

VEHICLE TITLE FS ETR500 COACH

MASSES & INERTIAS

Number of bogies	2
Number of axles (per bogie)	2
Body mass	34.23 Mg
Body roll inertia	54.63 Mgm ²
Body pitch inertia	1821.0 Mgm ²
Body yaw inertia	1760.0 Mgm ²
Bogie mass	2.76 Mg
Bogie roll inertia	2.034 Mgm ²
Bogie pitch inertia	2.504 Mgm ²
Bogie yaw inertia	4.071 Mgm ²
Wheelset mass	1.58 Mg
Wheelset roll and yaw inertia	0.753 Mgm ²

DIMENSIONS

Semi pivot spacing	9.5 m
Semi wheelbase	1.5 m
Wheel radius	0.44 m
Body centre of gravity height above rail level	1.5 m
Bogie centre of gravity height above rail level	0.68 m

PRIMARY SUSPENSION

Lateral stiffness (per axle)	4.35 MN/m
Vertical stiffness (per axle)	1.61 MN/m
Yaw stiffness (per axle)	14.0 MNm/r
Lateral damper rate (per axle)	- MNs/m
Vertical damper rate (per axle)	0.015 MNs/m
Vertical friction breakout (per axle)	- KN
Height above rail level of lateral springs	0.44 m
Lateral semi spacing of vertical springs	0.96 m
Height above rail level of lateral dampers	- m
Lateral semi spacing of vertical dampers	0.96 m
Lateral semi spacing of vertical friction	- m