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## APTU Uniform Rules (Appendix F to COTIF 1999)

### Uniform Technical Prescriptions (UTP) applicable to Rolling Stock, subsystem

### FREIGHT WAGONS - (UTP WAG) – ANNEX PP

### VEHICLE IDENTIFICATION


Explanatory note:

The texts of this UTP which appear across two columns are identical to corresponding texts of the European Union regulations. Texts which appear in two columns differ; the left-hand column contains the UTP regulations, the right-hand column shows the text in the corresponding EU regulations. The text in the right-hand column is for information only and is not part of the OTIF regulations.

OTIF UTP	Corresponding text in EU regulations <sup>1</sup>	EU ref. <sup>2</sup>
<b>PP.0 GENERAL REMARKS</b>		Part 0
<b>PP.0.1 THIS ANNEX DESCRIBES</b>		1.
<p>the vehicle number and linked marking applied in a visible manner on the vehicle to identify it uniquely during operation. It does not describe other numbers or markings possibly engraved or fixed in a permanent manner on the chassis or the main components of the vehicle during its construction.</p> <p>These other markings are included in Annex B.</p> <p><b>Note:</b> This Annex PP is an adapted extract of TSI OPE Annex P. It contains the provisions applicable to freight wagons. Some tables include information concerning other types of railway vehicles; such information shall not be considered as regulations applicable in accordance with this Annex.</p>		
<p>The conformity of the number and linked marking with the indications described in this Appendix is not mandatory for:</p> <ul style="list-style-type: none"> <li>– vehicles that are only used on networks to which UTP WAG does <b>not</b> apply;</li> <li>– heritage vehicles, in a historical guise;</li> <li>– wagons that are not normally used or transported on the networks to which this UTP WAG applies.</li> </ul> <p>Nevertheless, these vehicles must receive a temporary number permitting their operation.</p>	<p style="text-align: center;">  this TSI (OPE)</p> <p style="text-align: center;">  TSI</p>	2.

<sup>1</sup> Annex P of TSI OPE (Operations and traffic management) – Commission Decision 2010/640/EU published in the EU Official Journal L280 on 26.10.2010 – as amended by Commission Decision 2011/314/EU published in the EU Official Journal L144 on 31.05.2011.

<sup>2</sup> If no EU reference is indicated, it means that the chapter/section number is the same as in the OTIF text.

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## PP.02 STANDARD NUMBER AND LINKED ABBREVIATIONS

Each railway vehicle receives a number consisting of 12 digits (figures) called “standard number” with the following structure:

Type of rolling stock	Type of vehicle and indication of interoperability [2 digits]	Country in which the vehicle is registered [2 digits]	Technical characteristics [4 digits]	Serial number [3 digits]	Self-checking digit [1 digit]
Wagons	00 to 09 10 to 19 20 to 29 30 to 39 40 to 49 80 to 89 <i>[details in PP.6]</i>	01 to 99 <i>[details in PP.4]</i>	0000 to 9999 <i>[details in PP.9]</i>	001 to 999	0 to 9 <i>[details in PP.3]</i>
Hauled passenger vehicles	50 to 59 60 to 69 70 to 79 <i>[details in PP.7]</i>	01 to 99 <i>[details in PP.4]</i>	0000 to 9999 <i>[details in PP.10]</i>	001 to 999	0 to 9 <i>[details in PP.3]</i>
Tractive rolling stock	90 to 99 <i>[details in PP.8]</i>		0000001 to 8999999 <i>[the meaning of these figures is defined by the Contracting States , eventually by bilateral or multilateral agreement]</i>		
Special vehicles			9000 to 9999 <i>[details in PP.11]</i>	001 to 999	

In a given country, the 7 digits of technical characteristics and serial number are sufficient to identify uniquely a vehicle inside each group of wagons, hauled passenger vehicles, tractive rolling stock <sup>3</sup> and special vehicles <sup>4</sup>.

Alphabetical markings complete the number:

- markings linked to the interoperability ability (details in section PP.5);
- abbreviation of the country in which the vehicle is registered (details in section PP.4);
- keeper <sup>5</sup> (details in section PP.1);
- abbreviations of the technical characteristics (details in section PP.13 for hauled passenger vehicles, section PP.12 for wagons and Section PP.14 for special vehicles).


## PP.03 ALLOCATION OF NUMBER

The unique Standard Number shall be | The rules for the management of the

<sup>3</sup> For tractive rolling stock, the six digits of the number has to be unique in a given country.

<sup>4</sup> For special vehicles, the first digit and the last five digits of the technical characteristics and serial number must be unique in a given country.

<sup>5</sup> A vehicle keeper is the person, who, being the owner or having the right of disposal over it, exploits a vehicle economically in a permanent manner as a means of transport and is registered as such in the National Vehicle Register.

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allocated according to the rules laid down in Article 14 § 1 of ATMF.

Corresponding text in EU regulations<sup>1</sup> EU ref.<sup>2</sup>

numbers will be proposed by the ERA as part of the activity No 15 of its work programme 2005. European Vehicle Number

The

Standard Number

shall be changed when it does not reflect the interoperability capability or technical characteristics according to this Annex due to technical modifications of the vehicle. Such technical modifications may require a new technical admission.

European Vehicle Number

authorisation for placing in service according to Articles 20-25 of Interoperability Directive 2008/57/EC.

2010/  
640/EU

### PP.1 VEHICLE KEEPER MARKING (VKM)

Part 1

#### PP.1.1 DEFINITION OF THE VEHICLE KEEPER MARKING

A Vehicle Keeper Marking (VKM) is an alphabetic code, consisting of 2 to 5 letters<sup>6</sup>. A VKM is inscribed on each side of the rail vehicle, near the Standard Number.

European Vehicle Number.

The VKM denominates the vehicle keeper as registered in a National Vehicle Register.

the Rolling Stock Register.

A VKM is unique and valid in all countries covered by UTP WAG (i.e. the OTIF Contracting States)

this TSI (OPE)

and all countries that enter into an agreement that involves the application of the system of vehicle numbering and Vehicle Keeper Marking as described in this Annex PP.

TSI (OPE).

#### PP.1.2 FORMAT OF THE VEHICLE KEEPER MARKING

The VKM is a representation of the full name or an abbreviation of the vehicle keeper, if possible in a recognisable manner. All 26 letters of the Latin alphabet may be used. The letters in the VKM are written in capitals. Letters that do not stand for first letters of words in the keeper's name may be written in lower case. For checking uniqueness, the letters written in lower case will be taken as written in capitals.

Letters may contain diacritical signs<sup>7</sup>. Diacritical signs used by these letters are ignored for checking uniqueness.

For vehicles kept by keepers that reside in a country that does not use the Latin alphabet, a translation letter by letter of the VKM in its own alphabet may be applied behind the VKM separated from it by a slash-sign ("/"). This translated VKM is disregarded for checking uniqueness and other data-processing purposes.

#### PP.1.3 EXEMPTIONS FOR USING A VEHICLE KEEPER MARKING

A Contracting State may decide to apply the following exemptions:

Member States


A VKM is not required for the vehicles whose numbering system does not follow the present Annex PP

TSI (OPE)

(cf. part 0, point 2). Nevertheless, adequate information about the identity of the vehicle keeper has to be provided to the organisations involved in their operation over networks

<sup>6</sup> Digits, spaces and signs other than letters are not allowed. For NMBS/SNCB, the use of an encircled single letter B can be continued.

<sup>7</sup> Diacritical marks are "accent signs", such as in Å, Ç, Ö, Ć, Ž, Å etc. Special letters such as Ø and Æ will be represented by a single letter; in tests for uniqueness Ø is treated as O and Æ as A.

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to which this  
Annex  
applies.

Corresponding text in EU regulations <sup>1</sup> EU ref. <sup>2</sup>

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When the full name and address information is inscribed on the vehicle, a VKM is not required for:

- vehicles of keepers with such a limited vehicle fleet that this does not warrant the use of a VKM;
- specialised vehicles for infrastructure maintenance.

A VKM is not required for locomotives, multiple units and passenger vehicles used in national traffic only, when:

- they carry their keeper's logo and that logo contains the same and well recognisable letters as the VKM;
- they carry a well recognisable logo that has been accepted by the competent national authority as an adequate equivalent for the VKM.

When a company logo is applied in addition to besides the application of a VKM, only the VKM is valid and the logo is disregarded.

