

## Product Fact Sheet

# TAPESTAR <sup>XL</sup>



- Fast reel-to-reel, high-resolution, critical current measurement of superconducting tape (1G or 2G HTS tape)
- Contactless technique at liquid nitrogen temperature
- Integrated Dewar in closed cabinet configuration
- Tape heater to avoid moisture condensation
- Industrial tape drive with tension and speed control
- PLC – based control electronics
- Integrated industrial PC
- User interface: keyboard and touch screen

### Technical specifications

#### Tape drive

Transfer speed	0 – 750 m/h
Measurement speed	0 – 200 m/h
Tape tension	5 – 11 N
Tape guiding	front side and back side
Min. bending diameter	100 mm

#### Storage coil dimensions and mounting

Max. coil outer diameter	800 mm
Min. coil inner diameter	200 mm
Max. tape weight	50 kg
Hub diameter (adaptable to customer's specs)	3 “
Max. core width	20 mm

#### HTS tape specs

Max. thickness	200 µm
Max. width	12 <sup>+0.4</sup> mm
Critical current measurement range	50 – 1000 A

#### Measurement specs

Number of sensors across 12mm	21
Axial resolution (@ 200 m/h)	1 mm
Lateral resolution	0.6 mm
Magnetic field	0 – 120 mT
Measurement accuracy with respect to calibration sample	±3% of measuring range (min. 15 A)

#### General requirements

Electrical	Y 400 V 3ph, 50 Hz; 3 kW
Cryogenic	Liquid nitrogen @ 0.5 bar
Ambient temperature	5 ... 35 °C
Permissible humidity	10 ... 90%, no condensation, Use only indoors
Installation location	<1000 m NN, vibration-free

#### Dimensions

Footprint (L x W)	2630 mm x 880 mm
Height	1550 mm
Weight	475 kg
Emission sound pressure level (opened hood / closed hood)	65 dB(A) / 55 dB(A)