

SIWATT^{...} NO 20-15

NON-ORIENTED MAGNETIC STEEL FOR USE AT MEDIUM AND HIGH FREQUENCIES

MECHANICAL PROPERTIES

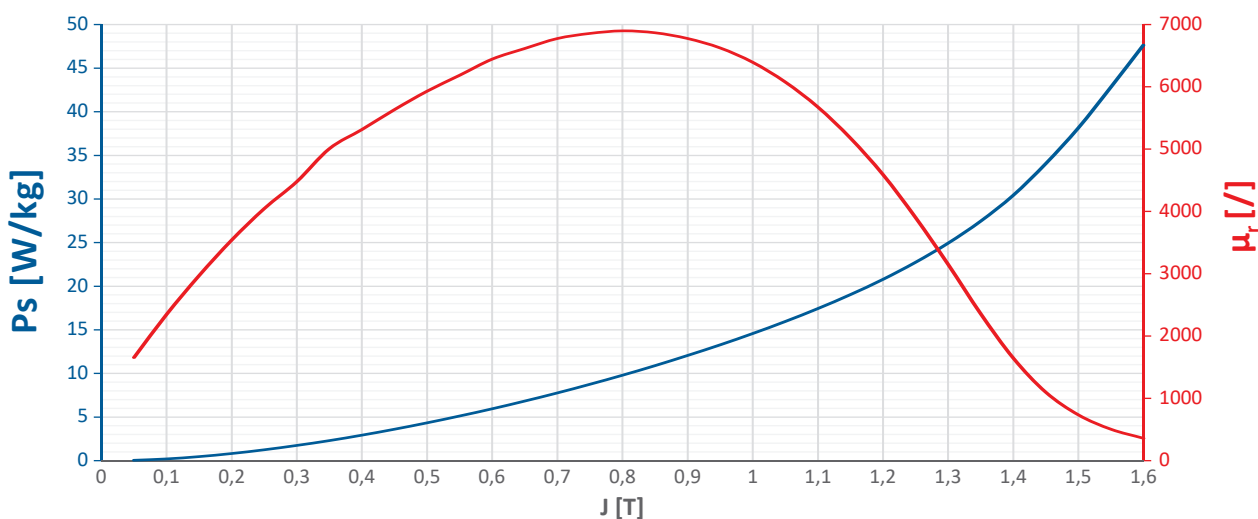
	Designation	Min.	Max.
Yield strength [MPa]	$R_{p0.2}$	270	350
Tensile strength [MPa]	R_m	400	460
Elongation [%]	A_{80}	17	30

Values for yield strength, tensile strength and elongation are given for the transverse direction.

