isovac®

isovac 1000-100 A

The perfect solution for direct application

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.
Upon request, isovac 1000-100 A can be supplied with an electrical steel insulation system and can be used directly in as-delivered condition.

Convincing advantages:

- 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 1000-100 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	JIS	GOST	ASTM	AISI	IS648	GB/T2521.1
	Material No.	Abbreviation	60404-8-4	C2552	21427.2	A677			
isovac 1000-100 A	1.0896	M1000-100A	M1000-100A 5	100A1000	-	-	-	100C1000	-

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 1000-100 A	345	310	440	34	135

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
	1.0 T P10		1.5 T P15		2500 A/m J25	5000 A/m J50	10000 A/m J100	1.5 T μ_r
	50 Hz [W/kg]	60 Hz [W/lb]	50 Hz [W/kg]	60 Hz [W/lb]	[T]	[T]	[T]	[-]
isovac 1000-100 A	3.00	1.83	8.00	4.88	1.64	1.72	1.83	2300

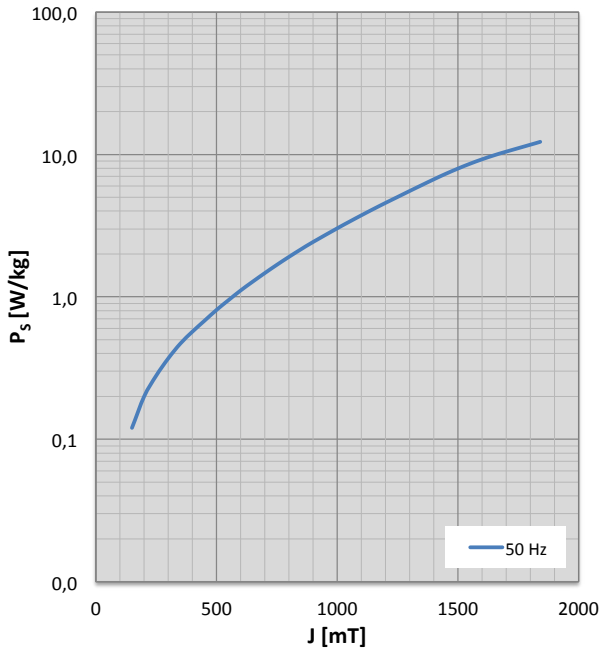
Physical properties:

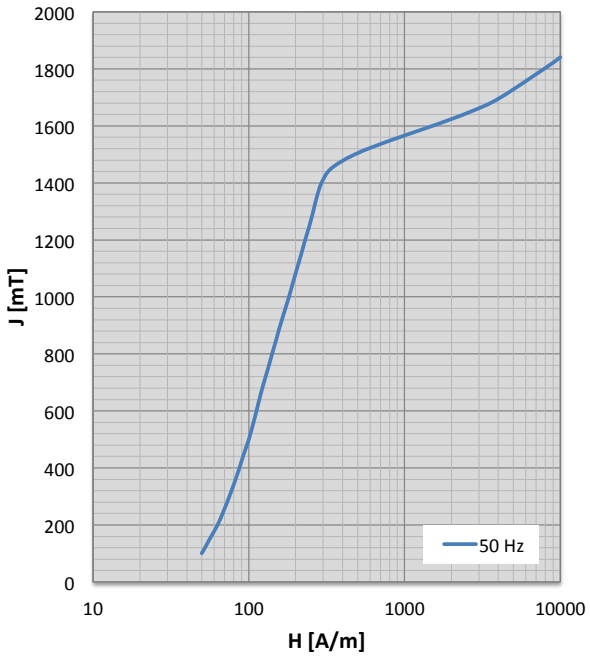
Typical values

Grade named according to isovac®	Density ρ [g/cm³]	Specific electrical resistance ρ_s [μΩcm]	Thermal conductivity λ [W/mK]
isovac 1000-100 A	7.78	31.1	36

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

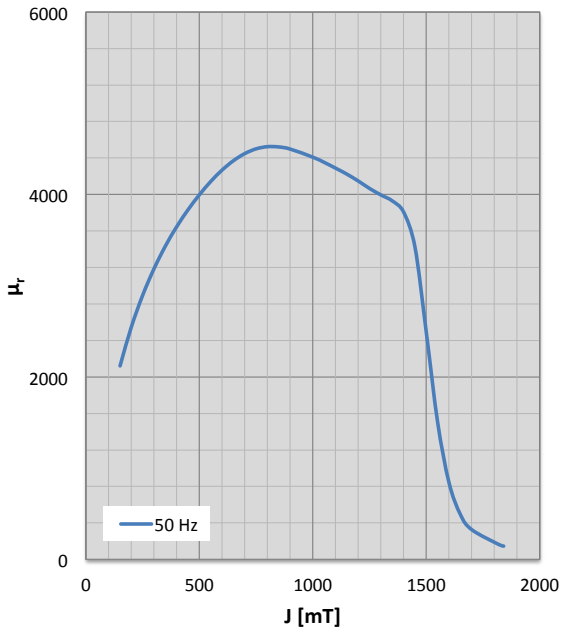
Test direction: Mean value from longitudinal and transverse measurements at indicated frequencies, single-sheet test





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	50	0.04	1589
150	56	0.12	2120
200	63	0.20	2545
250	69	0.28	2894
300	75	0.37	3185
350	81	0.47	3433
400	87	0.57	3646
450	93	0.68	3832
500	100	0.81	3996
550	106	0.95	4142
600	112	1.11	4267
650	118	1.28	4370
700	125	1.47	4448
750	133	1.68	4500
800	141	1.91	4524
850	150	2.16	4521
900	159	2.43	4498
1000	181	3.03	4409
1050	192	3.37	4352
1100	204	3.74	4289
1150	217	4.14	4223
1200	230	4.57	4148
1250	245	5.03	4066
1300	259	5.54	3995
1350	273	6.09	3930
1400	293	6.69	3808
1450	337	7.32	3426
1500	479	7.96	2490
1550	820	8.61	1504
1600	1510	9.25	843
1650	2656	9.87	494
1700	4140	10.47	327
1822	9000	12.00	161
1841	10000	12.27	146

Available Dimensions

Grade named according to isovac®	Delivery form	Width [mm]	Length [mm]
isovac 1000-100 A	Wide strip / Slit strip	19 – 1590	-
	Cut-to-length sheets	300 – 1590	300 – 5000

Deliverable coating systems

Grade named according to isovac®	Uncoated	C-3	Backlack	C-5	C-6
isovac 1000-100 A	✓	✓	○	✓	✓

✓ Available ○ On request

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

voestalpine Stahl GmbH
voestalpine-Straße 3
4020 Linz, Austria
T. +43/50304/15-8018
produktmanagement@voestalpine.com
www.voestalpine.com/isovac

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ONE STEP AHEAD.