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Technical document

Technical characteristics of the vehicle relevant for operational and marking purposes – Letter marking

Document History

Version	Date	Comments
0.1	08 July 2023	Initial version
0.2	02 October 2023	Addition of letter marking for hauled passengers vehicles

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The titles of the different headings shall be numbered as follows:

1. References

1.	2007/756/EC - COMMISSION DECISION of 9 November 2007 adopting a common specification of the national vehicle register provided for under Articles 14(4) and (5) of Directives 96/48/EC and 2001/16/EC.	<u>Link</u>
2.	COMMISSION IMPLEMENTING DECISION (EU) 2018/1614 of 25 October 2018 laying down specifications for the vehicle registers referred to in Article 47 of Directive (EU) 2016/797 of the European Parliament and of the Council and amending and repealing Commission Decision 2007/756/EC.	<u>Link</u>

2. Background

The technical marking of vehicles was originally defined in UIC 438 fiches series, which included references to applicable EN standards such as EN 14033 or EN 15877.

In order to include the vehicles marking into the EU legal framework, the content of the UIC fiches 438 was completely transferred initially to the TSI OPE and then partially into the Appendix of the EVR Decision [1].

To date, the Appendix H of the TSI OPE includes vehicles marking elements, mainly the content and the marking position depending on the typology of vehicle.

3. Scope and objective

3.1. Scope

The scope of this Technical Document includes the definition of the marking (in letters) summarising the technical characteristics of:

- Hauled passenger vehicles, including driving coaches, and
- Freight wagons:
 - Simple wagons
 - Articulated and multiple wagons

3.2. Objective

The objective of this document is to offer a consolidated manual on letter marking.

4. General notes

In the tables included in this section:

- the information given in meters refers to the inside length of the wagons (lu);
- the information given in tonnes (tu) corresponds to the highest load limit shown in the loading table for the wagon in question, this limit being determined in accordance with the procedures laid down.

The following index letters have an international value, common to all categories:

q	pipe for electric heating which can be supplied by all accepted currents
qq	qq pipe and installation for electric heating which can be supplied by all accepted currents
s	freight wagons authorised to run at 100 km/h
SS	freight wagons authorised to run at 120 km/h

Table 1 – Index letters with an international value

The following letters have national value

t, u, v, w, x, y, z	The value of these letters is defined by each Member State.
	Table 2 – Index letters with a national value

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5. Letter marking for hauled passengers vehicles

The letter marking below applies to hauled passenger vehicles, including driving coaches.

5.1. Serials letters with an international value

Α	1 st class coach with seats
В	2 nd class coach with seats
AB	1 st /2 nd class coach with seats
WL	Sleeping-car with serial letter A, B or AB depending on the type of accommodation offered. The serial letters for sleeping-car with "special" compartments are supplemented with index-letter "S"
WR	Dining-car
R	Coach with dining-car, buffet or bar compartment (serial-letter used in addition)
D	Van
DD	Open, 2-tier car-carrier van
Post	Mail van
AS	
SR	Bar coach with dancing facilities
WG	
WSP	Pullman coach
Le	Open 2-axle 2-tier car-carrier wagon
Leq	Open 2-axle 2-tier car-carrier wagon fitted with train supply cable
Laeq	Open 3-axle 2-tier car-carrier wagon fitted with train supply cable

5.2. Index letters with an international value:

b h	Coach fitted out to carry disabled passengers
С	Compartments convertible into couchette accommodation
d v	Vehicle fitted to receive bicycles
ee z	Vehicle fitted with central power supply
f	Vehicle fitted with driver's cab (driving coach)
p t	Centre-aisle coach with seats
m	Vehicle over 24,5 m in length
S	Centre-aisle in vans and coaches with luggage compartment

The number of compartments is shown in the form of an index (for example: Bc9)

5.3. Serial letters and index letters with a national value

The others serial letters and index letters have a national value, defined by each Member State.

6. Letter marking for simple wagons

6.1. Category letter: E – Open high-sided wagon

		of ordinary type,
		with side and end tipping, with flat floor
Reference w	agon	with 2 axles: lu 🛛 7,70 m; 25 t 🖓 tu 🖓 30 t
		with 4 axles: lu 🛛 12 m; 50 t 🖓 tu 🖓 60 t
		with 6 axles or more: lu 🛛 12 m; 60t 🖓 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	С	with floor traps ^a
	Ŀ	with 2 axles: tu 🛙 20 t with 4 axles: tu 🖻 40 t
	k	with 6 axles or more: tu 🛛 50 t
	kk	with 2 axles: 20 t 🛛 tu 🖓 25 t with 4 axles: 40 t 🖓 tu 🖓 50 t
		with 6 axles or more: 50 t 🛛 tu 🖻 60 t
Index letters	I	without side tipping
	II	without floor traps ^b
	m	with 2 axles: lu 🛛 7,70 m
		with 4 axles or more: lu < 12 m
	mm	with 4 axles or more: lu 🛛 12 m b
	n	with 2 axles: tu > 30 t with 4 axles: tu > 60 t
		with 6 axles or more: tu > 75 t
	0	without end tipping
	р	with station for brakeman ^b

^a This concept only applies to open high-sided wagons with a flat floor and provided with a device enabling them to be used, either as ordinary wagons with a flat bottom, or for gravity unloading of certain goods by suitable positioning of the traps.

