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Translation

OR

Transport of road vehicles on wagons - Technical Organisation - Conveyance of semi-trailers with P coding or N coding on recess wagons

Trafic de véhicules routiers sur wagons - Organisation technique - Transport sur wagons poches de semi-remorques avec codification P ou codification N

*Huckepackverkehr - Technische Organisation - Beförderung von Sattelanhängern mit P-Kodifizierung
N-Kodifizierung auf Taschenwagen*



UNION INTERNATIONALE DES CHEMINS DE FER
INTERNATIONALER EISENBAHNVERBAND
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The person responsible for this leaflet is named in the UIC Code

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Summary

This Leaflet sets out regulations and provisions to be observed by semi-trailers with normal road transport characteristics for conveyance on fixed-recess carrier wagons.

The provisions are valid for:

- Semi-trailers,
- Gantry equipment/industrial trucks with grab handles,
- Recess wagon types 1a and 1b in accordance with *UIC Leaflet 571-4*.

o 1 - Semi-trailers with P coding

1.1 - Procedure and system prerequisites

The semi-trailers must comply with the road traffic regulations applicable in the countries where they are registered. The procedure involves the conveyance of semi-trailers with P coding on recess wagons, where the following prerequisites apply:

- **Semi-trailers**, which possess:
 - a manufacturer's certificate testifying to the equipment's compliance with the provisions of the present leaflet,
 - proof of loading tests carried out on the type of semi-trailer in question on all recess wagons foreseen for such transport in accordance with *UIC Leaflet 571-4* (see Bibliography - page 30) or points [G.1 - page 18](#) to [G.8 - page 23](#)
 - P coding in accordance with *UIC Leaflet 596-6* (see Bibliography - page 30).

- **Gantry equipment / industrial trucks with grab handles**, loading capacity 40 t.

- **Recess wagons**

Recess wagons equipped with seating devices must be used, with the overall gauge in accordance with *UIC Leaflet 571-4*.

These recess wagons must be able to accommodate semi-trailers which possess the coding for recess wagon types 1a and 1b (see [Appendix G - page 17](#)).

In case of semi-trailers requiring a greater clearance gauge, recess wagons equipped with seating devices and which have been allocated a compatibility code in accordance with appendices [G.1](#) to [G.8](#) are to be used.

Before loading, the seating device must be set to the prescribed height in accordance with the code number plate on the semi-trailer.

Semi-trailers which possess compatibility codes for recess wagons may also be loaded onto recess wagons which are not yet included in *UIC Leaflet 571-4*. If these recess wagons only use a king pin to secure the semi-trailers, the use of scotch blocks is unnecessary abandoned. These wagons are equipped with special mechanisms which are activated in case of king pin overload as a result of longitudinal jolts sustained during shunting.

Continued transport after activation of the overload alert mechanism without special treatment until unloading is generally only permitted once appropriate measures have been taken to secure the load. The king pin is to be changed, however, before the load is transported by road.

1.2 - Technical requirements

1.2.1 - Grab handling grooves

For transshipment, semi-trailers must be equipped with grab handling grooves, the positions, dimensions and shape of which conform to Appendix A - page 11.

The distance between the grab handling grooves and the wagon solebar must be at least 100 mm.

1.2.2 - King pins

The semi-trailers must be equipped with a standardised (functional measurements in accordance with *Directive 94/20/EC class H50, DIN 74080 and ISO 337* - see Bibliography - page 30) king pin with 2" diameter.

1.2.3 - Road combination

The road combination must be suitable for horizontal transshipment of semi-trailers.

The distance between the axles and the chassis must not vary more than 250 mm when lifting the semi-trailer.

The width over the outer edges of the tyres must be selected so that the tyres can be used for centering purposes on the recess wagon in accordance with *UIC Leaflet 596-6* and the tyres are flush against the floor of the recess wagon (reference plane).

There must be a device for releasing the brakes. The device must be located on the left side of the vehicle, near the road combination.

1.2.4 - Air suspension

Semi-trailers with a width in excess of 2 500 mm must be equipped with air suspension.

The following requirements apply to the air suspension:

- Central draining valve on the left side of the vehicle, the service (running) and draining positions of which should be clearly marked by symbols,
- The pneumatic springs must be deflated and non-pressurised at all times during transshipment and conveyance of semi-trailers by rail.

1.2.5 - Vehicle gauge

The maximum permissible vehicle gauge for semi-trailers designed for recess wagon types 1a and 1b are given in Appendix G - page 17. The permissible vehicle gauge for semi-trailers which require a greater clearance gauge is dependent on the compatibility code of the recess wagon and the corresponding clearance gauge required (in accordance with Appendices G.1 - page 18 to G.8 - page 23).

These vehicle gauges must not be exceeded under any circumstances.

Retractable components may be used in order to remain within the vehicle gauge.

1.2.6 - Retractable components

Retractable components as well as the moveable parts of landing gear must be equipped with a locking mechanism preventing their dropping down or falling out during transport and transshipment.

1.2.7 - Landing gear

The handle for the activation of the landing gear must be permanently fixed to the vehicle or have a hexagonal end of 23 mm or 32 mm or a square end of 17 mm. It must be possible to use the landing gear when the semi-trailer lifted by its grab handles or on the recess wagon.