#### PP.1.4 PROVISIONS ABOUT ALLOCATION OF VEHICLE KEEPER MARKINGS

A vehicle keeper can be issued more than one VKM, in case:

- the vehicle keeper has a formal name in more than one language,
- a vehicle keeper has good cause to distinguish between separate vehicle fleets within his organisation.

A single VKM can be issued for a group of companies:

- that belong to single corporate structure (e.g. holding structure),
- that has mandated a separate, single legal entity for handling all issues on their behalf, in which event the legal entity is the keeper.


#### PP.1.4 REGISTER OF VEHICLE KEEPER MARKINGS (VKM) AND PROCEDURE FOR ALLOCATION

The register of VKM is public and updated on a real time basis.

It is a joint register set up in accordance with an agreement between the Secretary General and ERA, see "Rules for registration of a VKM" on the OTIF website ([www.otif.org](http://www.otif.org)) under Technology/Registers.

An application for a VKM is filed with the applicant's competent national authority and forwarded to the central body.

The central body is formed jointly by the Secretary General and ERA. If the applicant has his place of business in a State which does not apply EU law, the central body is the Secretary General. The application form included in the above-mentioned Rules shall be used.

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A VKM can be used only after publication by the central body.  
i.e. after publication on the OTIF and ERA  
websites.

The National Authorities and the Secretary  
General (or ERA) may refuse registration of  
a requested VKM if the letter combination  
might lead to confusion or deception. In this  
case a justified decision shall be issued.

The holder of a VKM must inform the competent national authority when he ends the use  
of a VKM, and the competent national authority will forward the information to the central  
body,  
the Secretary General.

ERA.

A VKM will then be revoked once the keeper has proved that the marking has been  
changed on all vehicles concerned. It will not be reissued for 10 years, unless it is  
reissued to the original holder or at his request to another holder.

A VKM can be transferred to another holder, which is the legal successor to the original  
holder. A VKM stays valid when the VKM's holder changes his name to a name that does  
not bear resemblance to the VKM.

The VKM will be applied to all new build wagons after entry into force of the  
UTP WAG.

relevant TSIs.

Existing wagons will have to be brought in compliance with the VKM marking by 31  
December 2013. In case of inconsistency between the VKM marked on the vehicle and  
the data registered in the NVR, the NVR-registration supersedes.

## PP.2 INSCRIPTION OF THE NUMBER AND LINKED ALPHABETICAL MARKING ON THE BODYWORK Part 2

### PP.2.1 GENERAL ARRANGEMENTS FOR EXTERNAL MARKINGS

The provisions concerning markings in  
standard prEN 15877-1:2010 shall be  
observed. This includes the general  
provisions in chapter 4 of the standard.


The capital letters and figures making up  
the marking inscriptions shall be at least  
80 mm in height, in a sans serif font type  
of correspondence quality. A smaller  
height may only be used where there is  
no option but to place the marking on the  
sole bars.

The marking is placed not higher than 2  
metres above rail level.

### PP.2.2 WAGONS

The marking shall be inscribed on the wagon bodywork in the following manner (exam-  
ples):

21 TEN	31 TEN	23 RIV	81	(profile G2)
85 CH-SBB	72 SRB-ZS	85 CH-SBB	80 D-DB	
7369 551-5	0691 232-1	7369 005-0	6633 001-5	
Zcs	Tanoos	Zcs	Falns	
23 TEN	31 TEN	33 TEN	43	(In this case without VKM, full
80 D-RFC	80 D-DB	84 NL-ACTS	87 E	name and address information
7369 553-4	0691 235-2	4796 100-8	4273 361-3	is inscribed on the vehicle);
Zcs	Tanoos	Slpss	Laeks	this option has limited validity,
				see last paragraph of PP.1.4

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For wagons whose bodywork does not offer a large enough area for this type of arrangement, particularly in the case of flat wagons, the marking shall be arranged as follows:

01 87 3320 644-7  
TEN E-SNCF Ks

When one or more index letters with a national definition are inscribed on a wagon, this national marking (in the example below "xy") must be shown after the international letter marking and separated from it by a hyphen as follows:

01 87 3320 644-7  
TEN E-SNCF Ks-xy

2010/  
640/E  
U

### PP.3 RULES FOR THE DETERMINATION OF THE CHECK-DIGIT (DIGIT 12)

Part 3

The check-digit is determined in the following manner:

- the digits in the even positions of the basic number (counting from the right) are taken at their own value;
- the digits in the odd positions of the basic number (counting from the right) are multiplied by 2;
- the sum formed by the digits in even position and by all the digits which constitute the partial products obtained from the odd positions is then established;
- the last digit of this sum is retained;
- the complement required to bring the last digit to 10 forms the check-digit; should this last digit be nought, then the check-digit will also be nought.

Examples

1 Let the basic number be    3   3   8   4   4   7   9   6   1   0   0  
-  
Multiplication factor        2   1   2   1   2   1   2   1   2   1   2  
    6   3   16   4   8   7   18   6   2   0   0

Sum:  $6 + 3 + 1 + 6 + 4 + 8 + 7 + 1 + 8 + 6 + 2 + 0 + 0 = 52$

The last digit of this sum is 2.

The check-digit number will therefore be 8 and the basic number thus becomes the registration number 33 84 4796 100 - 8.

2 Let the basic number be    3   1   5   1   3   3   2   0   1   9   8  
-  
Multiplication factor        2   1   2   1   2   1   2   1   2   1   2  
    6   1   10   1   6   3   4   0   2   9   16

Sum:  $6 + 1 + 1 + 0 + 1 + 6 + 3 + 4 + 0 + 2 + 9 + 1 + 6 = 40$

The last digit of this sum is 0.

The check-digit number will therefore be 0 and the basic number thus becomes the registration number 31 51 3320 198 - 0.

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Corresponding text in EU regulations <sup>1</sup> EU ref. <sup>2</sup>**PP.4 CODING OF THE COUNTRIES IN WHICH THE VEHICLES ARE REGISTERED Part 4  
(DIGITS 3-4 AND ABBREVIATION)**

The Information relating to third countries (non OTIF Member States) is given for information purposes only.


Countries	Alphabetical country code <sup>(1)</sup>	Numerical country code	Companies concerned by the square brackets in part 6 and part 7 <sup>(2)</sup>	Countries	Alphabetical country code <sup>(1)</sup>	Numerical country code	Companies concerned by the square brackets in part 6 and part 7 <sup>(2)</sup>
Albania	AL	41	HSh	Lebanon	RL	98	CEL
Algeria	DZ	92	SNTF	Liechtenstein	LIE <sup>(1)</sup>		
Armenia	AM <sup>(3)</sup>	58	ARM	Lithuania	LT	24	LG
Austria	A	81	ÖBB	Luxembourg	L	82	CFL
Azerbaijan	AZ	57	AZ	Macedonia (Former Yugoslav Republic of)	MK	65	CFARYM (MŽ)
Belarus	BY	21	BC	Malta	M		
Belgium	B	88	SNCB/NMBS	Moldova	MD <sup>(1)</sup>	23	CFM
Bosnia-Herzegovina	BIH	44	ŽRS	Montenegro	MNE	62	JŽ?
		50	ŽFBH	Monaco	MC		
Bulgaria	BG	52	BDZ, SRIC	Mongolia	MGL	31	MTZ
China	RC	33	KZD	Morocco	MA	93	ONCFM
Cuba	CU <sup>(3)</sup>	40	FC	Netherlands	NL	84	NS
Cyprus	CY			Norway	N	76	NSB, JBV
Czech Republic	CZ	54	ČD	Poland	PL	51	PKP
Denmark	DK	86	DSB, BS	Portugal	P	94	CP, REFER
Egypt	ET	90	ENR	Romania	RO	53	CFR
Estonia	EST	26	EVR	Russia	RUS	20	RZD
Finland	FIN	10	VR, RHK	Serbia	SRB	72	ŽS
France	F	87	SNCF, RFF	Slovakia	SK	56	ŽSSK, ŽSR
Georgia	GE	28	GR	Slovenia	SLO	79	SŽ
Germany	D	80	DB, AAE <sup>(2)</sup>	South Korea	ROK	61	KNR
Greece	GR	73	CH	Spain	E	71	RENFE
Hungary	H	55	MÁV, GySEV/ROeEE <sup>(2)</sup>	Sweden	S	74	GC, BV
Iran	IR	96	RAI	Switzerland	CH	85	SBB/CFF/FFS, BLS <sup>(4)</sup>
Iraq	IRQ <sup>(3)</sup>	99	IRR	Syria	SYR	97	CFS
Ireland	IRL	60	CIE	Tajikistan	TJ	66	TZD
Israel	IL	95	IR	Tunisia	TN	91	SNCFT