 $^{^{\}rm b}$ Only applicable to wagons with gauge of 1520 mm.

6.2. Category letter: F – Open high-sided wagon

		of special type
		with 2 axles: 25 t 🛛 tu 🖓 30 t
Reference wagon		with 3 axles: 25 t 🛛 tu 🖓 40 t
		with 4 axles: 50 t 🛛 tu 🖓 60 t
		with 6 axles or more: 60 t 🛛 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	b	high capacity with axles (volume 2 45 m ³)
	с	with controlled gravity unloading, on both sides, alternately, at the top ^a
	сс	with controlled gravity unloading, on both sides, alternately, at the bottom ^a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	k	with 2 or 3 axles: tu < 20 t with 4 axles: tu < 40 t
		with 6 axles or more: tu < 50 t
Index	kk	with 2 or 3 axles: 20 t 2 tu < 25 t with 4 axles: 40 t 2 tu < 50t
letters		with 6 axles or more: 50 t 🛛 tu < 60 t
	I	with bulk gravity unloading, on both sides, simultaneously, at the top ^a
	II	with bulk gravity unloading, on both sides, simultaneously, at the bottom ^a
	n	with 2 axles: tu > 30 t
		with 3 axles or more: tu >40 t with 4 axles: tu > 60 t
		with 6 axles or more: tu > 75 t
	0	with axial bulk gravity unloading, at the top ^a
	00	with axial bulk gravity unloading, at the bottom ^a
	р	with axial controlled gravity unloading, at the top ^a
	рр	with axial controlled gravity unloading, at the bottom ^a
	ррр	with station for brakeman ^b

^{*a*} Wagons with gravity unloading in category F are open wagons, which do not have a flat floor and have no tipping facility either at the end or the side. ^{*b*} Only applicable to wagons with gauge of 1520 mm.

The method of unloading these wagons is defined by a combination of the following characteristics:

Arrangement of the unloading apertures:

- > axial : Apertures situated above the centre of the track
- bilateral: Apertures on either side of the track, outside the rails (For these wagons, unloading is:
 simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides,
 - alternate, if complete emptying of the wagon can take place by opening the apertures on one side only)
 - top: The lower edge of the discharge through (without taking into account mobile devices which may extend this through) is situated at least 0.700 m above the rail, and allows for the use of a conveyor belt to take away the goods
- > bottom: The position of the lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods

Rate of unloading:

)

- bulk: Once the apertures are open for unloading, they cannot be closed again until the wagon is empty
- > controlled: At any time during unloading, the flow of the goods can be regulated or even stopped

Category letter: G – Covered wagon 6.3.

		Of ordinary type
		with at least 8 ventilation apertures
Reference wa	agon	with 2 axles: 9 m 🛛 lu < 12 m; 25 t 🖓 tu 🖓 30 t
		with 4 axles: 15 m 🛛 lu 🖓 18 m; 50 t 🖓 tu 🖓 60 t
		with 6 axles or more: 15 m 🛛 lu 🖓 18 m; 60 t 🖓 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
		high capacity:
	b	 with 2 axles: lu 212 m and payload capacity 2 70 m³ with 4 axles or more: lu 2 18 m
	bb	with 4 axles: lu 🛛 18 m a
	g	for grain
	h	for fruits and vegetables ^b
		with 2 axles: tu < 20 t with 4 axles: tu < 40t
	k	with 6 axles or more: tu < 50 t
Index letters		with 2 axles: 20 t 🛙 tu 🖻 25 t with 4 axles: 40 t 🖻 tu 🖻 50 t
	kk	with 6 axles or more: 50 t 🛛 tu 🖓 60 t
		with less than 8 ventilation apertures
		with enlarged doors apertures ^a
		with 2 axles: lu < 9 m
	m	with 4 axles or more: lu < 15 m
		with 2 axles: tu > 30 t with 4 axles: tu > 60 t
	n	with 6 axles or more: tu > 75 t
	0	with 2 axles: $lu < 12 m$ and payload capacity $@70 m^3$
	р	with station for brakeman ^a

^oOnly applicable to wagons with gauge of 1520 mm. ^bThe concept "for fruits and vegetables" applies only to wagons provided with additional ventilation apertures at the floor level.

Category letter: H - covered wagon 6.4.

		of special type
Deference		with 2 axles: 9 m 🛛 lu 🖓 12 m; 25 t 🖓 tu 🖓 28 t
Reference wagon		with 4 axles: 15 m 🛛 lu 🖓 18 m; 50 t 🖓 tu 🖓 60 t
		with 6 axles or more: 15 m 🛛 lu 🖓 18 m; 60 t 🖓 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	b	with 2 axles: 12 m 2 lu 2 14 m and payload capacity 2 70 m3 ^a
	U	with 4 axles or more: 18 m 🛛 lu < 22 m
	bb	with 2 axles: lu 🛙 14m
	2	with 4 axles or more: lu 🛛 22 m
	С	with end doors
	СС	with end doors and fitted internally for the transport of motor cars
	d	with floor traps
	dd	with tipping body ^b
	е	with 2 floors
	ee	with 3 floors or more
Index letters	f	suitable for traffic with Great Britain ^a
index letters	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively) ^a
	g	for grain
	gg	for cement ^b
	h	for fruits and vegetables ^c
	hh	for mineral fertilizer ^b
	i	with opening or shunt walls
	ii	with very robust opening or shunt walls ^d
	Ŀ	with 2 axles: tu < 20 t with 4 axles: tu < 40 t
	k	with 6 axles or more: tu < 50 t
	kk	with 2 axles: 20 t 🛛 tu < 25 t with 4 axles: 40 t 🖓 tu < 50 t
		with 6 axles or more: 50 t
	Ι	with movable partitions ^e

