

Appendix B: Problem specifications

Table A.1: Design specifications for the baseline Flywheel Energy Storage System

Parameter	Value
Flywheel axial length	1000 mm
Flywheel diameter	430 mm
Motor axial length	250 mm
Shaft and PM diameter	84 mm
Magnet thickness	6 mm
AMB rated force	5780 N
Max rotational speed	40,000 r/min
Current controller transfer function	$\frac{v(s)}{\epsilon(s)} = G_{ci}(s) = 258.75 + 1611.54$