**OTIF UTP****Corresponding text in EU regulations <sup>1</sup> EU ref. <sup>2</sup>**

Countries	Alphabetical country code <sup>(1)</sup>	Numerical country code	Companies concerned by the square brackets in part 6 and part 7 <sup>(2)</sup>	Countries	Alphabetical country code <sup>(1)</sup>	Numerical country code	Companies concerned by the square brackets in part 6 and part 7 <sup>(2)</sup>
Italy	I	83	FS, FNME <sup>(2)</sup>	Turkey	TR	75	TCDD
<i>Japan</i>	J	42	EJRC	<i>Turkmenistan</i>	TM	67	TRK
<i>Kazakhstan</i>	KZ	27	KZH	Ukraine	UA	22	UZ
<i>Kyrgyzstan</i>	KS	59	KRG	United Kingdom	GB	70	BR
Latvia	LV	25	LDZ	<i>Uzbekistan</i>	UZ	29	UTI
				<i>Vietnam</i>	VN <sup>(3)</sup>	32	DSVN

- (1) According to the alphabetical coding system described in Appendix 4 to the 1949 convention and Article 45(4) of the 1968 convention on road traffic.
- (2) Companies who, at the time of coming into force, were members of UIC or OSJD and used the described country code as company code.
- (3) Codes to be confirmed.
- (4) Until the evolutions indicated in point 3 of the general remarks come into force, these companies can use the codes 43 (GySEV/ROeEE), 63 (BLS), 64 (FNME), 68 (AAE). The period of updating will then be defined together with the concerned Contracting States.

Country names indicated in *italic* letters are not OTIF Member States at the time of the adoption of this UTP WAG.

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**PP.5 ALPHABETICAL MARKING OF THE INTEROPERABILITY CAPABILITY**

Part 5

PP.5.1 **“TEN”**: a wagon which

- 1) fully<sup>8</sup> complies with all relevant UTPs (and RID if applicable) in the versions in force at the time<sup>9</sup> of its technical admission and which, as it is subject to section 7.6.4 of UTP WAG, is admitted in all OTIF Contracting States (= OTIF Member States that apply APTU and ATMF) in accordance with ATMF Article 6 § 3, or

- 2) is subject to ATMF Article 3a § 1 (i.e. authorised according to Articles 22(1) and 23(1) of EU Directive 2008/57/EC);

or

**“RIV”**: a wagon which complies with the regulations of the railway Technical Unity (TU) and the obligatory provisions of the applicable leaflets in the UIC Code, including the provisions of the RIV 2000 agreement in its version of 1 January 2004. **NB.:** The RIV marking is only valid for wagons subject to the transitional provisions in Article 19 of ATMF;

or

**“PPV/PPW”**: A wagon which complies with the PPV/PPW or PGW agreement (inside OSJD States) (original: PPV/PPW: **ППВ** (Правила пользования вагонами в международном сообщении; PGW: Правила Пользования Грузовыми Вагонами)

**Note:**

Wagons which are not admitted

for operation in all

Contracting States

need a marking indicating the States where they have been admitted/authorised.

The marking shall be in accordance with standard **pr**EN 15877-1:2010 marking 4.5.2 “Derogation plate”.

The States shall be codified in accordance with this Annex section PP.4.

This case may cover vehicles which are

UTP WAG compliant but admitted according to ATMF Article 6 § 4 (i.e. State by State) and wagons which do not comply with the UTP WAG.

These wagons correspond to coding 4 or 8 of the first digit in the vehicle number specified in section PP.6.1.

**“TEN”**: Vehicle which complies with the following conditions:

- it complies with all relevant TSIs which are in force at the moment of placing in service and has been authorised to be placed in service according to Article 22(1) of Directive 2008/57/EC;
- it is provided with an authorisation valid in all Member States in accordance with Article 23(1) of Directive 2008/57/EC.

2011/  
314/EU  
Annex P.  
part 5 ↓

authorised

Member States

The list of authorising MS should be marked according to one of the following drawings, where D stands for the MS who has granted the first authorisation (in the given example, Germany) and F stands for the second authorising MS (in the given example, France).

TSI compliant or which are not.

<sup>8</sup> If the UTP contains “open points” relating to the wagon’s compatibility with infrastructure or if the wagon is subject to a derogation or a specific case or not fully UTP compliant, it shall be admitted according to ATMF Article 6 § 4; instead of TEN, it will need the grid marking specified in the note to indicate the States by which the wagon has been admitted.

<sup>9</sup> The date of admission is the date on which the Certificate is issued.

## PP.6 INTEROPERABILITY CODES USED FOR WAGONS (DIGITS 1-2)

### PP.6.1

	1 <sup>st</sup> digit	2 <sup>nd</sup> digit	0	1	2	3	4	5	6	7	8	9	2 <sup>nd</sup> digit	1 <sup>st</sup> digit
		Track Gauge	fixed or variable	fixed	variable	fixed	variable	fixed	variable	fixed	variable	fixed or variable	Track Gauge	
TEN <sup>(a)</sup> and/or RIV <sup>(b)</sup> and/or PPV/PPW	0	with axles	Not to be used	TEN <sup>(a)</sup> and/or RIV <sup>(b)</sup>		not to be used <sup>(d)</sup>						PPV/PPW wagons (variable gauge)	with axles	0
	1	with bogies											with bogies	1
TEN <sup>(a)</sup> and/or RIV <sup>(b)</sup> and/or PPV/PPW	2	with axles		TEN <sup>(a)</sup> and/or RIV <sup>(b)</sup>						TEN <sup>(a)</sup> and/or RIV <sup>(b)</sup> and/or PPV/PPW	PPV/PPW wagons (fixed gauge)	with axles	2	
	3	with bogies										with bogies	3	
Other wagons <sup>(e)</sup>	4	with axles <sup>(c)</sup>	maintenance related wagons	Other wagons <sup>(e)</sup>							Wagons with special numbering for technical characteristics not placed in service inside EU or a COTIF Contracting State	with axles	4	
	8	with bogies <sup>(c)</sup>										with bogies	8	
	Traffic		Domestic traffic or International traffic by special agreement	International traffic by special agreement	Domestic traffic	Interna- tional traffic by special agreement	Domestic traffic	Interna- tional traffic by special agreement	Domestic traffic	Interna- tional traffic by special agreement	Domestic traffic	Domestic traffic or International traffic by special agreement		
	1 <sup>st</sup> digit	2 <sup>nd</sup> digit	0	1	2	3	4	5	6	7	8	9	2 <sup>nd</sup> digit	1 <sup>st</sup> digit

(a) Wagons permitted to carry the TEN marking, see section PP.5.1, and which in addition to the criteria for the TEN marking meet the criteria included in section PP.6.2.

(b) Including wagons, which according to existing regulations carry the digits defined in the present table. RIV cannot be used for wagons admitted after the entry into force of UTP WAG.


(c) Fixed or variable gauge.

(d) Except for wagons in category I (temperature-controlled wagons), not to be used for new vehicles placed in service.

(e) Including wagons permitted to carry the marking TEN, but do not meet the criteria included in section 6.2; Includes also wagons which cannot carry the marking TEN.

**[NB: THE YELLOW IS UNCLEAR! CAN FIXED GAUGE ONLY BE USED BY SPECIAL AGREEMENT AND VARIABLE ONLY IN DOMESTIC TRAFFIC?]**

For more information on the criteria for 1<sup>st</sup> digit, see the APPLICATION GUIDE (not part of the regulations) at the end of this Annex PP - (page 40).

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PP.6.2 Additional criteria to be met by a wagon subject to UTP WAG section 7.6.4 in order to achieve compatibility with Appendix C of the preliminary draft 3.0 of TSI WAG revised:<sup>10</sup>

### C.3 Ability to be hump shunted:

In addition to the requirements in section 6.2.3.1.1 of this UTP, the wagon shall be assessed in accordance with clause 8 of EN 12663-2:2010 and classified in Category F-I in accordance with clause 5.1 of EN 12663-2:2010 with the following exception: for wagons designed to carry motor vehicles or combined transport wagons without long stroke shock absorbers, Category F-II may be used. The requirements concerning the buffing tests in clause 8.2.5.1 of EN 12663-2:2010 apply.

### C.8 Tests concerning longitudinal compressive forces:

The verification of safe running under longitudinal compressive forces shall be based on EN 15839:2011.

