Super Express Key Facts

The Super Express Train

Train Characteristics

	10-Elec-IC[i]	10-Bi-IC	10-Self-IC	10-Self-IU	5-Elec-Co	5-Bi-Co
	Type 5	**Type 2**	**Type 1A**	**Type 1B**	**Type 3**	**Type 4**
Train length (m)	259.9	255.0	250.2	250.2	129.9	125.0
width (m)	2.7					
Car length (m)	26m (coach), 21m (Diesel Power Car)					
Body shell material	Aluminium (with Steel Diesel Power Car)					
Friction stir welded	✓					
Train tare mass (kg)	412,500	428,200	438,100	437,700	219,400	233,600
Mass (tons/m)	1.586	1.679	1.752	1.751	1.688	1.869
Noise (dBA) Internal External	NR 58, PSIL < 55 Pass-by Noise $L_{pAeq,Tp}$ < 88 (200km/h)					
Air con. redundancy	2/car	2/car	2/car	2/car	2/car	2/car
Electronic SRS[ii]	✓					
Passenger WiFi	✓					
Pressure sealed vehicle	✓					
Secondary suspension	Air bag					
Bogie wheel base (m)	2.5					
Bogie centres (m)	17					

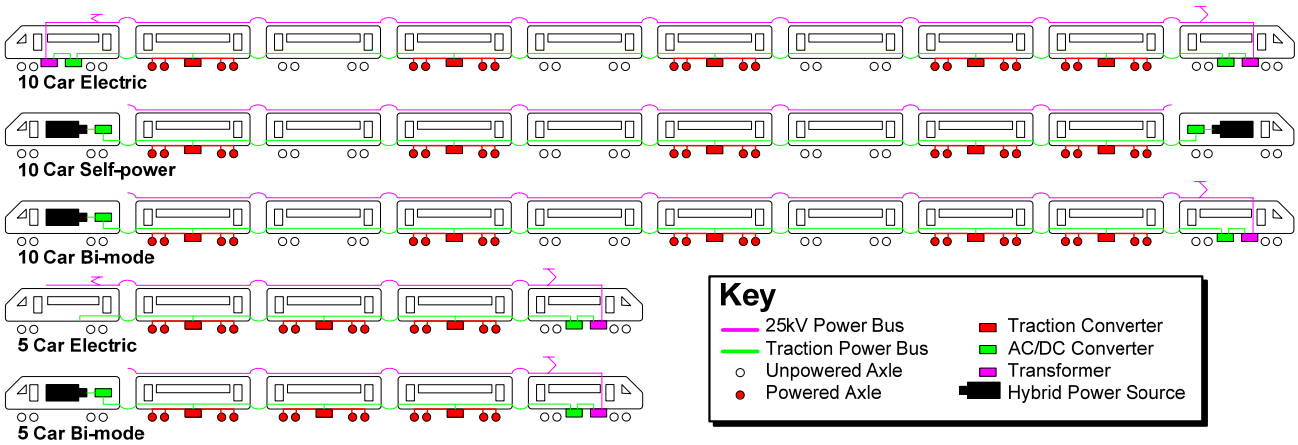
Traction Characteristics

	10-Elec-IC	10-Bi-IC	10-Self-IC	10-Self-IU	5-Elec-Co	5-Bi-Co
	Type 5	**Type 2**	**Type 1A**	**Type 1B**	**Type 3**	**Type 4**
Max. Speed (mph)	125 (capable of 140 with minor modifications)					
Max acceleration(m/s/s) Electrified routes Non-electrified routes	 0.75 N/A	 0.75 0.75	 0.75 0.75	 0.75 0.75	 0.75 N/A	 0.75 0.75
Min. Simulated Running Time[iii] (min)	226 KX to Edin	131 Edin-Aber	75 Pad to Bri	75 Pad to Bri	158 KX-NCL	76 Pad to Bri
Type of traction drive	Hitachi IGBT					
Approx. power at rail (MW)	4	4(elec) 2(non-elec)	4	4	2	2
Approx. starting effort (kN)	400	400	400	400	200	200
No. pantographs	1 + 1 spare	1	0	0	1 + 1 spare	1
Regenerative Braking	✓					
No. powered axles	20	20	20	20	12	12
No. motored bogies	10	10	10	10	6	6
No. trailer bogies	10	10	10	10	4	4

Interior Characteristics

Note: the Hitachi Super Express train is designed to meet the train technical specification (which has been published by the Department for Transport: http://www.dft.gov.uk/pgr/rail/pi/iep). The specification requires that the internal characteristics of the train offer defined flexibility to the Train Operators, allowing customisation to meet the needs of passengers, which may differ from route to route. Therefore, while the details below meet the requirements of the train technical specification for the six different bid scenarios, the train operating companies may choose to make changes to the internal characteristics of the trains that are finally delivered.

	10-Elec-IC	10-Bi-IC	10-Self-IC	10-Self-IU	5-Elec-Co	5-Bi-Co
Items	**Type 5**	**Type 2**	**Type 1A**	**Type 1B**	**Type 3**	**Type 4**
Total Seating capacity	649	610	552	581	351	289
Seat pitch						
Standard	875 (Uni) 1,900 (Bay)	875 (Uni) 1,900 (Bay)	875 (Uni) 1,900 (Bay)	825 (Uni) 1,810 (Bay)	825 (Uni) 1,810 (Bay)	825 (Uni) 1,810 (Bay)
First class	980 (Uni) 1,930 (Bay)	980 (Uni) 1,930 (Bay)	980 (Uni) 1,930 (Bay)	980 (Uni) 1,930 (Bay)	980 (Uni) 1,930(Bay)	980 (Uni) 1,930 (Bay)
No. toilets SST[iv]	10	9	8	8	4	3
UAT[v]	2	2	2	2	1	1
No. Luggage Racks	19	17	15	15	9	7



[i] Elec = Electric, Bi = Bi-mode, Self = Self-power. IC = Intercity, IU = Interurban, Co = Commuter – these descriptions refer to the train types and interior scenarios defined in the Train Technical Specification.
[ii] Seat Reservation System
[iii] These simulated minimum running times are as per Appendix D of the ITT. They are "running on green" with specified station stops, but exclude any station dwell time or other operational margins, that have to be added to create the working timetable.
[iv] SST – Space Saver Toilet
[v] UAT – Universal Access Toilet