

# 344 Superconductors

Type 344S: Stainless steel stabilized YBCO second generation HTS wire

- Designed for use in superconductor coils where extra robustness and current limiting capabilities are critical
- Well suited for rapid thermal cycle applications like compact fault current limiters and high stress coils
- Lengths made to order
- High strength, robust and reliable
- Reinforced and stabilized
- High normal state axial resistance
- Pre-tinned for ease of field joints

**344 superconductors are American Superconductor's new YBCO second generation HTS wires.**



## Mechanical Properties:

Average thickness:	0.275 - 0.310 mm
Minimum width:	4.27 mm
Maximum width:	4.55 mm
Minimum double bend diameter (RT):	25 mm <sup>i</sup>
Maximum rated tensile stress (RT):	300 MPa <sup>i</sup>
Maximum rated wire tension (RT):	20 kg <sup>i</sup>
Maximum rated tensile strain (77K):	0.3% <sup>i</sup>

## Electrical Properties:

Minimum amperage (Ic) <sup>ii</sup>	Average engineering current density - Je (A/cm <sup>2</sup> ) <sup>iii</sup>
70 A	5,200 A/cm <sup>2</sup>
80 A	5,900 A/cm <sup>2</sup>
90 A	6,700 A/cm <sup>2</sup>
≥100 A	Contact factory

Spliced wire available in long lengths

Insulation options: Contact factory

Certificate of Conformance provided.

Certificate of Analysis optionally available. Contact factory.

<sup>i</sup> Greater than 95% Ic retention

<sup>ii</sup> 77K, self-field, 1μV/cm

<sup>iii</sup> Je is calculated value based on average thickness and width



2.2 MVA FCL demonstrator tested within the joint AMSC/Siemens development agreement



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