

Section 1: General Information

0. Identification of the type

0.1 0.2 0.4 Type ID: 51-398-0001-4-001-001

0.3 Date of record: 2021-06-01

1. General Information

1.1 Type name: Ua

1.2 Alternative type name: Modulare 4-achsige Sonderwagenfamilie m² der Bauart Ua

1.3 Manufacturer:

1.3.1 Manufacturer identification data:

1.3.1.1 Name of organisation: DB Cargo Polska S.A.

1.3.1.2 Registered business number:

1.3.1.3 Organisation code:

1.3.2 Manufacturer contact data:

1.3.2.1 Address of organisation, street and number:

1.3.2.2 Town:

1.3.2.3 Country code:

1.3.2.4 Post code:

1.3.2.5 E-mail address:

Registration Method: New Type

Registered Vehicle Type:

1.4 Category: Freight Wagons

1.5 Subcategory: Freight wagon

1.6 Platform: --

Section 2: Conformity with TSI

2.1 Conformity with TSI and Sections not complied with:

1435mm **WAG (Reg(EU) No321/2013 amended by Reg(EU)No1236/2013 amended by Reg(EU)2015/924 amended by Reg(EU)2019/776 amended by Reg(EU)2020/387)+clause7.1.2+Appendix C totally[GE Wagon] Noise (Regulation (EU) No 1304/2014 amended by Regulation (EU) 2019/774)**

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

2.2 Reference of 'EC type examination certificates'

Reference of 'EC type examination certificates' - if module SB applied - and/or 'design verification certificate' - if module SH1 applied

2871/2/SH1/2021/RST/DEEN/00049-2.0/V01 complementing
2871/2/SH1/2021/RST/DEEN/00236/V01 and
2871/2/SH1/2020/RST/DEEN/00049-01/V03

Section 3: Authorisations

European Union

3.0 Area Of Use:

EU(European Union)

3.1.1 Member state of authorisation:

European Union(EU)

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:

1435mm

1 Technical restriction related to construction

1.1 Minimum curve radius in meters: 75 (single wagon); 150 (coupled operation)

1.3 Speed restrictions in Km/h: 120 (equipped with wheel tread brake); 100 (equipped with disc brake and laden at 22.5t axle load); see also the non-coded restrictions

2 Geographical restriction

2.1 Kinematic gauge (coding WAG TSI): G1/GI1

2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

2.7 Noise category: 2.7.2 Can be used in all quieter routes- TSI Noise compliant- Silent (tested against a TSI NOI)

3 Environmental restrictions

3.1 Climatic zone: 3.1.1 T1

3.1.2.4 Non-coded conditions for use and other restrictions:

1435mm

1) The maximum speed of a wagon equipped with wheel tread brake shall be 120 km/h empty and 100 km/h loaded when in "S" condition, but a loaded wagon is not restricted from being integrated in a train composition that runs up to 120 km/h due to the load table being marked with "S" in combination with three stars (according to point 7.1.2(g) of the WAG TSI and clause 4.5.4 of EN 15877-1:2012).

2) The maximum speed of a wagon equipped with disc-braked bogies and an actual axle load of 22,5t is limited to 100 km/h.

3) Wagons equipped with disc brakes are not permitted to be operated with less than 20t total weight and less than 5t axle loads. The operation of such wagon in tare condition is prohibited, if in tare condition the total weight is less than 20t and axle loads are less than 5t.

4) The maximum gradient on which a wagon is kept immobilised by the parking brake alone, if the wagon is fitted with one, shall not be more than 26‰ for wagons with wheel tread brakes and not more than 30‰ for wagons with disc brakes or brake shoes must be used.

5) The width of the buffer head must be 550mm for vehicles with a bogie pivot distance of 16900 mm or more.