### C.10 Location of parking brake handles

If a wagon is equipped with a parking brake, the location of its operating handle or wheel shall be:

- on both sides of the wagon if it is operated from the ground or
- on a platform that can be accessed from both sides of the wagon.

The handles for operation from the ground shall be wheels.

### C.16 Tow hooks

Wagons shall be provided with standard tow hooks, which shall be fixed to the side of the wagon underframe in accordance with leaflet UIC 535-1, clause 1.4.

### C.17 Protection of protruding parts


To ensure the safety of staff, protruding (angular or pointed) wagon parts located up to 2 m above rail level or above passageways and working surfaces and liable to cause accidents, shall be fitted with protective devices in accordance with leaflet UIC 535-2, clause 1.3.

### C.18 Label holders

Wagons shall be equipped with a label holder on each side in accordance with leaflet UIC 575, clause 1.

Corresponding text in EU regulations EU  
ref.

<sup>10</sup> The other provisions in Appendix C of the preliminary draft are covered in UTP WAG chapter 4-6, including the additional provisions applicable to wagons subject to section 7.6.4 (i.e. wagons cross-admitted in all Contracting States).

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**PP.7-  
PP.8** (Not relevant for wagons)

Part  
7-8

**PP.9 STANDARD NUMERICAL MARKING OF WAGONS (DIGITS 5 TO 8)**

Part 9

The numerical marking associated to the main technical characteristics of the wagon and it

This Annex indicates  
and it  
ERA website ([www.era.europa.eu](http://www.era.europa.eu)).

is published on the  
OTIF website ([www.otif.org](http://www.otif.org))

An application for a new code is filed with the registering entity and sent to the Secretary General. (as referred to in Decision 2007/756/EC and sent to the ERA.

**PP.10** (Not relevant for wagons)

Part 10

**PP.11 CODES FOR THE TECHNICAL CHARACTERISTICS OF THE SPECIAL VEHICLES (DIGIT 6 TO 8)**

Part 11

Section PP.11 is published on the  
OTIF website ([www.otif.org](http://www.otif.org))

ERA website ([www.era.europa.eu](http://www.era.europa.eu)).

An application for a new code is filed with the registering entity and sent to the Secretary General. (as referred to in Decision 2007/756/EC and sent to the ERA.

A new code can be used only after publication by the  
Secretary General. ERA.

**PP.12 LETTER MARKING FOR WAGONS**

Part 12

An application for a new code is filed with the registering entity and sent to the Secretary General. (as referred to in Decision 2007/756/EC and sent to the ERA.

A new code can be used only after publication by the  
Secretary General. ERA.

**LETTER MARKING FOR WAGONS WHICH ARE NOT ARTICULATED OR MULTIPLE WAGONS**

**DEFINITION OF THE CATEGORY AND INDEX LETTERS**


**1. Important notes**

In the attached tables:

- 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.

**2. Index letters with an international value common to all categories**

- q pipe for electric heating which can be supplied by all accepted currents
- qq pipe and installation for electric heating which can be supplied by all accepted currents
- s wagons authorised to run under "s" conditions (see point 4.5.4 Wagon load table in prEN 15877-1:2010)
- ss wagons authorised to run under "ss" conditions (see point 4.5.4 Wagon load table)

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in **pr**EN 15877-1:2010)

### 3. Index letters with a national value


t, u, v, w, x, y, z

The value of these letters is defined by each Contracting State.

| Member State.

#### CATEGORY LETTER: E - OPEN HIGH-SIDED WAGON

Reference wagon	of ordinary type, with side and end tipping, with flat floor with 2 axles: $lu \geq 7,70 \text{ m}$ ; $25 \text{ t} \leq tu \leq 30 \text{ t}$ with 4 axles: $lu \geq 12 \text{ m}$ ; $50 \text{ t} \leq tu \leq 60 \text{ t}$ with 6 axles or more: $lu \geq 12 \text{ m}$ ; $60\text{t} \leq tu \leq 75 \text{ t}$	
Index letters	a	with 4 axles
	aa	with 6 axles or more
	c	with floor traps <sup>a</sup>
	k	with 2 axles: $tu < 20 \text{ t}$ with 4 axles: $tu < 40 \text{ t}$ with 6 axles or more: $tu < 50 \text{ t}$
	kk	with 2 axles: $20 \text{ t} \leq tu < 25 \text{ t}$ with 4 axles: $40 \text{ t} \leq tu < 50 \text{ t}$ with 6 axles or more: $50 \text{ t} \leq tu < 60 \text{ t}$
	l	without side tipping
	ll	without floor traps <sup>b</sup>
	m	with 2 axles: $lu < 7,70 \text{ m}$ with 4 axles or more: $lu < 12 \text{ m}$
	mm	with 4 axles or more: $lu > 12 \text{ m}$ <sup>b</sup>
	n	with 2 axles: $tu > 30 \text{ t}$ with 4 axles: $tu > 60 \text{ t}$ with 6 axles or more: $tu > 75 \text{ t}$
	o	without end tipping
	p	with station for brakeman <sup>b</sup>
<p>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.</p> <p>b. Only applicable to wagons with track gauge of 1520 mm.</p>		

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**CATEGORY LETTER: F - OPEN HIGH-SIDED WAGON**

<i>Reference wagon</i>	<b>Of special type</b> <b>with 2 axles: 25 t ≤ tu ≤ 30 t</b> <b>with 3 axles: 25 t ≤ tu ≤ 40 t</b> <b>with 4 axles: 50 t ≤ tu ≤ 60 t</b> <b>with 6 axles or more: 60 t ≤ tu ≤ 75 t</b>	
<b>Index letters</b>	a	with 4 axles
	aa	with 6 axles or more
	b	high capacity with axles (volume > 45 m <sup>3</sup> )
	c	with controlled gravity unloading, on both sides, alternately, at the top <sup>a</sup>
	cc	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a</sup>
	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
	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
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a</sup>
	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
	o	with axial bulk gravity unloading, at the top <sup>a</sup>
oo	with axial bulk gravity unloading, at the bottom <sup>a</sup>	
p	with axial controlled gravity unloading, at the top <sup>a</sup>	
pp	with axial controlled gravity unloading, at the bottom <sup>a</sup>	
ppp	with station for brakeman <sup>b</sup>	
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 track gauge of 1520 mm.	
The method of unloading these wagons is defined by a combination of the following characteristics:		
<i>Arrangement of the unloading apertures:</i>		
— 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		



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- 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**

<i>Reference wagon</i>		<b>Of ordinary type with at least 8 ventilation apertures with 2 axles: <math>9\text{ m} \leq lu &lt; 12\text{ m}</math>; <math>25\text{ t} \leq tu \leq 30\text{ t}</math> with 4 axles: <math>15\text{ m} \leq lu &lt; 18\text{ m}</math>; <math>50\text{ t} \leq tu \leq 60\text{ t}</math> with 6 axles or more: <math>15\text{ m} \leq lu &lt; 18\text{ m}</math>; <math>60\text{ t} \leq tu \leq 75\text{ t}</math></b>
<b>Index letters</b>	a	with 4 axles
	aa	with 6 axles or more
	b	high capacity: - with 2 axles: $lu \geq 12\text{ m}$ and payload capacity $\geq 70\text{ m}^3$ - with 4 axles or more: $lu \geq 18\text{ m}$
	bb	with 4 axles: $lu > 18\text{ m}$ <sup>a</sup>
	g	for grain
	h	for fruits and vegetables <sup>b</sup>
	k	with 2 axles: $tu < 20\text{ t}$ with 4 axles: $tu < 40\text{ t}$ with 6 axles or more: $tu < 50\text{ t}$
	kk	with 2 axles: $20\text{ t} \leq tu < 25\text{ t}$ with 4 axles: $40\text{ t} \leq tu < 50\text{ t}$ with 6 axles or more: $50\text{ t} \leq tu < 60\text{ t}$
	l	with less than 8 ventilation apertures
	ll	with enlarged doors apertures <sup>a</sup>
	m	with 2 axles: $lu < 9\text{ m}$ with 4 axles or more: $lu < 15\text{ m}$
	n	with 2 axles: $tu > 30\text{ t}$ with 4 axles: $tu > 60\text{ t}$ with 6 axles or more: $tu > 75\text{ t}$
	o	with 2 axles: $lu < 12\text{ m}$ and payload capacity $\geq 70\text{ m}^3$
	p	with station for brakeman <sup>a</sup>
a.		Only applicable to wagons with track gauge of 1520 mm.
b.		The concept "for fruits and vegetables" applies only to wagons provided with additional ventilation apertures at the floor level.