^a2-axle wagons bearing the index letters "f", "fff" can have a payload capacity less than 70 m3. ^bOnly applicable to wagons with gauge of 1520 mm.

^cThe concept « for fruits and vegetables » applies only to wagons provided with additional ventilation apertures at the floor level.

^dOnly applicable to wagons with gauge of 1435 mm. ^e Movable partitions may be dismounted temporarily.

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II	with lockable movable partitions ^e
m	with 2 axles: lu < 9 m with 4 axles or more: lu < 15 m
mm	with 4 axles or more: lu 🛛 18 m ^b
n	with 2 axles: tu > 28 t with 4 axles: tu > 60 t with 6 axles or more: tu > 75 t
0	with 2 axles: lu 12 m < 14 m et volume utile $ \mathbb{P} 70 m^3 $
р	with station for brakeman ^b

6.5. Category letter: I - temperature-controlled wagon

		refrigerator wagon
Reference wagon		with class IN thermal insulation,
		with motor-driven ventilation, with gratings and ice bunker 🛙 3,5 m ³
		with 2 axles: 19 m ² 2 floor area < 22 m ² ; 15 t 2 tu 2 25 t
		with 4 axles: floor area 2 39 m ² ; 30 t 2 tu 2 40 t
	а	with 4 axles
	b	with 2 axles and large floor area: 22 m ² 2 floor area 2 27 m ²
	bb	with 2 axles and very large floor area: floor area > 27 m^2
	с	with meat hooks
	d	for fish
	е	with electric ventilation
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	with mechanical refrigeration ^{a b}
Index letters	gg	refrigerator with liquefied gas ^a
	h	with class IR thermal insulation
	i	mechanically refrigerated by the machinery of an accompanying technical wagon ^{a b c}
	ii	accompanying technical wagon ^{a c}
	k	with 2 axles: tu 2 15 t with 4 axles: tu 2 30 t
	I	insulated without ice bunkers ^{a d}
	m	with 2 axles: floor area 2 19 m ² with 4 axles: floor area 2 39 m ²
	mm	with 4 axles: floor area 2 39m ^{2 e}
	n	with 2 axles: tu 2 25 t with 4 axles; tu 2 40 t
	0	with ice bunkers of capacity less than 3,5 m ^{3 d}
	р	without gratings
Note: The floor of ice bunkers.	area of c	overed refrigerator wagons is always determined taking into account the use

^a The index letter "I" shall not be marked on wagons bearing the index letters "g", "gg", "i" or "ii". ^b Wagons bearing both the index letters "g" and "i" can be used individually or in a mechanically refrigerated raft.

^c The concept of "accompanying technical wagon" applies at the same time to factory wagons, workshop wagons (both with or without sleeping accommodation) and dormitory wagons.

^d The index letter "o" shall not be marked on wagons bearing the index letter "I".

^e Only applicable to wagons with gauge of 1520 mm.

6.6. Category letter: K - 2-axle flat wagon

		Of ordinary type
		with drop sides and short stanchions
Reference wagon		lu 🛛 12 m; 25 t 🖓 tu 🖉 30 t
	b	with long stanchions
	g	fitted for the transport of containers ^a
	i	with removable cover and non-removable ends ^b
	j	with shock-absorbing device
	k	tu 🖸 20 t
	kk	20 t 🛙 tu 🖻 25 t
Index letters	I	without stanchions
	m	9 m 🛛 lu 🖸 12 m
	mm	lu 🛙 9 m
	n	tu 🖸 30 t
	0	with non-removable sides
	р	without sides ^b
	рр	with removable sides

^a Index letter "g" may be used together with category letter K exclusively for ordinary wagons which have only been additionally fitted out for the transport of containers. Wagons fitted out solely for the transport of containers must be classified in category L. ^b The index letter "p" shall not be marked on wagons bearing index letter "i".

6.7. Category letter: L - 2-axle flat wagon

		Of special type
Reference wagon		lu 🛛 12 m; 25 t 🖓 tu 🖓 30 t
	b	with special fittings for securing purposes for medium-sized containers (pa) ^a
	С	with swivelling bolster ^a
	d	fitted out for the transport of motor cars, without deck ^a
	е	with decks for the transport of motor cars ^a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	fitted for the transport of containers (except pa) ^{a,b}
	h	fitted out for the transport of steel coils, eye to side ^{a,c}
Index letters	hh	fitted out for the transport of steel coils, eye to sky ^{a,c}
	i	with removable cover and non-removable ends ^a
	ii	with very robust removable metallic cover ^d and non-removable ends ^a
	j	with shock-absorbing device
	k	tu < 20 t
	kk	20 t 🛛 tu < 25 t
	I	without stanchions ^a
	m	9 m
	mm	lu < 9 m
	n	tu > 30 t
	р	without sides ^a

^a The inscription of the index letters "I" or "p" is optional for wagons bearing the index letters "b", "c", "d", "e", "g", "h", "hh", "i" or "ii". But numerical codes must always correspond to letter markings on wagons.

