

## PPM 50 - PPM 60

### Description

A flexible small-capacity rail vehicle for routes where passenger flows are relatively low but a high quality travel experience is desired. Available in high floor configuration suitable for level access from standard height railway platforms, or low floor configuration suited to tramway use. Flexible external appearance and internal layout. Traction power derived from small automotive internal combustion engine for longer routes or from intermittent electric supply, requiring contact with power source at stopping points only (where stops are close together and zero emission operation is required).



PPM 50 in high floor configuration

### Typical Details

#### **Dimensions:**

Length 8.7m (PPM 50) / 9.6m (PPM 60)  
Width 2.4m (excluding step plates if required)  
Height 3.2m (high floor) / 2.7m (low floor)

#### **Floor height above rail level:**

Low floor configuration 0.45m  
High floor configuration 0.915m

#### **Passenger accommodation:**

Typical capacity 20-25 seated plus 30-35 standing (variable)  
1 wheelchair position  
Seating to suit customer requirements

#### **Primary driveline and transmission:**

|                              |   |
|------------------------------|---|
| Self-powered vehicles        | Engine Ford DSG423 (propane gas or diesel fuel)<br>Primary transmission via gearbox, freewheel clutch and Tandler bevel box<br>4 'V-belt' belt transmission to flywheel |
| Intermittent electric supply | 70V DC motor (requires 20kW supply at stopping points)<br>'Charge' time at stopping points 30s, distance between stops up to 800m                                       |

#### **Flywheel energy storage:**

Effective speed range 1,000-2,600rpm  
Flywheel diameter/mass 1m/500kg (self-powered), 1.2m/750kg (intermittent electric)

#### **Secondary transmission:**

Pneumatic clutch and Linde two-way hydrostatic transmission and gearbox to driven axle  
Twin-axle drive optional

#### **Braking:**

Regenerative service braking against flywheel via secondary transmission  $1\text{m/s}^2$   
Emergency braking by spring-on/air-off disc brakes  $3\text{m/s}^2$   
Air operated sanding gear fitted

#### **Running gear:**

Gauges 1000mm-1676mm  
Wheel diameter 610mm  
Rubber chevron suspension

#### **Auxiliary power:**

24V control and vehicle systems, 12V engine systems, independent batteries

#### **Maximum speed:**

65km/h on suitable trackwork

#### **Minimum curve radius:**

15m for 1435mm gauge vehicles; smaller radii possible on narrower gauges

#### **Maximum gradient:**

1 in 15 (optional modification for 1 in 10)



PPM 60 in low floor configuration