## CATEGORY LETTER: H - COVERED WAGON

<i>Reference wagon</i>		<b>of special type</b> <b>with 2 axles: <math>9\text{ m} \leq lu \leq 12\text{ m}</math>; <math>25\text{ t} \leq tu \leq 28\text{ t}</math></b> <b>with 4 axles: <math>15\text{ m} \leq lu &lt; 18\text{ m}</math>; <math>50\text{ t} \leq tu \leq 60\text{ t}</math></b> <b>with 6 axles or more: <math>15\text{ m} \leq lu &lt; 18\text{ m}</math>; <math>60\text{ t} \leq tu \leq 75\text{ t}</math></b>
<b>Index letters</b>	a	with 4 axles
	aa	with 6 axles or more
	b	with 2 axles: $12\text{ m} \leq lu \leq 14\text{ m}$ and payload capacity $\geq 70\text{ m}^3$ <sup>a</sup> with 4 axles or more: $18\text{ m} \leq lu < 22\text{ m}$
	bb	with 2 axles: $lu \geq 14\text{ m}$ with 4 axles or more: $lu \geq 22\text{ m}$
	c	with end doors
	cc	with end doors and fitted internally for the transport of motor cars
	d	with floor traps
	dd	with tipping body <sup>b</sup>
	e	with 2 floors
	ee	with 3 floors or more
	f	suitable for traffic with Great Britain <sup>a</sup>
	ff	suitable for traffic with Great Britain (by tunnel exclusively)
	fff	suitable for traffic with Great Britain (by train-ferry exclusively) <sup>a</sup>
	g	for grain
	gg	for cement <sup>b</sup>
	h	for fruits and vegetables <sup>c</sup>
	hh	for mineral fertilizer <sup>b</sup>
	i	with opening or shunt walls
	ii	with very robust opening or shunt walls <sup>d</sup>
	k	with 2 axles: $tu < 20\text{ t}$ with 4 axles: $tu < 40\text{ t}$ with 6 axles or more: $tu < 50\text{ t}$
kk	with 2 axles: $20\text{ t} \leq tu < 25\text{ t}$ with 4 axles: $40\text{ t} \leq tu < 50\text{ t}$ with 6 axles or more: $50\text{ t} \leq tu < 60\text{ t}$	
l	with movable partitions <sup>e</sup>	
ll	with lockable movable partitions <sup>e</sup>	
m	with 2 axles: $lu < 9\text{ m}$ with 4 axles or more: $lu < 15\text{ m}$	
mm	with 4 axles or more: $lu > 18\text{ m}$ <sup>b</sup>	
n	with 2 axles: $tu > 28\text{ t}$ with 4 axles: $tu < 60\text{ t}$ with 6 axles or more: $tu > 75\text{ t}$	
o	with 2 axles: $lu\ 12\text{ m} < 14\text{ m}$ et volume utile $\geq 70\text{ m}^3$	
p	with station for brakeman <sup>b</sup>	

- a. 2-axle wagons bearing the index letters "f", "fff" can have a payload capacity less than  $70\text{ m}^3$ .  
b. Only applicable to wagons with track gauge of 1520 mm.  
c. The concept « for fruits and vegetables » applies only to wagons provided with additional ventilation apertures at the floor level.  
d. Only applicable to wagons with gauge of 1435 mm.  
e. Movable partitions may be dismantled temporarily.

**CATEGORY LETTER: I - TEMPERATURE-CONTROLLED WAGON**

Reference wagon		refrigerator wagon with class IN thermal insulation, with motor-driven ventilation, with gratings and ice bunker $\geq 3,5 \text{ m}^3$ with 2 axles: $19 \text{ m}^2 \leq \text{floor area} < 22 \text{ m}^2$ ; $15 \text{ t} \leq \text{tu} \leq 25 \text{ t}$ with 4 axles: floor area $\geq 39 \text{ m}^2$ ; $30 \text{ t} \leq \text{tu} \leq 40 \text{ t}$
<b>Index letters</b>	a	with 4 axles
	b	with 2 axles and large floor area: $22 \text{ m}^2 \leq \text{floor area} \leq 27 \text{ m}^2$
	bb	with 2 axles and very large floor area: floor area $> 27 \text{ m}^2$
	c	with meat hooks
	d	for fish
	e	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 <sup>a b</sup>
	gg	refrigerator with liquefied gas <sup>a</sup>
	h	with class IR thermal insulation
	i	mechanically refrigerated by the machinery of an accompanying technical wagon <sup>a b c</sup>
	ii	accompanying technical wagon <sup>a c</sup>
	k	with 2 axles: $\text{tu} > 15 \text{ t}$ with 4 axles: $\text{tu} < 30 \text{ t}$
	l	insulated without ice bunkers <sup>a d</sup>
	m	with 2 axles: floor area $< 19 \text{ m}^2$ with 4 axles: floor area $< 39 \text{ m}^2$
mm	with 4 axles: floor area $\geq 39 \text{ m}^{2e}$	
n	with 2 axles: $\text{tu} > 25 \text{ t}$ with 4 axles; $\text{tu} > 40 \text{ t}$	
o	with ice bunkers of capacity less than $3,5 \text{ m}^{3d}$	
p	without gratings	
<p>a. The index letter "l" shall not be marked on wagons bearing the index letters "g", "gg", "i" or "ii".</p> <p>b. Wagons bearing both the index letters "g" and "i" can be used individually or in a mechanically refrigerated raft.</p> <p>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.</p> <p>d. The index letter "o" shall not be marked on wagons bearing the index letter "l".</p> <p>e. Only applicable to wagons with track gauge of 1520 mm.</p> <p>Note: The floor area of covered refrigerator wagons is always determined taking into account the use of ice bunkers.</p>		

**CATEGORY LETTER: K - 2-AXLE FLAT WAGON**

Reference wagon		Of ordinary type with drop sides and short stanchions $lu \geq 12 \text{ m}; 25 \text{ t} \leq tu \leq 30 \text{ t}$
<b>Index letters</b>	b	with long stanchions
	g	fitted for the transport of containers <sup>a</sup>
	i	with removable cover and non-removable ends <sup>b</sup>
	j	with shock-absorbing device
	k	$tu < 20 \text{ t}$
	kk	$20 \text{ t} \leq tu < 25 \text{ t}$
	l	without stanchions
	m	$9 \text{ m} \leq lu < 12 \text{ m}$
	mm	$lu < 9 \text{ m}$
	n	$tu > 30 \text{ t}$
	o	with non-removable sides
	p	without sides <sup>b</sup>
	pp	with removable sides
<p>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.</p> <p>b. The index letter "p" shall not be marked on wagons bearing index letter "i".</p>		

**CATEGORY LETTER: L - 2-AXLE FLAT WAGON**

Reference wagon		of special type $lu \geq 12 \text{ m}; 25 \text{ t} \leq tu \leq 30 \text{ t}$
<b>Index letters</b>	b	with special fittings for securing purposes for medium-sized containers (pa) <sup>a</sup>
	c	with swivelling bolster <sup>a</sup>
	d	fitted out for the transport of motor cars, without deck <sup>a</sup>
	e	with decks for the transport of motor cars <sup>a</sup>
	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) <sup>a b</sup>
	h	fitted out for the transport of steel coils, eye to side <sup>a c</sup>
	hh	fitted out for the transport of steel coils, eye to sky <sup>a c</sup>
	i	with removable cover and non-removable ends <sup>a</sup>
	ii	with very robust removable metallic cover <sup>d</sup> and non-removable ends <sup>a</sup>
	j	with shock-absorbing device
	k	$tu < 20 \text{ t}$
	kk	$20 \text{ t} \leq tu < 25 \text{ t}$
	l	without stanchions <sup>a</sup>
m	$9 \text{ m} \leq lu < 12 \text{ m}$	
mm	$lu < 9 \text{ m}$	
n	$tu > 30 \text{ t}$	
p	without sides <sup>a</sup>	
<p>a. The inscription of the index letters "l" 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.</p> <p>b. Wagons used solely for the transport of containers (except pa).</p> <p>c. Wagons used solely for the transport of steel coils.</p> <p>d. Only applicable to wagons with track gauge of 1435 mm.</p>		