^b Wagons used solely for the transport of containers (except pa).

^c Wagons used solely for the transport of steel coils.

^d Only applicable to wagons with gauge of 1435 mm.

6.8. Category letter: O - mixed flat and open high-sided wagon

		of ordinary type
Reference wa	agon	with 2 or 3 axles, with drop sides or ends and stanchions
		with 2 axles: lu 🛛 12 m; 25 t 🖾 tu 🖾 30 t with 3 axles: lu 🖻 12 m; 25 t 🖻 tu 🖻 40 t
	а	with 3 axles
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	k	tu 🖻 20 t
Index letters	kk	20 t 🛙 tu 🖻 25 t
	I	without stanchions
	m	9 m 🛙 lu 🖻 12 m
	mm	lu 🛙 9 m
	n	with 2 axles: tu 🛛 30 t with 3 axles: tu 🖓 40 t

6.9. Category letter: R - flat bogies wagon

		of ordinary type
Reference wa	agon	with drop ends and stanchions
		18 m 🛛 lu < 22 m; 50 t 🖓 tu 🖓 60 t
	b	lu 🛙 22 m
	е	with drop sides
	g	fitted for the transport of containers ^a
	h	fitted out for the transport of steel coils, eye to side b
	hh	fitted out for the transport of steel coils, eye to sky ^b
	i	with removable cover and non-removable ends ^c
	j	with shock-absorbing device
	k	tu < 40 t
Index letters	kk	40 t 🗹 tu < 50 t
	I	without stanchions
	m	15 m 🛛 lu < 18 m
	mm	lu < 15 m
	n	tu > 60 t
	0	with non-removable ends less than 2 m in height
	00	with non-removable ends, 2 m or more in height ^c
	р	without drop ends ^c
	рр	with removable sides

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^a The use of the index letter "g" associated with the category letter R is only possible in the case of ordinary wagons which have only been additionally fitted out for the transport of containers. Wagons fitted out solely for the transport of containers must be classified in category S.

^b The use of the index letter "h" or "hh" together with the category letter R is only possible in the case of ordinary wagons which have only been additionally fitted out for the transport of containers. Wagons fitted out solely for the transport of containers must be classified in category S. ^c The index letters "oo" and/or "p" shall not be marked on wagons bearing index letter "i".

6.10. Category letter: S - flat bogies wagon

		of special type
Reference wa	agon	with 4 axles: lu 🛛 18 m; 50 t 🖓 tu 🖓 60 t
		with 6 axles or more: lu 🛛 22 m; 60 t 🖓 tu 🖉 75 t
	а	with 6 axles (2 bogies of 3 axles)
	аа	with 8 axles or more
	ааа	with 4 axles (2 bogies of 2 axles) ^a
	b	with special fittings for securing purposes for medium-sized containers (pa) $^{\rm b}$
	С	with swivelling bolster ^b
	d	fitted out for the transport of motor cars, without deck ^{b,c}
	е	with decks for the transport of motor cars ^b
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	fitted for the transport of containers, total loading length 2 60' (except pa) ^{b,c,d}
Index letters	gg	fitted for the transport of containers, total loading length > 60' (except pa) b,c,d
	h	fitted out for the transport of steel coils, eye to side b,e
	hh	fitted out for the transport of steel coils, eye to sky ^{b,e}
	hhh	fitted out transport of steel coils, eye longitudinal
	i	with removable cover and non-removable ends ^b
	ii	with very robust removable metallic cover $^{\rm f}$ and non-removable ends $^{\rm b}$
	j	with shock-absorbing device
	k	with 4 axles: tu < 40 t
	ĸ	with 6 axles or more: tu < 50 t
	kk	with 4 axles: 40 t
		with 6 axles or more: 50 t 🛛 tu < 60 t
	Ι	without stanchions ^b
	m	with 4 axles: 15 m

^a Only applicable to wagons with gauge of 1520 mm.

^e Wagons used solely for the transport of steel coils.

^f Only applicable to wagons with gauge of 1435 mm

^b The inscription of the index letters "l" or "p" is optional for wagons bearing the index letters "b", "c", "d", "e", "g", "gg", "h", "hh", "i" or "ii". But numerical codes must always correspond to letter markings on wagons.

^c Wagons which in addition to the transport of containers and swap bodies are used to transport vehicles shall be marked with the index letters "g" or "gg" and the letter "d".

