

Section 1: General Information

0. Identification of the type

0.1 0.2 0.4 Type ID: 71-100-0001-0-001-001

0.3 Date of record: 2021-11-26

1. General Information

1.1 Type name: Palfinger Bimodal IVECO BPG

1.2 Alternative type name:

1.3 Manufacturer:

1.3.1 Manufacturer identification data:

1.3.1.1 Name of organisation: PALFINGER IBERICA MAQUINARIA

1.3.1.2 Registered business number: B87456489

1.3.1.3 Organisation code:

1.3.2 Manufacturer contact data:

1.3.2.1 Address of organisation, street and number: Sierra de Guadarrama, 2

1.3.2.2 Town: San Fernando de Henares (MADRID)

1.3.2.3 Country code: ES

1.3.2.4 Post code: 28830

1.3.2.5 E-mail address: palfinger@palfinger.es

Registration Method: New Type

Registered Vehicle Type:

1.4 Category: Special Vehicles

1.5 Subcategory: Self-propelled special vehicle

1.6 Platform: IVECO

Section 2: Conformity with TSI

2.1 Conformity with TSI and Sections not complied with:

1000mm / Autonomous / None **Not conform to any TSI**

1435mm / Autonomous / None **Not conform to any TSI**

1668mm / Autonomous / None **Not conform to any TSI**

2.3 Applicable specific cases (specific cases conformity with which has been assessed)

2.2 Reference of 'EC type examination certificates'

Section 3: Authorisations

Spain

3.0 Area Of Use: ES(Spain)

3.1.1 Member state of authorisation: Spain(ES)

3.1.2.1 Status: Valid

3.1.2.2 Validity of Authorisation (until):

3.1.2.3 Coded conditions for use and other
restrictions:

1000mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.3 Gauge 1000

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

1435mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

1668mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.8 Gauge 1668

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

3.1.2.4 Non-coded conditions for use and other restrictions:

1000mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [\leq 5 km/h].

Para los trabajos en vía, la dotación del vehículo deberá incluir, como mínimo, dos dispositivos de comunicación de radio de largo alcance tipo "walkie-talkie" o teléfono móvil. En cualquier caso, se deberá disponer de cargador para dichos dispositivos.

En caso de rescate, debe ser remolcado mediante lanza auxiliar. Velocidad máxima 5 km/h. La dotación del vehículo debe incluir lanza auxiliar.

La pendiente máxima de circulación será de 40‰ [mm/m].

El vehículo no puede ser incorporado a un tren.

El vehículo no podrá remolcar a ningún otro cuando se emplee como vehículo ferroviario.

1435mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [\leq 5 km/h].

Para los trabajos en vía, la dotación del vehículo deberá incluir, como mínimo, dos dispositivos de comunicación de radio de largo alcance tipo "walkie-talkie" o teléfono móvil. En cualquier caso, se deberá disponer de cargador para dichos dispositivos.

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La pendiente máxima de circulación será de 40‰ [mm/m].

El vehículo no puede ser incorporado a un tren.

El vehículo no podrá remolcar a ningún otro cuando se emplee como vehículo ferroviario.

1668mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [\leq 5 km/h].

Para los trabajos en vía, la dotación del vehículo deberá incluir, como mínimo, dos dispositivos de comunicación de radio de largo alcance tipo "walkie-talkie" o teléfono móvil. En cualquier caso, se deberá disponer de cargador para dichos dispositivos.

En caso de rescate, debe ser remolcado mediante lanza auxiliar. Velocidad máxima 5 km/h. La dotación del vehículo debe incluir lanza auxiliar.

La pendiente máxima de circulación será de 40‰ [mm/m].

El vehículo no puede ser incorporado a un tren.

El vehículo no podrá remolcar a ningún otro cuando se emplee como vehículo ferroviario.