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**CATEGORY LETTER: O - MIXED FLAT AND OPEN HIGH-SIDED WAGON**

<i>Reference wagon</i>		<b>of ordinary type with 2 or 3 axles, with drop sides or ends and stanchions with 2 axles: <math>lu \geq 12\text{ m}</math>; <math>25\text{ t} \leq tu \leq 30\text{ t}</math> with 3 axles: <math>lu \geq 12\text{ m}</math>; <math>25\text{ t} \leq tu \leq 40\text{ t}</math></b>
<b>Index letters</b>	a	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	$tu < 20\text{ t}$
	kk	$20\text{ t} \leq tu < 25\text{ t}$
	l	without stanchions
	m	$9\text{ m} \leq lu < 12\text{ m}$
	mm	$lu < 9\text{ m}$
	n	with 2 axles: $tu > 30\text{ t}$ with 3 axles: $tu > 40\text{ t}$

**CATEGORY LETTER: R - FLAT BOGIES WAGON**

Reference wagon		of ordinary type with drop ends and stanchions $18\text{ m} \leq lu < 22\text{ m}$ ; $50\text{ t} \leq tu \leq 60\text{ t}$
<b>Index letters</b>	b	$lu \geq 22\text{ m}$
	e	with drop sides
	g	fitted for the transport of containers <sup>a</sup>
	h	fitted out for the transport of steel coils, eye to side <sup>b</sup>
	hh	fitted out for the transport of steel coils, eye to sky <sup>b</sup>
	i	with removable cover and non-removable ends <sup>c</sup>
	j	with shock-absorbing device
	k	$tu < 40\text{ t}$
	kk	$40\text{ t} \leq tu < 50\text{ t}$
	l	without stanchions
	m	$15\text{ m} \leq lu < 18\text{ m}$
	mm	$lu < 15\text{ m}$
	n	$tu > 60\text{ t}$
	o	with non-removable ends less than 2 m in height
	oo	with non-removable ends, 2 m or more in height <sup>c</sup>
	p	without drop ends <sup>c</sup>
pp	with removable sides	
<p>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.</p> <p>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.</p> <p>c. The index letters "oo" and/or "p" shall not be marked on wagons bearing index letter "i".</p>		



**CATEGORY LETTER: S - FLAT BOGIES WAGON**

Reference wagon		of special type with 4 axles: $lu \geq 18 \text{ m}$ ; $50 \text{ t} \leq tu \leq 60 \text{ t}$ with 6 axles or more: $lu \geq 22 \text{ m}$ ; $60 \text{ t} \leq tu \leq 75 \text{ t}$
Index letters	a	with 6 axles (2 bogies of 3 axles)
	aa	with 8 axles or more
	aaa	with 4 axles (2 bogies of 2 axles) <sup>a</sup>
	b	with special fittings for securing purposes for medium-sized containers (pa) <sup>b</sup>
	c	with swivelling bolster <sup>b</sup>
	d	fitted out for the transport of motor cars, without deck <sup>b c</sup>
	e	with decks for the transport of motor cars <sup>b</sup>
	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 $\leq 60'$ (except pa) <sup>b c d</sup>
	gg	fitted for the transport of containers, total loading length $> 60'$ (except pa) <sup>b c d</sup>
	h	fitted out for the transport of steel coils, eye to side <sup>b e</sup>
	hh	fitted out for the transport of steel coils, eye to sky <sup>b e</sup>
	i	with removable cover and non-removable ends <sup>b</sup>
	ii	with very robust removable metallic cover <sup>f</sup> and non-removable ends <sup>b</sup>
	j	with shock-absorbing device
	k	with 4 axles: $tu < 40 \text{ t}$ with 6 axles or more: $tu < 50 \text{ t}$
	kk	with 4 axles: $40 \text{ t} \leq tu < 50 \text{ t}$ with 6 axles or more: $50 \text{ t} \leq tu < 60 \text{ t}$
l	without stanchions <sup>b</sup>	
m	with 4 axles: $15 \text{ m} \leq lu < 18 \text{ m}$ ; with 6 axles or more: $18 \text{ m} \leq lu < 22 \text{ m}$	
mm	with 4 axles: $lu < 15 \text{ m}$ with 6 axles or more: $lu < 18 \text{ m}$	
mmm	with 4 axles : $lu \geq 22 \text{ m}$ <sup>a</sup>	
n	with 4 axles: $tu > 60 \text{ t}$ with 6 axles or more: $tu > 75 \text{ t}$	
p	without sides <sup>b</sup>	
<p>a. Only applicable to wagons with track gauge of 1520 mm.</p> <p>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.</p> <p>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".</p> <p>d. Wagons used solely for the transport of containers or for transport of swap bodies for grab handling and spreader gripping.</p> <p>e. Wagons used solely for the transport of steel coils.</p> <p>f. Only applicable to wagons with track gauge of 1435 mm.</p>		



**CATEGORY LETTER: T - WAGON WITH OPENING ROOF**

Reference wagon		with 2 axles: $9\text{ m} \leq l_u < 12\text{ m}$ ; $25\text{ t} \leq t_u \leq 30\text{ t}$ with 4 axles: $15\text{ m} \leq l_u < 18\text{ m}$ ; $50\text{ t} \leq t_u \leq 60\text{ t}$ with 6 axles or more: $15\text{ m} \leq l_u < 18\text{ m}$ ; $60\text{ t} \leq t_u \leq 75\text{ t}$
Index letters	a	with 4 axles
	aa	with 6 axles or more
	b	high capacity: with 2 axles: $l_u \geq 12\text{ m}$ with 4 axles or more: $l_u \geq 18\text{ m}$ <sup>a b</sup>
	c	with end doors
	d	with controlled gravity unloading, on both sides, alternately, at the top <sup>a b c</sup>
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a b c</sup>
	e	with unobstructed height of the doors $> 1,90\text{ m}$ <sup>a b c</sup>
	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
	hh	fitted out for the transport of steel coils, eye to sky
	i	with opening walls <sup>a</sup>
	j	with shock-absorbing device
	k	with 2 axles: $t_u < 20\text{ t}$ with 4 axles: $t_u < 40\text{ t}$ with 6 axles or more: $t_u < 50\text{ t}$
	kk	with 2 axles: $20\text{ t} \leq t_u < 25\text{ t}$ with 4 axles: $40\text{ t} \leq t_u < 50\text{ t}$ with 6 axles or more: $50\text{ t} \leq t_u < 60\text{ t}$
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a b c</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a b c</sup>
	m	with 2 axles: $l_u < 9\text{ m}$ with 4 axles or more: $l_u < 15\text{ m}$ <sup>b</sup>
n	with 2 axles: $t_u > 30\text{ t}$ with 4 axles: $t_u > 60\text{ t}$ with 6 axles or more: $t_u > 75\text{ t}$	
o	with axial bulk gravity unloading, at the top <sup>a b c</sup>	
oo	with axial bulk gravity unloading, at the bottom <sup>a b c</sup>	
p	with axial controlled gravity unloading, at the top <sup>a b c</sup>	
pp	with axial controlled gravity unloading, at the bottom <sup>a b c</sup>	

- 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", "l", "ll", "o", "oo", "p" or "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.

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,



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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: U - SPECIAL WAGONS**

Reference wagon	other than those in categories F, H, L, S or Z with 2 axles: $25\text{ t} \leq tu \leq 30\text{ t}$ with 3 axles: $25\text{ t} \leq tu \leq 40\text{ t}$ with 4 axles: $50\text{ t} \leq tu \leq 60\text{ t}$ with 6 axles or more: $60\text{ t} \leq tu \leq 75\text{ t}$	
<b>Index letters</b>	a	with 4 axles
	aa	with 6 axles or more
	c	with unloading under pressure
	d	with controlled gravity unloading, on both sides, alternately, at the top <sup>a</sup>
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a</sup>
	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 <sup>b c</sup>
	k	with 2 or 3 axles: $tu < 20\text{ t}$ with 4 axles: $tu < 40\text{ t}$ with 6 axles or more: $tu < 50\text{ t}$
	kk	with 2 or 3 axles: $20\text{ t} \leq tu < 25\text{ t}$ with 4 axles: $40\text{ t} \leq tu < 50\text{ t}$ with 6 axles or more: $50\text{ t} \leq tu < 60\text{ t}$
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a</sup>
	n	with 2 axles: $tu > 30\text{ t}$ with 3 axles: $tu > 40\text{ t}$ with 4 axles: $tu > 60\text{ t}$ with 6 axles or more: $tu > 75\text{ t}$ <sup>c</sup>
o	with axial bulk gravity unloading, at the top <sup>a</sup>	
oo	with axial bulk gravity unloading, at the bottom <sup>a</sup>	
p	with axial bulk gravity unloading, at the top <sup>a</sup>	
pp	with axial bulk gravity unloading, at the bottom <sup>a</sup>	
<p>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.</p> <p>b. In particular:</p> <ul style="list-style-type: none"> <li>- well wagons</li> <li>- wagons with a central recess</li> <li>- wagons with an ordinary sloping diagonal permanent control desk</li> </ul> <p>c. Index letter "n" shall not be marked on wagons bearing the index letter "i".</p> <p>The method of unloading these wagons is defined by a combination of the following characteristics:</p> <p><i>Arrangement of the unloading apertures:</i></p> <ul style="list-style-type: none"> <li>- axial: Apertures situated above the centre of the track</li> <li>- bilateral: Apertures on either side of the track, outside the rails</li> </ul>		