^d Wagons used solely for the transport of containers or for transport of swap bodies for grab handling and spreader gripping.

		with 6 axles or more: 18 m 🛛 lu < 22 m
	mm	with 4 axles: lu < 15 m with 6 axles or more: lu < 18 m
	mmm	with 4 axles 🛛 lu 🖸 22 m a
	n	with 4 axles: tu > 60 t with 6 axles or more: tu > 75 t
	р	without sides ^b

Category letter: T - wagon with opening roof 6.11.

		with 2 axles: 9 m 2 lu < 12 m; 25 t 2 tu 2 30 t
Reference wa	agon	with 4 axles: 15 m 🛛 lu < 18 m ; 50 t 🖓 tu 🖓 60 t
		with 6 axles or more: 15 m 🛛 lu < 18 m; 60 t 🖓 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	b	high capacity: – with 2 axles: lu 2 12 m – with 4 axles or more: lu 2 18 m ^{a,b}
	С	with end doors
	d	with controlled gravity unloading, on both sides, alternately, at the top ^{a,b,c}
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom ^{a,b,c}
	е	with unobstructed height of the doors > 1,90 m ^{a,b,c}
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
Index letters	g	for grain
	h	fitted out for the transport of steel coils, eye to side
	hh	fitted out for the transport of steel coils, eye to sky
	i	with opening walls ^a
	j	with shock-absorbing device
	k	with 2 axles: tu 2 20 t with 4 axles: tu 2 40 t with 6 axles or more: tu 2 50 t
	kk	with 2 axles: 20 t 2 tu < 25 t with 4 axles: 40 t 2 tu 2 50 t with 6 axles or more: 50 t 2 tu 2 60 t
	I	with bulk gravity unloading, on both sides, simultaneously, at the top ^{a,b,c}
	II	with bulk gravity unloading, on both sides, simultaneously, at the bottom ^{a,b,c}
	m	with 2 axles: lu 2 9 m with 4 axles or more: lu 2 15 m ^b

^a Index letter "e":

is optional on wagons bearing the index letter "b" (but numerical codes must always correspond to letter markings on wagons), _

shall not be marked on wagons bearing the index letters "d", "dd", "i", "I", "I", "o", "oo", "p" ou "pp".

^b Index letter "b" and "m" shall not be marked on wagons bearing the index letters "d", "dd", "l", "ll", "o", "oo", "p" or "pp".

^c Wagons with gravity unloading in category T are wagons fitted with an opening roof giving access to a loading hatch over the complete length of the body; these wagons do not have a flat floor and are not designed for end or side tipping.

		n	with 2 axles: tu 2 30 t with 4 axles: tu 2 60 t with 6 axles or more: tu 2 75 t	
		0	with axial bulk gravity unloading, at the top ^{a,b,c}	
		00	with axial bulk gravity unloading, at the bottom ^{a,b,c}	
		р	with axial controlled gravity unloading, at the top ^{a,b,c}	
		рр	with axial controlled gravity unloading, at the bottom ^{a,b,c}	
The m	ethod of unloa	ding these wagons	s is defined by a combination of the following characteristics:	
Arra	ingement of the	e unloading apertu	res:	
_	 axial: Apertures situated above the centre of the track bilateral: Apertures on either side of the track, outside the rails (For these wagons, unloading is: simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides, alternate, if complete emptying of the wagon can take place by opening the apertures on one side only) 			
-	top:	•	The lower edge of the discharge through (without taking into account mobile devices which may extend this through) is situated a least 0.700 m above the rail, and allows for the use of a conveyor belt to take away the goods	
-	bottom:	The position of the lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods		
Rate	e of unloading:			
- -	bulk: controlled:		res are open for unloading, they cannot be closed again until the wagon is empty ng unloading, the flow of the goods can be regulated or even stopped	

6.12. Category letter: U - special wagons

		other than those in categories F, H, L, S ou Z
		with 2 axles: 25 t 🛛 tu 🖓 30 t
Reference wagon		with 3 axles: 25 t 🛛 tu 🖓 40 t
		with 4 axles: 50 t 🛛 tu 🖓 60t
		with 6 axles or more: 60 t 🛛 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	С	with unloading under pressure
	d	with controlled gravity unloading, on both sides, alternately, at the top ^a
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom ^a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	for grain
	i	fitted out for the transport objects which should exceed the gauge if they were loaded on ordinary wagons $^{\rm b\ c}$
Index letters	k	with 2 or 3 axles: tu 🛙 20 t with 4 axles: tu 🖻 40 t
		with 6 axles or more: tu 🛛 50 t
	kk	with 2 or 3 axles: 20 t 🛛 tu 🖾 25 t with 4 axles: 40 t 🖓 tu 🖓 50 t
		with 6 axles or more: 50 t 🛛 tu 🖻 60 t
	I	with bulk gravity unloading, on both sides, simultaneously, at the top ^a
	=	with bulk gravity unloading, on both sides, simultaneously, at the bottom ^a
	n	with 2 axles: tu 🛙 30 t with 3 axles: tu 🖻 40 t with 4 axles: tu > 60 t
		with 6 axles or more: tu 🛛 75 t ^c
	0	with axial bulk gravity unloading, at the top ^a
	00	with axial bulk gravity unloading, at the bottom ^a
	р	with axial bulk gravity unloading, at the top ^a

^a Wagons with gravity unloading in category U are closed wagons which can only be loaded through one or more loading apertures situated in at the top part of the body, and whose total opening dimensions are less than the length of the body; these wagons do not have a flat floor and are not designed for end or side tipping.