3.1.3.1.1 Date of the original authorisation: 2021-11-25

3.1.3.1.2 Authorisation holder:

3.1.3.1.2.1 Authorisation holder identification data:

3.1.3.1.2.1.1 Name of organisation: PALFINGER IBERICA MAQUINARIA

3.1.3.1.2.1.2 Registered business number: B87456489

3.1.3.1.2.1.3 Organisation code:

3.1.3.1.2.2 Authorisation holder contact data:

3.1.3.1.2.2.1 Address of organisation, street and number: Sierra de Guadarrama, 2

3.1.3.1.2.2.2 Town: San Fernando de Henares (MADRID)

3.1.3.1.2.2.3 Country code: ES

3.1.3.1.2.2.4 Post code: 28830

3.1.3.1.2.2.5 E-mail address: palfinger@palfinger.es

3.1.3.1.3 Authorisation document reference: ES8020210220

3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:

ES/00000B874
56489/2021/0
00001

3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:

1000mm / Autonomous / None

2015/2299/EU

1.2.1 Maintenance instructions

2 Structure and mechanical parts

2.1.2.1 Load conditions and weighed mass

2.1.5 Fixing of devices to car body structure

2.2.2 Characteristics of rescue coupling

3 Track interaction and gauging

3.1 Vehicle gauge

3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius

3.3.2 Wheelset (complete)

3.3.3 Wheel

3.3.4 Wheel/rail interaction influencing systems

3.3.6 Bearings on the wheelset

3.3.8 Axle bearing condition monitoring

3.4 Limit of maximum longitudinal positive and negative acceleration

4.1 Functional requirements for braking at train level

4.4.1 Emergency braking command

4.4.2 Service braking command

4.4.3 Direct braking command

4.4.5 Parking braking command

4.5 Brake performance

4.5.1 Emergency braking performance

4.5.2 Service braking performance

4.5.3 Calculations related to thermal capacity

4.5.4 Parking brake performance

4.5.5 Brake performance calculation

4.7.5 Parking brake

6 Environmental conditions and aerodynamic effects

7.2.1 Vehicle marking

7.2.2 External lights

7.2.2.1 Headlights

7.2.2.2 Marker lights

7.2.2.3 End-of-train signal

7.2.2.4 Lamp controls

7.2.3 Audible signal systems

13 Specific operational requirements

1435mm / Autonomous / None

2015/2299/EU

1.2.1 Maintenance instructions

2 Structure and mechanical parts

2.1.2.1 Load conditions and weighed mass

2.1.5 Fixing of devices to car body structure

2.2.2 Characteristics of rescue coupling

3 Track interaction and gauging

3.1 Vehicle gauge

3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius

3.3.2 Wheelset (complete)

3.3.3 Wheel

3.3.4 Wheel/rail interaction influencing systems

3.3.6 Bearings on the wheelset

3.3.8 Axle bearing condition monitoring

3.4 Limit of maximum longitudinal positive and negative acceleration

4.1 Functional requirements for braking at train level

4.4.1 Emergency braking command

4.4.2 Service braking command

4.4.3 Direct braking command

4.4.5 Parking braking command

4.5 Brake performance

4.5.1 Emergency braking performance

4.5.2 Service braking performance

4.5.3 Calculations related to thermal capacity

4.5.4 Parking brake performance

4.5.5 Brake performance calculation

4.7.5 Parking brake

6 Environmental conditions and aerodynamic effects

7.2.1 Vehicle marking

7.2.2 External lights

7.2.2.1 Headlights

7.2.2.2 Marker lights

7.2.2.3 End-of-train signal

7.2.2.4 Lamp controls

7.2.3 Audible signal systems

- 13 Specific operational requirements
- 1668mm / Autonomous / None
- 2015/2299/EU
- 1.2.1 Maintenance instructions
- 2 Structure and mechanical parts
 - 2.1.2.1 Load conditions and weighed mass
 - 2.1.5 Fixing of devices to car body structure
 - 2.2.2 Characteristics of rescue coupling
- 3 Track interaction and gauging
 - 3.1 Vehicle gauge
 - 3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius
 - 3.3.2 Wheelset (complete)
 - 3.3.3 Wheel
 - 3.3.4 Wheel/rail interaction influencing systems
 - 3.3.6 Bearings on the wheelset
 - 3.3.8 Axle bearing condition monitoring
 - 3.4 Limit of maximum longitudinal positive and negative acceleration
- 4.1 Functional requirements for braking at train level
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 - 4.4.2 Service braking command
 - 4.4.3 Direct braking command
 - 4.4.5 Parking braking command
 - 4.5 Brake performance
 - 4.5.1 Emergency braking performance
 - 4.5.2 Service braking performance
 - 4.5.3 Calculations related to thermal capacity
 - 4.5.4 Parking brake performance
 - 4.5.5 Brake performance calculation
 - 4.7.5 Parking brake
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 - 7.2.2.2 Marker lights
 - 7.2.2.3 End-of-train signal
 - 7.2.2.4 Lamp controls