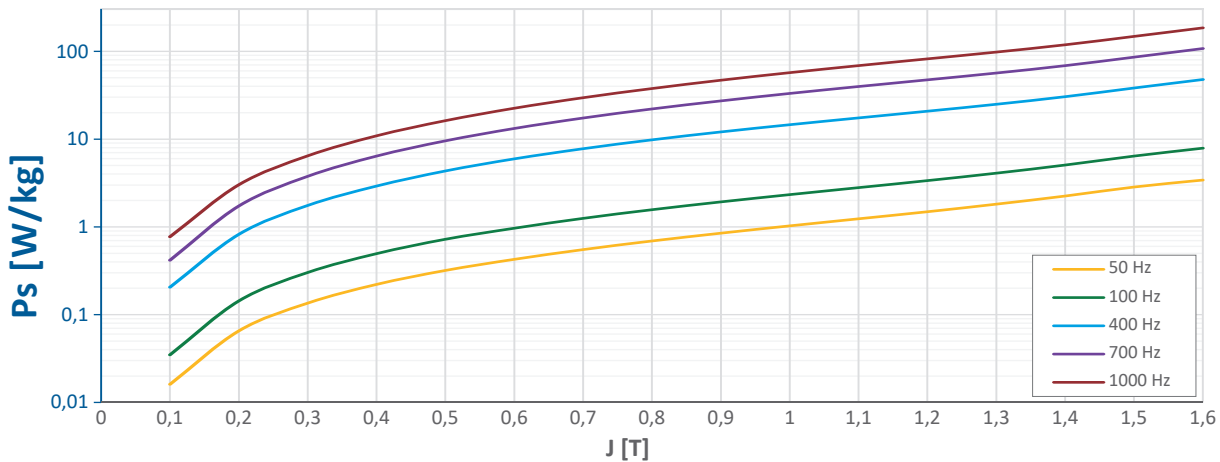
MAGNETIC PROPERTIES

	Guaranteed	Typical value
Core loss [W/kg] at 400 Hz and at 1.0 T	max. 15	14.5
Magnetic polarization [T] at 50 Hz and 2500 A/m	min. 1.48	1.56
Magnetic polarization [T] at 50 Hz and 5000 A/m	min. 1.59	1.66
Magnetic polarization [T] at 50 Hz and 10000 A/m	min. 1.69	1.78

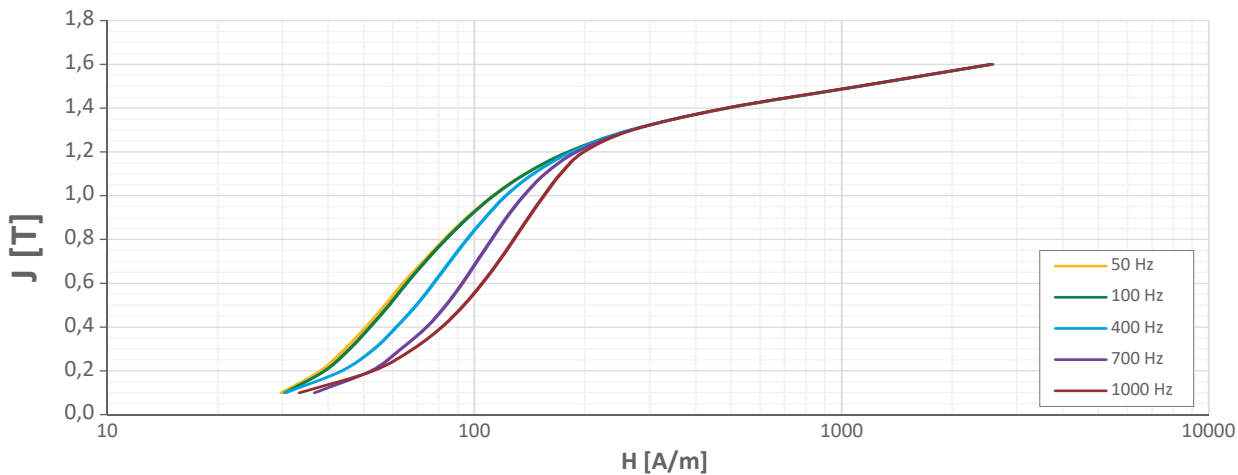
CORE LOSS AND RELATIVE PERMEABILITY CURVES AT 400 Hz (TYPICAL VALUES)



CORE LOSS CURVES AT DIFFERENT FREQUENCIES (TYPICAL VALUES)



MAGNETIZATION CURVES AT DIFFERENT FREQUENCIES (TYPICAL VALUES)



PHYSICAL PROPERTIES

	Typical value
Density at 20 °C [kg/dm³]	7.69
Specific electrical resistance [10-8Ωm]	42.2
Thermal conductivity [W/mK]	29.2

DIMENSIONAL RANGE

SIWATT NO 20-15 is supplied in strips of standard dimensions. For more information please see our general catalogue.

Other dimensions are a matter of agreement between customer and SIJ Acroni.

DELIVERY CONDITION

Cold rolled, finally annealed, coated or uncoated. For coating types and properties please see our general catalogue.

RELATED STANDARDS

SIWATT NO 20-15 is produced in accordance with the following standards:

- EN 10303 – Thin magnetic steel sheet and strip for use at medium frequencies
- EN 10251 – Magnetic materials - Methods of determination of the geometrical characteristics of electrical steel sheet and strip

The information and data in this product data sheet are intended for informative purpose only and may be revised at any time without notice. Presented typical properties of the materials are described only to help readers make their own evaluations and decisions. They are not guaranteed.