^b In particular:

- well wagons;
- wagons with a central recess;

⁻ wagons with an ordinary sloping diagonal permanent control desk. ^c Index letter "n" shall not be marked on wagons bearing the index letter "i".

		рр	with axial bulk gravity unloading, at the bottom ^a				
The m	he method of unloading these wagons is defined by a combination of the following characteristics:						
Arra	ingement of the	e unloading apertu	res:				
-	axial:	Apertures situate	ed above the centre of the track				
-	bilateral:	 (For these simultaneous simulta	ner side of the track, outside the rails wagons, unloading is: bus, if complete emptying of the wagon requires the apertures to be open on both sides, f complete emptying of the wagon can take place by opening the apertures on one side only)				
-	top:	The lower edge of the discharge through (without taking into account mobile devices which may extend this through) is situated a least 0.700 m above the rail, and allows for the use of a conveyor belt to take away the goods					
-	bottom:	The position of t	ne lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods				
Rate	e of unloading:						
-	bulk: controlled:	•	res are open for unloading, they cannot be closed again until the wagon is empty ng unloading, the flow of the goods can be regulated or even stopped				

6.13. Category letter: Z - tank wagon

		with metal shell,
		for the transport of liquids or gases
Reference wa	agon	with 2 axles: 25 t 🖻 lu 🖻 30 t
Neterence we	5011	with 3 axles: 25 t 🛛 tu 🖓 40 t
		with 4 axles: 50 t 🛛 tu 🖓 60 t
		with 6 axles or more: 60 t 🛛 tu 🖓 75 t
	а	with 4 axles
	аа	with 6 axles or more
	b	for oil products ^a
	С	with unloading under pressure ^b
	d	for food and chemical products ^a
	е	fitted with heating devices
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
Index letters	g	for the transport of gases under pressure, liquefied or dissolved under pressure ^b
	i	tank of non-metallic material
	j	with shock-absorbing device
	k	with 2 or 3 axles: tu 2 20 t with 4 axles: tu 2 40 t
		with 6 axles or more: tu 🛛 50 t
	kk	with 2 or 3 axles: 20 t 🛛 tu 🖓 25 t with 4 axles: 40 t 🖓 tu 🖓 50 t
	ĸĸ	with 6 axles or more: 50 t 🛛 tu 🖓 60 t
	n	with 2 axles: tu 2 30 t with 3 axles: tu 2 40 t with 4 axles tu > 60 t
		with 6 axles or more: tu 🛙 75 t
	р	with station for brakeman ^a

^a Only applicable to wagons with gauge of 1520 mm.

^b The index letter "c" shall not be marked on wagons bearing the index letter "g".

7. Articulated and multiple wagons

7.1. Category letter: F – Open high-sided wagon

Reference wagon		Articulated or multiple wagon with axles, with 2 units
		22 m
	а	with bogies
	С	with controlled gravity unloading, on both sides, alternately, at the top 1
	СС	with controlled gravity unloading, on both sides, alternately, at the bottom
	E	with 3 units
	ee	with 4 units or more
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
Index letters	I	with bulk gravity unloading, on both sides, simultaneously, at the top $^{ m 1}$
index letters	I	with bulk gravity unloading, on both sides, simultaneously, at the bottom $^{ m 1}$
	m	with 2 units: lu 🛙 27 m
	mm	with 2 units: lu < 22 m
	0	with axial bulk gravity unloading, at the top 1
	00	with axial bulk gravity unloading, at the bottom 1
	р	with axial controlled gravity unloading, at the top 1
	рр	with axial controlled gravity unloading, at the bottom ¹
	r	articulated wagon
	rr	multiple wagon
The method of unloading	these wagon	s is defined by a combination of the following characteristics:
Arrangement of the unl	oading apertu	res:
 axial: Apertures situated above the centre of the track bilateral: Apertures on either side of the track, outside the rails 		
		wagons, unloading is:
:		ous, if complete emptying of the wagon requires the apertures to be open on both sides, if complete emptying of the wagon can take place by opening the apertures on one side only)
		of the discharge through (without taking into account mobile devices which may extend this through) is situated
		ove the rail, and allows for the use of a conveyor belt to take away the goods he lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods
Rate of unloading:		in lower cape of the discharge through does not allow for the use of a conveyor beit to take away the goods
 controlled: At any time during unloading, the flow of the goods can be regulated or even stopped 		

¹ Wagons with gravity unloading in category F are open wagons, which do not have a flat floor and are not designed for end or side tipping.

Reference wagon		articulated or multiple wagon with axles, with 2 units 22 m 🛛 lu < 27 m
	а	with bogies
	С	with end doors
	СС	with end doors and fitted internally for the transport of motor cars
	d	with floor traps
	е	with 3 units
	ee	with 4 units or more
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
Index letters	g	for grain
	h	for fruits and vegetables ^a
	i	with opening or shunt walls
	ii	with very robust opening or shunt walls ^b
	I	with movable partitions ^c
	II	with lockable movable partitions ^c
	m	with 2 units: lu 🛙 27 m
	mm	with 2 units: lu < 22 m
	r	articulated wagon
	rr	multiple wagon

7.2. Category letter: H - covered wagon

^a The concept "for fruits and vegetables" applies only to wagons provided with additional ventilation apertures at the floor level.