7.2.3 Audible signal systems

13 Specific operational requirements

Área de uso España RFIG anchos de vía 1000 mm / 1435 mm / 1668 mm

Declaración del Proponente.r1.pdf y fecha 05/10/2021

3.1.3.1.6 Comments:

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

3.1.3.1 Initial Registration

3.1.2.3 Coded conditions for use and other restrictions:

1000mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.3 Gauge 1000

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

1435mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

1668mm / Autonomous / None

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 60 m

1.3 Speed restrictions in Km/h: 25 km/h

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1

2.2 Wheelset gauge: 2.2.8 Gauge 1668

2.3 No CCS on board: True

3 Environmental restrictions

3.1 Climatic zone: 3.1.3 T3

3.1.2.4 Non-coded conditions for use and other restrictions:

1000mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [\leq 5 km/h].

Para los trabajos en vía, la dotación del vehículo deberá incluir, como mínimo, dos dispositivos de comunicación de radio de largo alcance tipo "walkie-talkie" o teléfono móvil. En cualquier caso, se deberá disponer de cargador para dichos dispositivos.

En caso de rescate, debe ser remolcado mediante lanza auxiliar. Velocidad máxima 5 km/h. La dotación del vehículo debe incluir lanza auxiliar.

La pendiente máxima de circulación será de 40‰ [mm/m].

El vehículo no puede ser incorporado a un tren.

El vehículo no podrá remolcar a ningún otro cuando se emplee como vehículo ferroviario.

1435mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

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1668mm / Autonomous / None

El vehículo deberá circular al amparo de una entrega de vía bloqueada (EVB).

Al paso por aparatos de vía y tramos metálicos la velocidad deberá realizarse a velocidad reducida [\leq 5 km/h].

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3.1.3.1.1 Date of the original authorisation: 2021-11-25

3.1.3.1.2 Authorisation holder:

3.1.3.1.2.1 Authorisation holder identification data:

3.1.3.1.2.1.1 Name of organisation: PALFINGER IBERICA MAQUINARIA

3.1.3.1.2.1.2 Registered business number: B87456489

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3.1.3.1.2.2.4 Post code: 28830

3.1.3.1.2.2.5 E-mail address: palfinger@palfinger.es

3.1.3.1.3 Authorisation document reference: ES8020210220

3.1.3.1.4 Certificate of verification : Reference of type examination or design examination type:

ES/00000B874
56489/2021/0
00001

3.1.3.1.5 Parameters for which conformity to applicable national rules has been assessed:

1000mm / Autonomous / None
1.2.1 Maintenance instructions
2 Structure and mechanical parts

- 2.1.2.1 Load conditions and weighed mass
- 2.1.5 Fixing of devices to car body structure
- 2.2.2 Characteristics of rescue coupling
- 3 Track interaction and gauging
 - 3.1 Vehicle gauge
 - 3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius
 - 3.3.2 Wheelset (complete)
 - 3.3.3 Wheel
 - 3.3.4 Wheel/rail interaction influencing systems
 - 3.3.6 Bearings on the wheelset
 - 3.3.8 Axle bearing condition monitoring
- 3.4 Limit of maximum longitudinal positive and negative acceleration
- 4.1 Functional requirements for braking at train level
 - 4.4.1 Emergency braking command
 - 4.4.2 Service braking command
 - 4.4.3 Direct braking command
 - 4.4.5 Parking braking command
- 4.5 Brake performance
 - 4.5.1 Emergency braking performance
 - 4.5.2 Service braking performance
 - 4.5.3 Calculations related to thermal capacity
 - 4.5.4 Parking brake performance
 - 4.5.5 Brake performance calculation
- 4.7.5 Parking brake
- 6 Environmental conditions and aerodynamic effects
 - 7.2.1 Vehicle marking
 - 7.2.2 External lights
 - 7.2.2.1 Headlights
 - 7.2.2.2 Marker lights
 - 7.2.2.3 End-of-train signal
 - 7.2.2.4 Lamp controls
 - 7.2.3 Audible signal systems
- 13 Specific operational requirements
- 1435mm / Autonomous / None
- 1.2.1 Maintenance instructions
- 2 Structure and mechanical parts

