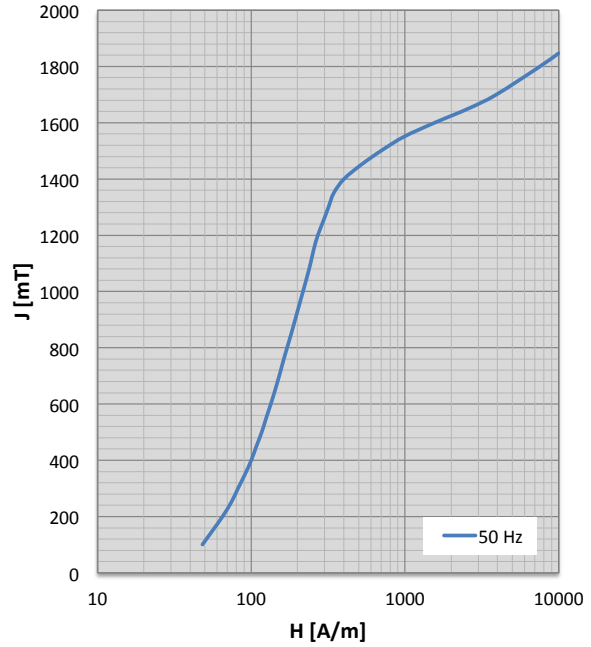
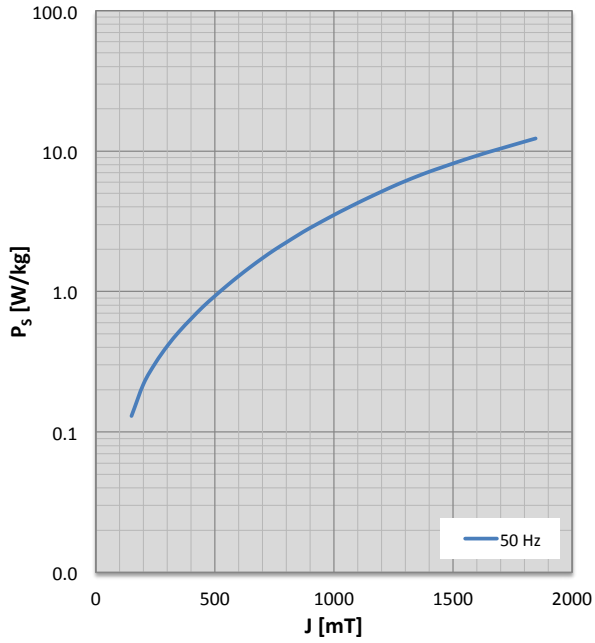
Physical properties:

Typical values

Grade named according to isovac®	Density ρ [g/cm³]	Specific electrical resistance ρ_s [$\mu\Omega\text{cm}$]	Thermal conductivity λ [W/mK]
isovac HP 1300-100 A	7.80	28.2	42

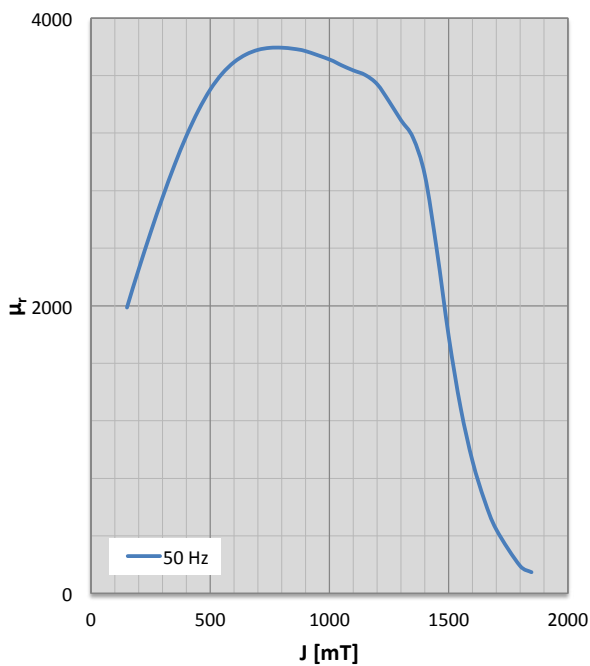
Characteristics P_s/J loss curve and characteristics J/H magnetization curve

Test direction: Mean value from longitudinal and transverse measurements at indicated frequencies, single-sheet test



Characteristics μ_r/J permeability curve

Test direction: Mean value from longitudinal and transverse measurements at 50 Hz, single-sheet test



Frequency dependence of magnetic properties

Test direction: Mean value longitudinal and transverse at indicated frequencies and polarizations, single-sheet test

— 50 Hz			
J [mT]	H [A/m]	P _s [W/kg]	μ _r [-]
100	48	0.05	1718
150	56	0.13	1988
200	65	0.22	2254
250	74	0.31	2510
300	82	0.41	2753
350	91	0.52	2978
400	100	0.64	3181
450	108	0.78	3357
500	117	0.93	3503
550	125	1.10	3614
600	134	1.29	3694
650	143	1.50	3747
700	152	1.73	3779
750	161	1.98	3793
800	171	2.24	3794
850	182	2.53	3786
900	193	2.84	3770
1000	217	3.51	3712
1050	230	3.88	3672
1100	243	4.28	3636
1150	255	4.70	3604
1200	271	5.15	3540
1250	294	5.63	3420
1300	318	6.12	3289
1350	344	6.62	3169
1400	401	7.13	2906
1450	517	7.63	2387
1500	698	8.16	1785
1550	983	8.71	1289
1600	1559	9.27	917
1650	2577	9.85	646
1700	3930	10.42	442
1799	7500	11.66	191
1847	10000	12.30	147

Available Dimensions

Grade named according to isovac®	Delivery form	Width [mm]	Length [mm]
isovac HP 1300-100 A	Wide strip / Slit strip	19 – 1600	-
	Cut-to-length sheets	300 – 1600	300 – 5000

Deliverable coating systems

Grade named according to isovac®	Uncoated	C-3	Backlack	C-5	C-6
isovac HP 1300-100 A	✔	✔	☰	✔	✔

✔ Available ☰ On request

The information and product properties contained in this printed material are non-binding and serve the sole purpose of technical orientation. They do not replace individual advisory services provided by our sales and customer service teams. The product information and characteristics set forth herein shall not be considered as guaranteed properties unless explicitly stipulated in a separate contractual agreement. For this reason, voestalpine shall not grant any warranty nor be held liable for properties and/or specifications other than those subject to explicit agreement. This also applies to the suitability and applicability of products for certain applications as well as to the further processing of materials into final products. All application risks and suitability risks shall be borne by the customer. The General Terms of Sale for Goods and Services of the voestalpine Steel Division shall apply to all materials supplied by the voestalpine Steel Division and can be accessed using the following link: www.voestalpine.com/stahl/en/The-Steel-Division/General-Terms-of-Sale

Technical changes are reserved. Errors and misprints are excepted. No part of this publication may be reprinted without explicit written permission by voestalpine Stahl GmbH.

Please find further information and downloadable files at www.voestalpine.com/isovac