^b Only applicable to wagons with gauge of 1435 mm.

^c Movable partitions may be dismounted temporarily.

7.3. Cate		ter: I - temperature controlled wagon refrigerator wagon
		with class IN thermal insulation,
Reference wa	agon	with motor-driven ventilation, with gratings and ice bunker 🛙 3,5 m ³
		articulated or multiple wagon with axles, with 2 units
		22 m
	а	with bogies
	с	with meat hooks
	d	for fish
	е	with electric ventilation
	ee	with 4 units or more
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	with mechanical refrigeration ^a
	gg	refrigerator with liquefied gas ^a
Index letters	h	with class IR thermal insulation
	i	mechanically refrigerated by the machinery of an accompanying technical wagon ^{a b}
	ii	accompanying technical wagon ^{a,b}
	I	insulated without ice bunkers ^{a,c}
	m	with 2 units: lu 🛛 27 m
	mm	with 2 units: lu < 22 m
	0	with ice bunkers of capacity less than 3,5 m ^{3 c}
	00	with 3 units
	р	without gratings
	r	articulated wagon
	rr	multiple wagon

7.3. Category letter: I - temperature controlled wagon

^a The index letter "I" shall not be marked on wagons bearing the index letters "g", "gg", "i" or "ii".

^b The concept of "accompanying technical wagon" applies at the same time to factory wagons, workshop wagons (both with or without sleeping accommodation) and dormitory wagons. ^c The index letter "o" shall not be marked on wagons bearing the index letter "l".

Reference wagon		articulated or multiple wagon with 2 units
		22 m
	а	articulated wagon
	аа	multiple wagon
	b	with special fittings for securing purposes for medium-sized containers (pa) ^a
	С	with swivelling bolster ^a
	d	fitted out for the transport of motor cars, without deck ^a
	е	with decks for the transport of motor cars ^a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	fitted for the transport of containers ^{a,b}
	h	fitted out for the transport of steel coils, eye to side ^{a,c}
Index letters	hh	fitted out for the transport of steel coils, eye to sky ^{a,c}
	i	with removable cover and non-removable ends ^a
	ii	with very robust removable metallic cover ^d and non-removable ends ^a
	j	with shock-absorbing device
	I	without stanchions ^a
	m	with 2 units: 18 m 🛛 lu < 22 m
	mm	with 2 units: lu < 18 m
	0	with 3 units
	00	with 4 units or more
	р	without sides ^a
	r	with 2 units: lu 🛙 27 m

7.4. Category letter: L - flat wagon with separate axles

^a The inscription of the index letters "I" or "p" is optional for wagons bearing the index letters "b", "c", "d", "e", "g", "h", "hh", "i" or "ii". But numerical codes must always correspond to letter markings on wagons

^b Wagons used solely for the transport of containers (except pa).

^c Wagons used solely for the transport of steel coils.

^d Only applicable to wagons with gauge of 1435 mm.

Reference wagon		articulated or multiple wagon with 2 units
		22 m
	b	with special fittings for securing purposes for medium-sized containers (pa) ^a
	С	with swivelling bolster ^b
	d	fitted out for the transport of motor cars, without deck b, Error! Bookmark not defined.
	е	with decks for the transport of motor cars ^a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	fitted for the transport of containers, total loading length 2 60' (except pa) a,b,c
	gg	fitted for the transport of containers, total loading length $> 60'$ (except pa) a,b,c
	h	fitted out for the transport of steel coils, eye to side ^{a,d}
	hh	fitted out for the transport of steel coils, eye to sky ^{a,d}
Index letters	hhh	fitted out transport of steel coils, eye longitudinal
	i	with removable cover and non-removable ends ^a
	ii	with very robust removable metallic cover ^e and non-removable ends ^a
	j	with shock-absorbing device
	I	without stanchions ^a
	m	with 2 units: lu 🛛 27 m
	mm	with 2 units: lu < 22 m
	0	with 3 units
	00	with 4 units or more
	р	without sides ^a
	r	articulated wagon
	rr	multiple wagon

7.5. Category letter: S - flat bogie wagon

^a The inscription of the index letters "I" or "p" is optional for wagons bearing the index letters "b", "c", "d", "e", "g", "gg", "h", "hh", "i" or "ii". But numerical codes must always correspond to letter markings on wagons.

^bWagons which in addition to the transport of containers and swap bodies are used to transport vehicles shall be marked with the index letters "g" or "gg" and the letter "d".

^cWagons used solely for the transport of containers or for transport of swap bodies for grab handling and spreader gripping.

^dWagons used solely for the transport of steel coils

^eOnly applicable to wagons with gauge of 1435 mm.

