Manchester, United Kingdom

FLEXITY Swift

Bombardier Transportation will soon be helping to relieve congestion by moving people swiftly and comfortably around the busy conurbation of Greater Manchester in an environmentally friendly manner. *BOMBARDIER *FLEXITY** Swift light rail vehicles will increase the attractiveness of Manchester public transport services and be able to positively influence mobility for people travelling within and around this region.**

In the course of the first stage of the programme for enhancing the Metrolink network 40 *FLEXITY* Swift light rail vehicles have been ordered by the Greater Manchester Passenger Transport Executive (GMPTE). The new vehicles will not only tackle overcrowding at peak times, but also assist in improving service reliability and performance.

The new Manchester vehicles are based on the *FLEXITY* Swift family of light rail vehicles, which are already in successful revenue service throughout Europe including Cologne and Bonn (Germany), Stockholm (Sweden) and the Netherlands. Wide double-doors ensure a rapid passenger flow and multi-purpose areas provide space for prams and wheelchair users. As a reliable partner for transport operators in the U.K., Bombardier vehicles are already in successful daily revenue service in London-Docklands, London-Croydon and Nottingham.

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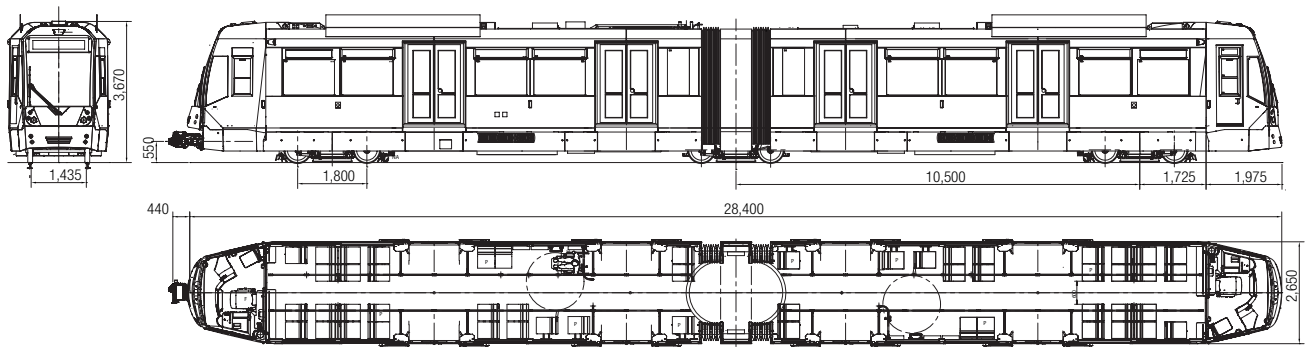

General Data

Contract award	April 2007
Type of vehicle	*BOMBARDIER FLEXITY* Swift HF
Model	bi-directional
Owner	Greater Manchester Passenger Transport Executive (GMPTE)
Quantity	40
Tram consist	3 modules

Dimensions and Weight

Length of vehicle	28.4 m
Height	3,670 mm
Width	2,650 mm
Entrance height above TOR	
• vehicle empty, new wheels	955 mm
• vehicle loaded, wheels worn	899 mm
Floor height above TOR	980 mm
Doors	
• Electric double-sliding plug doors	2 x 4
- door clearance height	2,024 mm
- door clearance width	1,305 mm
Aisle width	min. 600 mm
Wheel diameter (new / worn)	660 / 580 mm
Gauge	1,435 mm
Minimum horizontal curve radius	25 m
Minimum vertical curve radius (crest/sag)	400 m
Car weight (empty)	39.7 t
Maximum axle load	10.45 t
Buffer load	400 kN

Technical Characteristics

Nominal current supply: 750 Vdc
Energy recuperation
3-phase asynchronous motors
120 kW Motor power
Air-cooled motor
2 powered bogies - 1 trailer bogie
• Rubber/metal primary suspension
• Coil spring secondary suspension
• Sanders
• Anti slip, anti skid system
Automatic coupling system
Electrical service brake: regenerative
Mechanical brake: disk brake
Magnetic brake: 6 x 66 kN
Air conditioned cab
Passenger information system

Performance and Capacity

Maximum speed	80 km/h
Medium acceleration (fully loaded) from 0 … 70 km/h	1.08 m/s²
Deceleration	
• service brake	1.03 m/s²
• emergency brake	2.54 m/s²
Maximum gradient	65 ‰
Seated passengers (incl. tip up seats)	60
Standing passengers (4 pass./m²)	146
Multipurpose Areas (for wheel chairs and prams)	2

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