

Equipment details

Bodies:	Aluminium extrusions welded and huckbolted (FICAS Technology). Through gangways provided between car with internal and external bellows and overlapping sliding plates.
Bogies:	Bombardier Flexible frame.
Couplers:	Wedglock with pneumatic connections only on the front of DM cars, bolted bar coupler flange between cars.
Traction System:	Bombardier 3 phase AC, all axles motored and one inverter per car. Regenerative and Rheostatic braking.
Compressors:	Knorr-Bremse VVI20T oil free reciprocating – 3 Phase AC Motor.
Brakes:	Knorr-Bremse EP2002 with PEC7 actuators.
Auxiliary power Supplies:	Bombardier static converter, two per train
Saloon lighting:	21 fluorescent T5 Tubes via individual inverters per car.
Emergency lighting:	5 battery-fed fluorescent T5 Tubes via individual inverters per car normally forming part of the main saloon lighting.
HVAC:	Single roof mounted saloon air conditioning module with dual refrigeration circuits supplying ceiling mounted air ducts. Separate module on DM cars for cab air conditioning with fallback air from the saloon module. Internal and external smoke detection.
Passenger Information:	An LED external facing front destination display with separate train number display per train front. One external platform facing destination LED display per vehicle side. Two double sided internal side facing Saloon LED displays per car.
CCTV:	OPO TTCCTV displayed on 2 monitors in cab via microwave transmission. Saloon CCTV system viewable in cab when stationary and recorded digitally.
Doors:	Six electrically operated sliding doors per side, externally hung and configured as two double doorways and two single door ways. Fitted with obstacle detection and sensitive edge plus



S7 Stock

District, Circle and Hammersmith & City lines



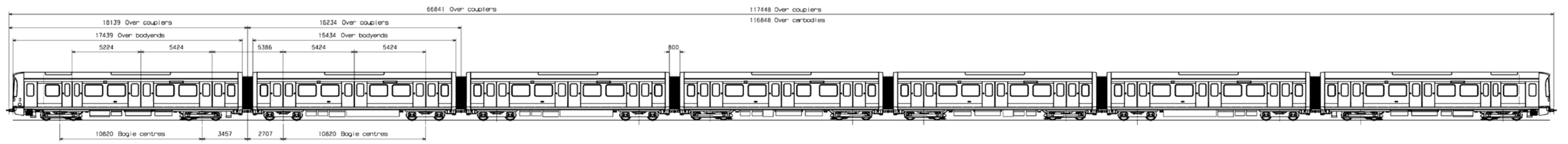
Built by Bombardier Transportation UK, Derby 2008-2014
Due to enter service in 2012 - 2014
Maintained by : LUL Nominee Company SSL

Principal characteristics

Track gauge:	1435mm
Current system:	630v dc 3rd and 4th rail, (capable of 750v operation), shoe gear fitted to DM and MS cars
Types of vehicle:	DM : Driving Motor Car M1, M2 : Non Driving Motor M2D : Non Driving Motor with De-icing Equipment
Formation per unit:	7 car blocked train
Formation per train :	DM-M1-MS-MS-M2-M1-DM or DM-M1-M2-MS-MS-M1-DM
Number of trains:	133 seven car.
Operation:	Conventional One Person Operated (OPO) pre-signalling upgrade Full Automatic Train Operation (ATO) with automatic door opening Manual Driving (Protected Manual or Restricted Manual)