6) This vehicle type features a modular design concept covering vehicles with varying basic design characteristics, which are composed of varying equipment and interoperability components (e.g. variety of bogies, with and without parking brake, wheel tread brake or disc brake, varying draw and buffer gear) and are designed for various load carriers with different kinds of goods. The vehicle configurations covered by the type authorisation are described in the annex to the EC declaration of verification of subsystem Nr.

DE/0000000007498/2021/000001. Due to the modular concept do the load limits of the various vehicle configurations vary. The load table registered in section 4 of ERATV represents only a load table for a representative example configuration, but does not cover all possible vehicle configurations. The actual load limits must therefore be determined individually for each vehicle under consideration of the weighed vehicle mass and the resulting load table marked on the vehicle prior to its putting into service.

3.1.3.1.1 Date of the original authorisation: 2021-05-31

3.1.3.3.2 Date of the last modification: 2021-12-06

3.1.3.3.3 Authorisation holder:

3.1.3.3.3.1 Authorisation holder identification data:

3.1.3.3.3.1.1 Name of organisation: DB Cargo AG

3.1.3.3.3.1.2 Registered business number: DE188158403

3.1.3.3.3.1.3 Organisation code:

3.1.3.3.3.2 Authorisation holder contact data:

3.1.3.3.3.2.1 Address of organisation, street and number: Pionierstr. 10

3.1.3.3.3.2.2 Town: Minden

3.1.3.3.3.2.3 Country code:	DE
3.1.3.3.3.2.4 Post code:	32423
3.1.3.3.3.2.5 E-mail address:	Modularer.Gueterwagen@deutschebahn.com
3.1.3.3.4 Authorisation document reference:	EU8020210089
3.1.3.3.5 Certificate of verification : Reference of type examination or design examination type:	2871/2/SH1/2021/RST/DEEN/00049-2.0/V01 complementing 2871/2/SH1/2021/RST/DEEN/00236/V01 and 2871/2/SH1/2020/RST/DEEN/00049-01/V03
3.1.3.3.6 Parameters for which conformity to applicable national rules has been assessed:	1435mm 0.0 None The update of the ERATV record due to changes to authorised vehicle types that are categorised in accordance with Article 15(1)(b) of Regulation (EU) 2018/545 has been processed by the Agency on the basis of information provided by the holder of the vehicle type authorisation and does not constitute an approval of the categorisation performed by the entity managing the change. The publication of the updated ERATV record was performed according to the quality requirements applicable to ERATV records, without assessing the categorisation of the change or any supporting document provided.
3.1.3.3.7 Comments:	
3.1.3.3.8 Reference to the written declaration by the proposer referred to in Article 3(11) of Regulation (EU) 402/2013:	Declaration by the proposer, Version 2.0, issued 11.02.2021
3.1.3.1 Initial Registration	
3.1.2.2 Validity of Authorisation (until):	2021-07-28
3.1.2.3 Coded conditions for use and other restrictions:	1435mm 1 Technical restriction related to construction 1.1 Minimum curve radius in meters: 75 (single wagon); 150 (coupled operation) 1.3 Speed restrictions in Km/h: 120 (equipped with wheel tread brake); 100 (equipped with disc brake and laden at 22.5t axle load); see also the non-coded restrictions 2 Geographical restriction 2.1 Kinematic gauge (coding WAG TSI): G1/GI1 2.2 Wheelset gauge: 2.2.4 Gauge 1435

2.3 No CCS on board: True

2.7 Noise category: 2.7.2 Can be used in all quieter routes- TSI Noise compliant- Silent (tested against a TSI NOI)

3 Environmental restrictions

3.1 Climatic zone: 3.1.1 T1

4 Restrictions on use

4.1 Time based: True

3.1.2.4 Non-coded conditions for use and other restrictions:

1435mm

1) The authorisation is valid until 28.07.2021. This temporary limitation is introduced pursuant to Article 46(6) of Regulation 2018/545 due to currently missing evidence concerning compliance with clause 6.2.1., and approval of the quality management system in accordance with module SH1 in particular, of TSI WAG (Regulation (EU) 321/2013) as amended. The temporary limitation may be withdrawn by the Authorising Entity when a valid approval of the Quality Management System covering the subsystem Rolling Stock and issued by a Notified Body is provided. A new authorisation is not required in that case as long as the conditions of use and other restrictions and the basic design characteristics of the type have not changed.

