URBANAUT® VEHICLES AND GUIDEWAY TECHNICAL DATA FOR AN INTERMEDIATE SIZE SYSTEM

These technical data are general information. For additional information, descriptions and data, see the website, "Urbanaut.com

A. **Vehicle Type and Adaptation**

Type of vehicle: Monorail vehicle on top of runway

2. Guideway Layout: Any type of configuration (loops or bi-directional)

Vehicles are easily switched from one guideway to another, elevated, tunnel or surface.

Applications: Freeways, urban areas, city centers, park and ride systems, shopping centers, 3.

airports, exhibitions, tourist resorts, sports and recreation.

Vehicle and Train Combinations: В.

- Single vehicles with low or high floor
- Dual vehicles (2 end cars) 2.
- Standard minimum train: 3 vehicles 3.
- Components for all trains:

Front car Rear car Middle car

- Example: 7 car train: 2 end cars + 5 middle cars
- Vehicle combinations: High floor and low floor (Flexible seating for high floor) Walk through from end-to-
- Walking space provided from front to rear end of each train

C. Vehicle Dimensions:

1.	Overall width:	2.35m (7.5ft)
2.	Single vehicle lengths	, ,
	Type a (PRT type)	3.0m (10ft)
	Type b:	5.5m (18ft)
	Туре с:	7.3m (24ft)
	Type d (Standard type)	9.0m (30ft)
	Middle cars for trains:	5.7m (22ft)

Overall height.

PRT Type: 2.0m (6.6ft) a. Low in floor single vehicle: 2.8m (9.3ft) High floor in trains: 3.2m (10.5ft) Floor to ceiling height: 2.05m (6.7ft)

Doorway opening outside sliders: 2.0m (6.6ft) height x 1.25m (4.1ft) width; 5.

Number of doors for end car: Number of doors for middle car: 2 or 4

Vehicle Weights (Empty) D.

Single Vehicle: 1. Varies with length

2. Train of vehicles:

> a. End cars: 3,500kg (7,700 lbs) Middle cars: 3,200kg (7,000lbs) b.

E. **Vehicle Components:**

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1. Car body: Composite, stainless steel and/or Aircraft aluminum 2. Boaie: Aluminum, composite material, or stainless steel

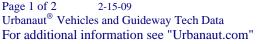
3. Windows: Fixed, tinted safety glass

Laterally moveable, tinted safety glass 4. Doors:

(Standard) 2 traction tires + 4 guide tires on aluminum wheels for each bogie, Tires & Wheels:

special high load capability, easily replaceable, with run flat safety tire inserts.

Optional: Bogie with steel wheels



F. Vehicle Mechanical, Electrical and Control

1. Primary power: 750 AC, substation line voltage mounted to guide rail or inside of guideway

2. Propulsion: Alt I: Powerful electromagnetic motor, in-wheel direct drive propulsion, with gear

Alt II: Maglev linear induction motor (MLIM)

Service braking: Dynamic regenerative
 Emergency braking: Drum or electric disk brake
 Suspension: Pneumatic and springs
 Air Conditioning: Redundant, high capacity

7. Fire Safety: Design and materials to meet ASTM E-119 and NFPA compliant

G. Vehicle Emergency Evacuation

Special provision for evacuating passenger for elevated guideways

H. Automatic Vehicle Control:

Consists of 3 vital safety sub-systems:

- a. Automatic Vehicle Propulsion
- b. Automatic Vehicle Operation
- c. Automatic Vehicle Supervision

The equipment is distributed along the inside of the guide way and at the central control station.

I. Passenger Service and Communication

Automatic ticketing, Audio-Visual Communication on vehicle and at stations.

J. Substations Power Supply: Located along guideway approx. every 2.0 km (1.25 miles)

Power required at each substation: Standard 15 kv

K. Guideway – Elevated Beam way, Concrete Slab for Tunnel and Surface

Special elevated structures and stations designed off-street, that do not interfere with street traffic.(See website)

- 1. Foundation: a. Standard spread concrete type
 - b. Standard Pile Foundation
 - Special foundations with multiple pilings
- 2. Width at surface: 1.2m (4.0ft) wide concrete slab (with center rail)
- 3. Width of elevated prefabricated concrete beam way or hybrid composite structure with concrete running slab: 1.1m (43 in)
- 4. Height of elevated beam way (normal): 1.0m (40in) + guide rail = 0.4m (15in)
- 5. Length of spans:; 30m (100ft) to 45m (150ft) depending on local applications.
- 6. Minimum clearance height under beam and cantilevers: 4.5m (15ft)

Gradient (slope): 12%
 Min. horizontal curve: 38m (125ft)
 Min. vertical curve: 300m (1000ft)

L. Guideway Switches (4 types – depending on application):

Type a: Multiple High Speed Guideway Switch – Flexing of Guide rail

Type b: Non-flexible swivel (for 2 guide ways crossing at same level)
Type c: On-board switch (for off-line stations and maintenance yard)

Type d: Passive switch for low speed vehicles and service

M. Vehicle Performance Characteristics

Max. Speed (Standard): a. 100 km/hr (60mph) for stations less than 1.6 km (1.0 miles) apart

b. For stations further apart, the max. speed can be increased (See website)

Max. Acceleration 1.2 m/sec2 (3.9ft/sec2)
Max Deceleration: (Normal) 1.2 m/sec2 (3.9ft/sec2)

Min. vehicle operational turning radius: 38m (125ft) (Smaller turning ability at L: c&d above)

Min. Interval between trains: Standard 1 ½ minutes (90 secs.)

N. Vehicle and Train Passenger Capacity:

Single Vehicle, Type a: 6 Seated + Wheel Chair

Single Vehicle, Type b: 10 Seated + 25 Standees + 1 wheel chair Single Vehicle, Type c: 18 Seated + 25 Standees + 2 wheel chairs 3-Car train, nominal loading: 58 Seated + 72 Standees

Max. Capacity, Large Train: 25,000 pph or more on single guide way 50,000 pph or more on dual guide way