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(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: Z - TANK WAGON**

<b>Reference wagon</b>	<b>with metal shell, for the transport of liquids or gases with 2 axles: 25 t ≤ lu ≤ 30 t 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</b>	
<b>Index letters</b>	a	with 4 axles
	aa	with 6 axles or more
	b	for oil products <sup>a</sup>
	c	with unloading under pressure <sup>b</sup>
	d	for food and chemical products <sup>a</sup>
	e	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 <sup>b</sup>
	i	tank of non-metallic material
	j	with shock-absorbing device
	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	
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	
p	with station for brakeman <sup>a</sup>	
<p>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".</p>		

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## LETTER MARKING FOR ARTICULATED AND MULTIPLE WAGONS

### DEFINITION OF THE CATEGORY AND INDEX LETTERS

#### 1. Important notes

In the attached tables, the information given in meters refers to the inside length of the wagons (lu).


#### 2. Index letters with an international value common to all categories

- q pipe for electric heating which can be supplied by all accepted currents
- qq pipe and installation for electric heating which can be supplied by all accepted currents
- s wagons authorised to run under "s" conditions (see point 4.5.4 Wagon load table in prEN 15877-1:2010)
- ss wagons authorised to run under "ss" conditions (see point 4.5.4 Wagon load table in prEN 15877-1:2010)

#### 3. Index letters with a national value

t, u, v, w, x, y, z

The value of these letters is defined by each Member State.

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**CATEGORY LETTER: F - OPEN HIGH-SIDED WAGON**

Reference wagon		Articulated or multiple wagon with axles, with 2 units $22\text{ m} \leq lu < 27\text{ m}$
<b>Index letters</b>	a	with bogies
	c	with controlled gravity unloading, on both sides, alternately, at the top <sup>a</sup>
	cc	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a</sup>
	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)
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a</sup>
	m	with 2 units: $lu \geq 27\text{ m}$
	mm	with 2 units: $lu < 22\text{ m}$
	o	with axial bulk gravity unloading, at the top <sup>a</sup>
	oo	with axial bulk gravity unloading, at the bottom <sup>a</sup>
	p	with axial controlled gravity unloading, at the top <sup>a</sup>
	pp	with axial controlled gravity unloading, at the bottom <sup>a</sup>
r	articulated wagon	
rr	multiple wagon	
<p>a. 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.</p> <p>The method of unloading these wagons is defined by a combination of the following characteristics:</p> <p><i>Arrangement of the unloading apertures:</i></p> <ul style="list-style-type: none"> <li>- axial: Apertures situated above the centre of the track</li> <li>- bilateral: Apertures on either side of the track, outside the rails (For these wagons, unloading is: <ul style="list-style-type: none"> <li>- simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides,</li> <li>- alternate, if complete emptying of the wagon can take place by opening the apertures on one side only)</li> </ul> </li> <li>- 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</li> <li>- 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</li> </ul> <p><i>Rate of unloading:</i></p> <ul style="list-style-type: none"> <li>- bulk: Once the apertures are open for unloading, they cannot be closed again until the wagon is empty</li> <li>- controlled: At any time during unloading, the flow of the goods can be regulated or even stopped</li> </ul>		

**CATEGORY LETTER: H - COVERED WAGON**

Reference wagon		articulated or multiple wagon with axles, with 2 units $22\text{ m} \leq lu < 27\text{ m}$
<b>Index letters</b>	a	with bogies
	c	with end doors
	cc	with end doors and fitted internally for the transport of motor cars
	d	with floor traps
	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)
	g	for grain
	h	for fruits and vegetables <sup>a</sup>
	i	with opening or shunt walls
	ii	with very robust opening or shunt walls <sup>b</sup>
	l	with movable partitions <sup>c</sup>
	ll	with lockable movable partitions <sup>c</sup>
	m	with 2 units: $lu \geq 27\text{ m}$
mm	with 2 units: $lu < 22\text{ m}$	
r	articulated wagon	
rr	multiple wagon	
<p>a. The concept "for fruits and vegetables" applies only to wagons provided with additional ventilation apertures at the floor level.</p> <p>b. Only applicable to wagons with gauge of 1435 mm.</p> <p>c. Movable partitions may be dismounted temporarily.</p>		

**CATEGORY LETTER: I - TEMPERATURE CONTROLLED WAGON**

Reference wagon		refrigerator wagon with class IN thermal insulation, with motor-driven ventilation, with gratings and ice bunker $\geq 3,5 \text{ m}^3$ articulated or multiple wagon with axles, with 2 units $22 \text{ m} \leq \text{lu} < 27 \text{ m}$
<b>Index letters</b>	a	with bogies
	c	with meat hooks
	d	for fish
	e	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 <sup>a</sup>
	gg	refrigerator with liquefied gas <sup>a</sup>
	h	with class IR thermal insulation
	i	mechanically refrigerated by the machinery of an accompanying technical wagon <sup>a b</sup>
	ii	accompanying technical wagon <sup>a b</sup>
	l	insulated without ice bunkers <sup>a c</sup>
	m	with 2 units: $\text{lu} \geq 27 \text{ m}$
	mm	with 2 units: $\text{lu} < 22 \text{ m}$
	o	with ice bunkers of capacity less than $3,5 \text{ m}^3$ <sup>c</sup>
oo	with 3 units	
p	without gratings	
r	articulated wagon	
rr	multiple wagon	
<p>a. The index letter "l" shall not be marked on wagons bearing the index letters "g", "gg", "i" or "ii".</p> <p>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.</p> <p>c. The index letter "o" shall not be marked on wagons bearing the index letter "l".</p>		

**CATEGORY LETTER: L - FLAT WAGON WITH SEPARATE AXLES**

Reference wagon	articulated or multiple wagon with 2 units $22\text{ m} \leq lu < 27\text{ m}$	
<b>Index letters</b>	a	articulated wagon
	aa	multiple wagon
	b	with special fittings for securing purposes for medium-sized containers (pa) <sup>a</sup>
	c	with swivelling bolster <sup>a</sup>
	d	fitted out for the transport of motor cars, without deck <sup>a</sup>
	e	with decks for the transport of motor cars <sup>a</sup>
	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 <sup>a b</sup>
	h	fitted out for the transport of steel coils, eye to side <sup>a c</sup>
	hh	fitted out for the transport of steel coils, eye to sky <sup>a c</sup>
	i	with removable cover and non-removable ends <sup>a</sup>
	ii	with very robust removable metallic cover <sup>d</sup> and non-removable ends <sup>a</sup>
	j	with shock-absorbing device
	l	without stanchions <sup>a</sup>
	m	with 2 units: $18\text{ m} \leq lu < 22\text{ m}$
	mm	with 2 units: $lu < 18\text{ m}$
o	with 3 units	
oo	with 4 units or more	
p	without sides <sup>a</sup>	
r	with 2 units: $lu \geq 27\text{ m}$	
<p>a. The inscription of the index letters "l" 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.</p> <p>b. Wagons used solely for the transport of containers (except pa).</p> <p>c. Wagons used solely for the transport of steel coils.</p> <p>d. Only applicable to wagons with gauge of 1435 mm.</p>		

**CATEGORY LETTER: S - FLAT BOGIE WAGON**

Reference wagon		articulated or multiple wagon with 2 units $22\text{ m} \leq lu < 27\text{ m}$
<b>Index letters</b>	b	with special fittings for securing purposes for medium-sized containers (pa) <sup>a</sup>
	c	with swivelling bolster <sup>a</sup>
	d	fitted out for the transport of motor cars, without deck <sup>a b</sup>
	e	with decks for the transport of motor cars <sup>a</sup>
	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 $\leq 60'$ (except pa) <sup>a b c</sup>
	gg	fitted for the transport of containers, total loading length $> 60'$ (except pa) <sup>a b c</sup>
	h	fitted out for the transport of steel coils, eye to side <sup>a d</sup>
	hh	fitted out for the transport of steel coils, eye to sky <sup>a d</sup>
	i	with removable cover and non-removable ends <sup>a</sup>
	ii	with very robust removable metallic cover <sup>e</sup> and non-removable ends <sup>a</sup>
	j	with shock-absorbing device
	l	without stanchions <sup>a</sup>
	m	with 2 units: $lu \geq 27\text{ m}$
	mm	with 2 units: $lu < 22\text{ m}$
	o	with 3 units
oo	with 4 units or more	
p	without sides <sup>a</sup>	
r	articulated wagon	
rr	multiple wagon	

- a. 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.
- b. 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".
- c. Wagons used solely for the transport of containers or for transport of swap bodies for grab handling and spreader gripping.
- d. Wagons used solely for the transport of steel coils.
- e. Only applicable to wagons with gauge of 1435 mm.