2) The maximum speed of a wagon equipped with wheel tread brake shall be 120 km/h empty and 100 km/h loaded when in "S" condition, but a loaded wagon is not restricted from being integrated in a train composition that runs up to 120 km/h due to the load table being marked with "S" in combination with three stars (according to point 7.1.2(g) of the WAG TSI and clause 4.5.4 of EN 15877-1:2012).

3) The maximum speed of a wagon equipped with disc-braked bogies and an actual axle load of 22,5t is limited to 100 km/h.

4) Wagons equipped with disc brakes are not permitted to be operated with less than 20t total weight and less than 5t axle loads. The operation of such wagon in tare condition is prohibited, if in tare condition the total weight is less than 20t and axle loads are less than 5t.

5) The maximum gradient on which a wagon is kept immobilised by the parking brake alone, if the wagon is fitted with one, shall not be more than 26‰ for wagons with wheel tread brakes and not more than 30‰ for wagons with disc brakes or brake shoes must be used.

6) The width of the buffer head must be 550mm for vehicles with a bogie pivot distance of 16900 mm or more.

7) This vehicle type features a modular design concept covering vehicles with varying basic design characteristics, which are composed of varying equipment and interoperability components (e.g. variety of bogies, with and without parking brake, wheel tread brake or disc brake, varying draw and buffer gear) and are designed for various load carriers with different kinds of goods. The vehicle configurations covered by the type authorisation are described in the annex to the EC declaration of verification of subsystem Nr.

DE/00000000007498/2021/000001. Due to the modular concept do the load limits of the various vehicle configurations vary. The load table registered in section 4 of ERATV represents only a load table for a representative example configuration, but does not cover all possible vehicle configurations. The actual load limits must therefore be determined individually for each vehicle under consideration of the weighed vehicle mass and the resulting load table marked on the vehicle prior to its putting into service.

3.1.3.1.1 Date of the original authorisation: 2021-05-31

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: DB Cargo AG

3.1.3.1.2.1.2 Registered business number: DE188158403

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: Pionierstr. 10

3.1.3.1.2.2.2 Town: Minden

3.1.3.1.2.2.3 Country code: DE

3.1.3.1.2.2.4 Post code: 32423

3.1.3.1.2.2.5 E-mail address: Modularer.Gueterwagen@deutschebahn.com

3.1.3.1.3 Authorisation document reference: EU8020210089

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

2871/2/SH1/2
020/RST/DEEN
/00049-01/V0
3

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

1435mm

0.0 None

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

Declaration by the proposer, Version 2.0, issued 11.02.2021

3.1.3.2 Modification

3.1.3.2.2 Date of the last modification:

2021-08-04

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

3.1.3.3 Modification

3.1.3.3.2 Date of the last modification:

2021-12-06

3.1.2.4 Non-coded conditions for use and other restrictions:

1435mm

- 1) The maximum speed of a wagon equipped with wheel tread brake shall be 120 km/h empty and 100 km/h loaded when in "S" condition, but a loaded wagon is not restricted from being integrated in a train composition that runs up to 120 km/h due to the load table being marked with "S" in combination with three stars (according to point 7.1.2(g) of the WAG TSI and clause 4.5.4 of EN 15877-1:2012).
- 2) The maximum speed of a wagon equipped with disc-braked bogies and an actual axle load of 22,5t is limited to 100 km/h.
- 3) Wagons equipped with disc brakes are not permitted to be operated with less than 20t total weight and less than 5t axle loads. The operation of such wagon in tare condition is prohibited, if in tare condition the total weight is less than 20t and axle loads are less than 5t.
- 4) The maximum gradient on which a wagon is kept immobilised by the parking brake alone, if the wagon is fitted with one, shall not be more than 26‰ for wagons with wheel tread brakes and not more than 30‰ for wagons with disc brakes or brake shoes must be used.
- 5) The width of the buffer head must be 550mm for vehicles with a bogie pivot distance of 16900 mm or more.