Information sheet date: March 2009

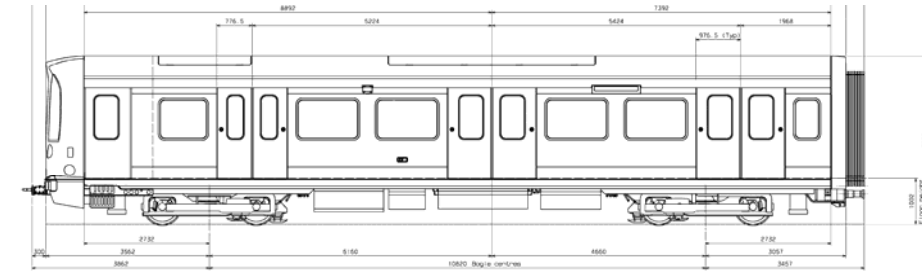




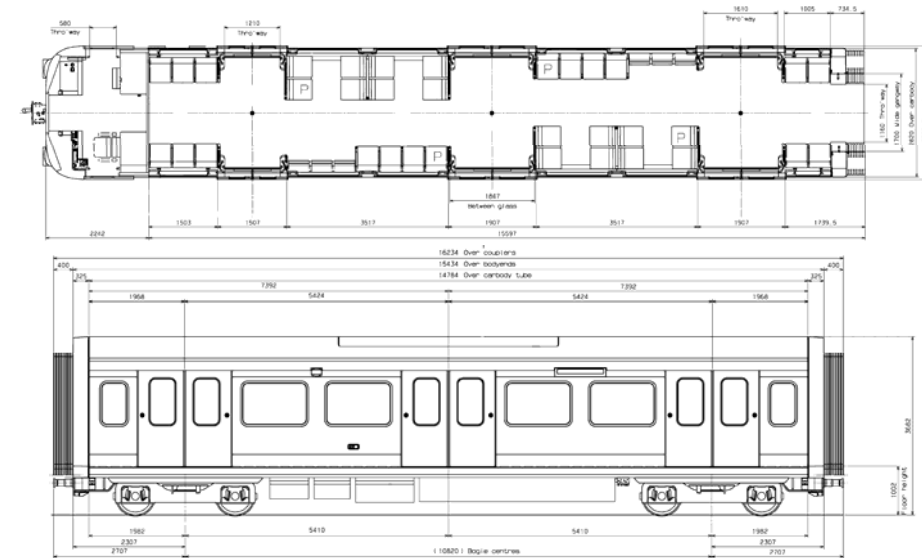
Vehicle details and statistics

	DM	M1	M2	MS
Length over body ends:	17439mm	15434mm	15434mm	15434mm
Width of body:	2820mm	2820mm	2820mm	2820mm
Car height:	2883mm	2883mm	2883mm	2883mm
Tare weight	32.9 tonnes	30.3 tonnes	27.2 tonnes	28.7 tonnes
Tare weight of 8-car train:	214.4 tonnes inc gangway			
Passenger door open width (1 st set)	1210mm	1610mm	1610mm	1610mm
Passenger door open width (others)	1610mm	1610mm	1610mm	1610mm
Car number series:	21301-21566	22301-22566	23001-23116*	24301-24566
	*excluding even car number 23002 – 23056. Replaced with M2D, deicing cars numbers 25002 to 25056 (even only).			
Vehicles in stock:	116	116	116	116
Grand total in stock	464			

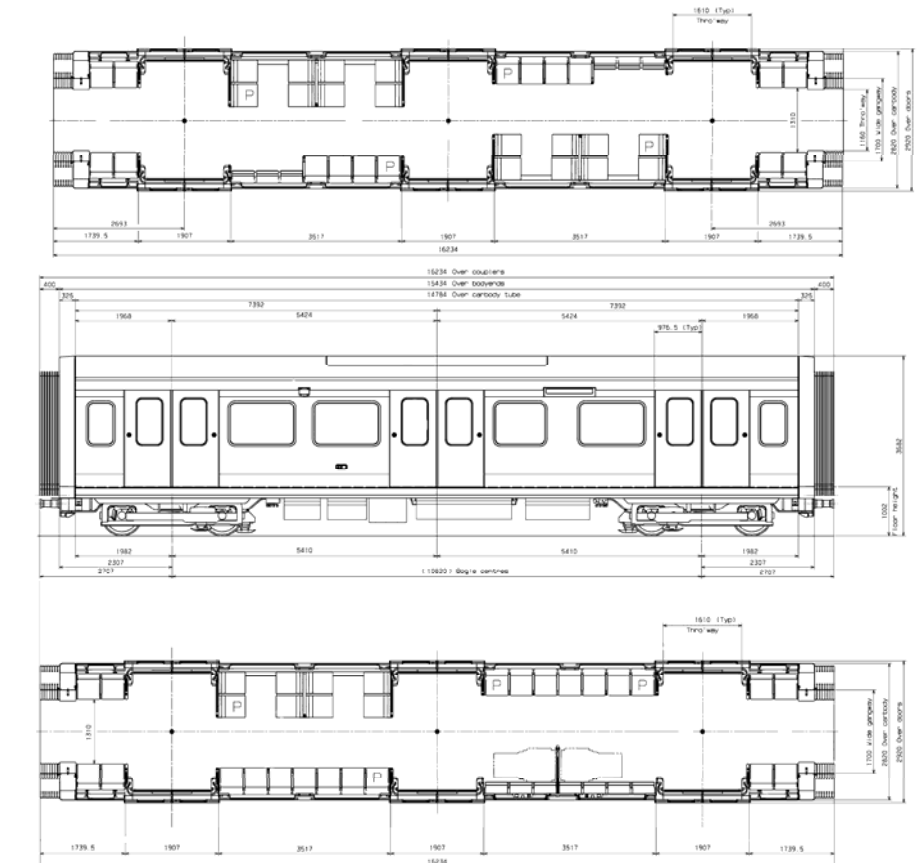
DM Car



M1 / M2 Car



MS Car



Passenger accommodation:

Please note that standing capacity figures exclude seating capacity

Seating capacity: (Number of full seats per train)	256
Seating capacity : (Number of tip up seats, excluding wheelchair spaces)	50
Wheelchair spaces/ additional tip up seats	4
Standing capacities (m ²) ^a :	
Doorway	106.02
Throughway (tip up seats used for standing space)	83.5
Throughway (tip up seats in use)	68.4
Maximum observed standing capacity (5 customers per m ²)	1210
Theoretical crush standing capacity (7 customers per m ²) ^c	1218
Theoretical design crush standing (E6325 A2)	1350

NOTES:

- Capacities here are figures **calculated** from floor area for design purposes
- For propulsion performance rating, tip up seats in use
- For structural and braking capacity (and JTC), tip up seats in use