**CATEGORY LETTER: T - WAGON WITH OPENING ROOF**

Reference wagon	articulated or multiple wagon with axles, with 2 units $22\text{ m} \leq lu < 27\text{ m}$	
<b>Index letters</b>	a	with bogies
	b	with unobstructed height of doors $> 1,90\text{ m}^a$
	c	with end doors
	d	with controlled gravity unloading, on both sides, alternately, at the top <sup>b</sup>
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a b</sup>
	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)
	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 <sup>a</sup>
	j	with shock-absorbing device
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a b</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a b</sup>
	m	with 2 units: $lu \geq 27\text{ m}$
	mm	with 2 units: $lu < 22\text{ m}$
	o	with axial bulk gravity unloading, at the top <sup>a b</sup>
oo	with axial bulk gravity unloading, at the bottom <sup>a b</sup>	
p	with axial controlled gravity unloading, at the top <sup>a b</sup>	
pp	with axial controlled gravity unloading, at the bottom <sup>a b</sup>	
r	articulated wagon	
rr	multiple wagon	

- a. Index letter "b" shall not be marked on wagons bearing the index letters "d", "dd", "i", "l", "ll", "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.

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



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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: U - SPECIAL WAGONS**

Reference wagon		<i>articulated or multiple wagon, with axles, with 2 units 22 m ≤ lu &lt; 27 m</i>
<b>Index letters</b>	a	with bogies
	e	with 3 units
	ee	with 4 units or more
	c	with unloading under pressure
	d	with controlled gravity unloading, on both sides, alternately, at the top <sup>a</sup>
	dd	with controlled gravity unloading, on both sides, alternately, at the bottom <sup>a</sup>
	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 <sup>b</sup>
	l	with bulk gravity unloading, on both sides, simultaneously, at the top <sup>a</sup>
	ll	with bulk gravity unloading, on both sides, simultaneously, at the bottom <sup>a</sup>
	m	with 2 units: lu ≥ 27 m
	mm	with 2 units: lu < 22 m
	o	with axial bulk gravity unloading, at the top <sup>a</sup>
	oo	with axial bulk gravity unloading, at the bottom <sup>a b</sup>
	p	with axial controlled gravity unloading, at the top <sup>a</sup>
pp	with axial controlled gravity unloading, at the bottom <sup>a</sup>	
r	articulated wagon	
rr	multiple wagon	
<p>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.</p> <p>b. In particular:</p> <ul style="list-style-type: none"> <li>- well wagons</li> <li>- wagons with a central recess</li> <li>- wagons with an ordinary sloping diagonal permanent control desk</li> </ul>		
<p>The method of unloading these wagons is defined by a combination of the following characteristics:</p> <p><i>Arrangement of the unloading apertures:</i></p> <ul style="list-style-type: none"> <li>- axial: Apertures situated above the centre of the track</li> <li>- bilateral: Apertures on either side of the track, outside the rails. (For these wagons, unloading is: <ul style="list-style-type: none"> <li>- simultaneous, if complete emptying of the wagon requires the apertures to be open on both sides,</li> <li>- alternate, if complete emptying of the wagon can take place by opening the apertures on one side only)</li> </ul> </li> <li>- 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</li> </ul>		



**OTIF**

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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

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**CATEGORY LETTER: Z - TANK WAGON**

Reference wagon		with metal shell, for the transport of liquids or gases articulated or multiple wagon with axles, with 2 units $22\text{ m} \leq lu < 27\text{ m}$
<b>Index letters</b>	a	with bogies
	c	with unloading under pressure <sup>a</sup>
	e	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 <sup>a</sup>
	i	tank of non-metallic material
	j	with shock-absorbing device
	m	with 2 units: $lu \geq 27\text{ m}$
	mm	with 2 units: $lu < 22\text{ m}$
	o	with 3 units
	oo	with 4 units or more
	r	articulated wagon
rr	multiple wagon	
a. The index letter "c" shall not be marked on wagons bearing the index letter "g".		

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## **APPLICATION GUIDE** to PP.5 and PP.6

(NOT part of the regulations)

Requirements	Authorisation	Marking	Authorisation	Marking	Authorisation	Marking	Authorisation	Marking
<b>UTP/TSI WAG</b> <b>Chapter 4, 5 and 6</b> (with open points <sup>1)</sup> related to the wagon in question)  <b>Mandatory</b>	<b>OTIF:</b> <b>ATMF Article 6 § 4</b>  <b>EU:</b> <b>2008/57/EC</b> <b>Article 22 (1) +</b> <b>Article 23 (2)</b>  <b>Authorised</b> <b>State by State</b>	<b>Deroga-</b> <b>tion plate</b> <b>(B.33)</b>  <b>First digit</b> <b>4 / 8</b>	<b>OTIF:</b> <b>ATMF Article 6 § 3</b>  <b>EU:</b> <b>2008/57/EC</b> <b>Article 22 (1) +</b> <b>Article 23 (1)</b>  <b>Cross authorised</b>	<b>TEN</b>   <b>First digit</b> <b>4 / 8</b>	<b>OTIF:</b> <b>ATMF Article 6 § 3</b>  <b>EU:</b> <b>2008/57/EC</b> <b>Article 22 (1) +</b> <b>Article 23 (1)</b>  <b>Cross authorised</b>	<b>TEN</b>   <b>First digit</b> <b>4 / 8</b>	<b>OTIF:</b> <b>ATMF Article 6 § 3</b>  <b>EU:</b> <b>2008/57/EC</b> <b>Article 22 (1) +</b> <b>Article 23 (1)</b>  <b>Cross authorised</b>	<b>TEN</b>   <b>First digit</b> <b>0 / 1 / 2 / 3</b> <sup>5)</sup>
<b>UTP/TSI WAG</b> <b>section 7.6.4,</b> <b>e) (~TSI Annex JJ.2)</b> (closing open points <sup>1)</sup> relating to the wagon in ques- tion)  <b>Voluntary - but</b>  <b>mandatory if b)+c)+d)</b> <b>below are all met</b>  <b>b) 1435 mm track gauge <sup>2)</sup></b> <b>c) G1 (+G11) profile gauge <sup>3)</sup></b> <b>d) ≤ 17 500 mm between</b> <b>adjacent axles</b> <b>Annex PP, section 6.2</b> <b>f) hump shunting allowed</b> <b>g) all other “6.2 criteria”</b>					<b>all requirements,</b> <b>except one or</b> <b>more of c), d) or f)</b> <b>are met</b>	<b>CW <sup>4)</sup></b>	<b>all requirements</b> <b>are met</b>	<b>GE <sup>4)</sup></b>

1) Only open points relating to compatibility with infrastructure, see Annex JJ.1

2) If the wagon with exchangeable bogies or wheelsets can run on 1435 mm, it will meet condition b)

3) If the wagon does not meet condition c), e.g. is profile G2, this shall be indicated by UTP WAG Annex B marking pos. No 2: 4.5.2 Gauge marking (B.2)

4) These markings are not part of Annex PP, but are included in Annex B. **GE** indicates “GoEverywhere”, except United Kingdom, and **CW** indicates “Compatible with GE”

5) Wagons subject to ATMF Article 19 marked RIV also use 0, 1, 2 or 3 as the first digit; they will keep the RIV and need not be marked GE or CW.