6) This vehicle type features a modular design concept covering vehicles with varying basic design characteristics, which are composed of varying equipment and interoperability components (e.g. variety of bogies, with and without parking brake, wheel tread brake or disc brake, varying draw and buffer gear) and are designed for various load carriers with different kinds of goods. The vehicle configurations covered by the type authorisation are described in the annex to the EC declaration of verification of subsystem Nr. DE/0000000007498/2021/000001. Due to the modular concept do the load limits of the various vehicle configurations vary. The load table registered in section 4 of ERATV represents only a load table for a representative example configuration, but does not cover all possible vehicle configurations. The actual load limits must therefore be determined individually for each vehicle under consideration of the weighed vehicle mass and the resulting load table marked on the vehicle prior to its putting into service.

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

2871/2/SH1/2021/RST/DEEN/00049-2.0/V01 complementing
2871/2/SH1/2021/RST/DEEN/00236/V01 and
2871/2/SH1/2020/RST/DEEN/00049-01/V03

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

The update of the ERATV record due to changes to authorised vehicle types that are categorised in accordance with Article 15(1)(b) of Regulation (EU) 2018/545 has been processed by the Agency on the basis of information provided by the holder of the vehicle type authorisation and does not constitute an approval of the categorisation performed by the entity managing the change. The publication of the updated ERATV record was performed according to the quality requirements applicable to ERATV records, without assessing the categorisation of the change or any supporting document provided.

3.1.3.3.7 Comments:

Section 4: Technical Characteristics

4.1.3 Wheel set gauge
RC

1435 mm

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

1

4.1.2 Speed

4.1.2.1 Maximum design speed	1435mm	120	km/h		
4.2.1 Reference profile RC		G1 G11			
4.3.1 Temperature range		T1 (-25 to +40)			
4.3.3 Snow, ice and hail conditions		Nominal			
4.5.1 Permissible payload for different line categories RC	1435mm	A (44,5) B1 (44,5) B2 (54,3) C2 (61,8) C3 (64,3) C4 (64,3) D2 (66) D3 (70,5) D4 (72,3)	t t t t t t t t t		
4.6.4 Combination of maximum speed and maximum cant deficiency for which the vehicle was assessed RC	1435mm	0120.00	km/h	0130.00	mm
4.6.5 Rail inclination RC	1435mm	1:20, 1:30, 1:40			
4.7.2.1 Brake performance on steep gradients with normal payload					
4.7.2.1.1 Reference case of TSI		Reference case (70 km/h, 21‰ (mm/m), 40 km)			
4.7.2.1.6 Maximum brake thermal energy capacity	1435mm	45	kJ		
4.7.3 Parking brake					
4.7.3.4 Parking brake	1435mm	True			
4.7.6 For general operation : Brake weight percentage (lambda) or Braked mass	1435mm			00058.00	tonnes

4.7.7 Service brake: At maximum service brake:	1435mm	0700.00	m	0000.55	m/s ²
Stopping distance, Maximum deceleration, for the load condition 'design mass under normal payload' at the design maximum speed.					
4.7.8 Wheel slide protection system	1435mm	False			
4.8.2 Minimum in-service wheel diameter RC		840	mm		
4.8.5 Minimum vertical convex curve radius capability		300	m		
4.8.6 Minimum vertical concave curve radius capability		250	m		
4.9.1 Type of end coupling	Manual				
4.9.2 Axle bearing condition monitoring (hot axles box detection) RC					Detectable by line side
4.14.1 Type of train detection systems for which the vehicle has been designed and assessed RC					Axle counters Track circuits Loops