Reference wagon		articulated or multiple wagon with axles, with 2 units 22 m 2 lu < 27 m
	а	with bogies
	b	with unobstructed height of doors > 1,90 m ^a
	С	with end doors
	d	with controlled gravity unloading, on both sides, alternately, at the top $^{\rm b}$
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom $_{\rm a,b}^{\rm a,b}$
	е	with 3 units
	ee	with 4 units or more
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	for grain
	h	fitted out for the transport of steel coils, eye to side
Index letters	hh	fitted out for the transport of steel coils, eye to sky
	i	with opening walls ^a
	j	with shock-absorbing device
	I	with bulk gravity unloading, on both sides, simultaneously, at the top ^{a,b}
	II	with bulk gravity unloading, on both sides, simultaneously, at the bottom ^{a,b}
	m	with 2 units: lu 🛙 27 m
	mm	with 2 units: lu < 22 m
	0	with axial bulk gravity unloading, at the top ^{a,b}
	00	with axial bulk gravity unloading, at the bottom ^{a,b}
	р	with axial controlled gravity unloading, at the top ^{a,b}
	рр	with axial controlled gravity unloading, at the bottom ^{a,b}
	r	articulated wagon
	rr	multiple wagon

7.6. Category letter: T - wagon with opening roof

^a Index letter "b" shall not be marked on wagons bearing the index letters "d", "dd", "i", "l", "l", "o", "oo", "p" or "pp".

^b Wagons with gravity unloading in category T are wagons fitted with an opening roof giving access to a loading hatch over the complete length of the body; these wagons do not have a flat floor and are not designed for end or side tipping.

method of unloading these wagons is defined by a combination of the following characteristics:				
Arrangement of the unloading apertures:				
-	axial: bilateral:	 Apertures situated above the centre of the track Apertures on either side of the track, outside the rails (For these wagons, unloading is: simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides, alternate, if complete emptying of the wagon can take place by opening the apertures on one side only) 		
-	top: situated at bottom:	 The lower edge of the discharge through (without taking into account mobile devices which may extend this through) is least 0.700 m above the rail, and allows for the use of a conveyor belt to take away the goods The position of the lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods 		
Rate	e of unloading:			
-	bulk:	Once the apertures are open for unloading, they cannot be closed again until the wagon is empty		
- controlled: At any time during unloading, the flow of the goods can be regulated or even stopped				

7.7. Category letter: U - special wagons

Reference wagon		articulated or multiple wagon, with axles, with 2 units
		22 m 🛛 lu < 27 m
	а	with bogies
	е	with 3 units
	ee	with 4 units or more
	С	with unloading under pressure
	d	with controlled gravity unloading, on both sides, alternately, at the top ^a
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom a
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	for grain
Index letters	i	fitted out for the transport objects which should exceed the gauge if they were loaded on ordinary wagons ^b
	I	with bulk gravity unloading, on both sides, simultaneously, at the top ^a
	II	with bulk gravity unloading, on both sides, simultaneously, at the bottom ^a
	m	with 2 units: lu 🛛 27 m
	mm	with 2 units: lu < 22 m
	0	with axial bulk gravity unloading, at the top ^a
	00	with axial bulk gravity unloading, at the bottom ^{a,b}
	р	with axial bulk gravity unloading, at the top ^a
	рр	with axial bulk gravity unloading, at the bottom ^a
	r	articulated wagon
	rr	multiple wagon

- well wagons;
- wagons with a central recess;

^a Wagons with gravity unloading in category U are closed wagons which can only be loaded through one or more loading apertures situated in at the top part of the body, and whose total opening dimensions are less than the length of the body; these wagons do not have a flat floor and are not designed for end or side tipping.

^b In particular:

⁻ wagons with an ordinary sloping diagonal permanent control desk.

The n	nethod of unloa	iding these wagons is defined by a combination of the following characteristics:		
Arr	angement of the	e unloading apertures:		
-	axial:	Apertures situated above the centre of the track		
-	bilateral:	Apertures on either side of the track, outside the rails		
 (For these wagons, unloading is: 				
		 simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides, 		
		 alternate, if complete emptying of the wagon can take place by opening the apertures on one side only) 		
-	top:	The lower edge of the discharge through (without taking into account mobile devices which may extend this through) is situated at		
		least 0.700 m above the rail, and allows for the use of a conveyor belt to take away the goods		
-	bottom:	The position of the lower edge of the discharge through does not allow for the use of a conveyor belt to take away the goods		
Rat	e of unloading:			
-	bulk:	Once the apertures are open for unloading, they cannot be closed again until the wagon is empty		
-	controlled:	At any time during unloading, the flow of the goods can be regulated or even stopped		

		· · · · · · · · · · · · · · · · · · ·
		with metal shell,
		for the transport of liquids or gases
Reference wa	agon	articulated or multiple wagon with axles, with 2 units
		22 m
	а	with bogies
	С	with unloading under pressure ^a
	е	fitted with heating devices
	f	suitable for traffic with Great Britain
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively)
	g	for the transport of gases under pressure, liquefied or dissolved under pressure ^a
Index letters	i	tank of non-metallic material
	j	with shock-absorbing device
	m	with 2 units: lu 🛛 27 m
	mm	with 2 units: lu < 22 m
	0	with 3 units
	00	with 4 units or more
	r	articulated wagon
	rr	multiple wagon

7.8. Category letter: Z - tank wagon

 $^{^{\}it a}$ The index letter "c" shall not be marked on wagons bearing the index letter "g".