- 2.1.2.1 Load conditions and weighed mass
- 2.1.5 Fixing of devices to car body structure
- 2.2.2 Characteristics of rescue coupling
- 3 Track interaction and gauging
 - 3.1 Vehicle gauge
 - 3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius
 - 3.3.2 Wheelset (complete)
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 - 4.5.4 Parking brake performance
 - 4.5.5 Brake performance calculation
 - 4.7.5 Parking brake
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 - 7.2.1 Vehicle marking
 - 7.2.2 External lights
 - 7.2.2.1 Headlights
 - 7.2.2.2 Marker lights
 - 7.2.2.3 End-of-train signal
 - 7.2.2.4 Lamp controls
 - 7.2.3 Audible signal systems
- 13 Specific operational requirements
 - 1668mm / Autonomous / None
 - 1.2.1 Maintenance instructions
- 2 Structure and mechanical parts

- 2.1.2.1 Load conditions and weighed mass
- 2.1.5 Fixing of devices to car body structure
- 2.2.2 Characteristics of rescue coupling
- 3 Track interaction and gauging
 - 3.1 Vehicle gauge
 - 3.2.5 Minimum horizontal curve radius, vertical concave curve radius, convex curve radius
 - 3.3.2 Wheelset (complete)
 - 3.3.3 Wheel
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 - 7.2.2.4 Lamp controls
 - 7.2.3 Audible signal systems
- 13 Specific operational requirements

Área de uso España RFIG anchos de vía 1000 mm / 1435 mm / 1668 mm

3.1.3.1.6 Comments:

3.1.3.1.7 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:

Declaración del Proponente.r1.pdf y fecha 05/10/2021

Section 4: Technical Characteristics

4.1.3 Wheel set gauge	1000	mm
RC	1435	mm
	1668	mm

4.1.12 Number of vehicles composing the fixed formation (for fixed formation only)	1
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4.13.1 Signalling

4.13.1.1 ETCS equipment on-board and the set of specifications from CCS TSI Annex A	None
RC	

4.13.1.5 Class B or other train protection control and warning systems installed (system and if applicable version)	None
RC	

4.13.1.8 ETCS System Compatibility	Not applicable
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4.13.2 Radio

4.13.2.1 GSM-R Radio voice on board and its Baseline	None
RC	

4.13.2.3 Class B or other radio systems installed (system and if applicable version)	None
RC	

4.13.2.5 Radio Voice System Compatibility	Not applicable
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4.13.2.7 GSM-R Radio Data communication on board and its Baseline	None
RC	

4.13.2.8 Radio Data System Compatibility	Not applicable
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4.10.1 Energy supply system (voltage and frequency)	Autonomous
RC	

4.1.2 Speed

4.1.2.1 Maximum design speed	1000mm / Autonomous / None	25	km/h
	1435mm / Autonomous / None	25	km/h
	1668mm / Autonomous / None	25	km/h
4.2.1 Reference profile RC		G1 GI1 (Specific case Spain – lower parts)	
4.3.1 Temperature range		T3 (-25 to +45)	
4.3.3 Snow, ice and hail conditions		Nominal	
4.4.1 Fire safety category RC		OTM	
4.5.2 Design mass			
4.5.2.1 Design mass in working order		18465	kg
4.5.2.2 Design mass under normal payload		19000	kg
4.5.3 Static axle load			
4.5.5 Total vehicle mass (for each vehicle of the unit)	1000mm / Autonomous / None	18390	kg
	1435mm / Autonomous / None	18390	kg
	1668mm / Autonomous / None	18390	kg
4.7.2.1 Brake performance on steep gradients with normal payload			
4.7.3 Parking brake			
4.7.4.1 Eddy current brake			
4.7.4.1.1 Eddy current track brake fitted RC		False	
4.7.4.2 Magnetic brake			
4.7.4.2.1 Magnetic track brake fitted RC		False	
4.7.4.3 Regenerative brake (only for vehicles with electrical traction)			
4.7.4.3.1 Regenerative brake fitted RC		False	

4.7.8 Wheel slide protection system	1000mm / Autonomous / False None		
	1435mm / Autonomous / False None		
	1668mm / Autonomous / False None		
4.8.1 Vehicle length		8.89	m
4.8.2 Minimum in-service wheel diameter RC		520	mm
4.8.4 Minimum horizontal curve radius capability RC		60	m
4.9.1 Type of end coupling	None Tensile force	undefined	kN
4.9.2 Axle bearing condition monitoring (hot axles box detection) RC		none	
4.14.1 Type of train detection systems for which the vehicle has been designed and assessed RC		None	