1.2.8 - Strength provisions

Compliance of vehicles with the following strength provisions is to be checked. The vehicle manufacturer must produce a certificate stating that these strength provisions are respected in terms of manufacturing tolerances, material composition and wear.

Additional checks shall be required in case of vehicle construction changes or increased permissible total laden weight.

1.2.8.1 - Lifting

It must be possible for the semi-trailer uniformly loaded to 1,25 R (R = total laden weight of the semi-trailer) or semi-trailers lump-loaded (coil transport) in accordance with their standard loading provisions to be lifted by its grab-handling grooves for at least 5 minutes without suffering any permanent deformation or damage whatever. Following the checks outlined below the semi-trailer must not show any permanent deformations or other changes which would prevent it from being used as intended; the semi-trailer must continue to comply with the measures stipulated for manipulation, securing and transshipment.

1.2.8.2 - Strength of vehicle body structure

Semi-trailers suitable for transport at up to 120 km/h must comply with *EN 12 642 code L* (see [Bibliography - page 30](#)).

Semi-trailers suitable for transport at between 120 km/h and 140 km/h must comply with *EN 12 642 code XL*.

1.2.8.3 - Sheeting

The design and securing of sheeting components must be in accordance with the minimum requirements of *EN 12641-1* and *EN 12641-2* (see [Bibliography - page 30](#)).

1.2.9 - Identification plates and markings

Semi-trailers with codes must bear the following plates and inscriptions in accordance with Appendix C - page 13:

1.2.9.1 - Code number plate

On each side wall in the area of the coupling pivot a code number plate must be affixed in accordance with point 1.4 - page 8.

From 01.01.2007 semi-trailers and recess wagons are to be marked in accordance with points 1.3.2 - page 6 and 1.3.3 - page 7.

Existing semi-trailers with (P) coding may still be deployed in accordance with the compatibility Table 1 - page 9.

1.2.9.2 - Grab-handling groove markings

There shall be a yellow strip, approximately 100 mm high, above the grab-handling grooves (see Appendix K - page 28).

A contrasting colour is to be chosen for yellow load units.

1.2.9.3 - "Pneumatic spring" pictogram

Pneumatically sprung semi-trailers are to be marked with a pictogram (see Appendix J - page 27) to the right of the code number plate indicating that the semi-trailer is to be conveyed with the pneumatic springs deflated.

1.2.9.4 - "Loading position" pictogram

The "loading position" pictogram (see Appendix I - page 26) only applies for the loading of semi-trailers onto recess wagons with fixed wheel recesses (see Appendix B - page 12), the wheelset to be positioned in the fixed wheel recess must be marked accordingly.

1.2.9.5 - "Zig-zag arrow" pictogram

If semi-trailers are fitted with ladders/ascent platforms a "zig-zag" arrow pictogram as shown in Appendix H - page 25 must appear next to each ladder/ascent platform.

1.2.9.6 - "XL code" pictogram

Semi-trailers suitable for transport at between 120 km/h and 140 km/h must be marked "Code XL" (see Appendix L - page 29).

1.3 - Semi-trailers requiring larger clearance envelopes

1.3.1 - Compatibility code

Compatibility codes (letters: a,b,c,d,e,f,g,h) are used to ensure the deployment of semi-trailers with the appropriate recess wagons.

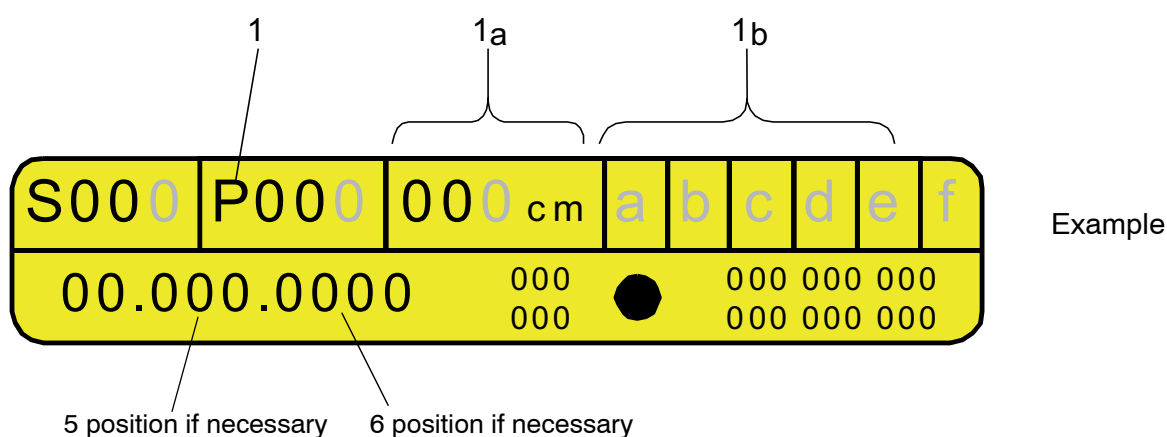
The designation of new clearance envelopes (additional letters) must be approved by UIC.

1.3.2 - Markings on semi-trailers

The profile number is determined in accordance with the coding procedure defined in *UIC Leaflet 596-6* for a specific seating device height on the recess wagon.

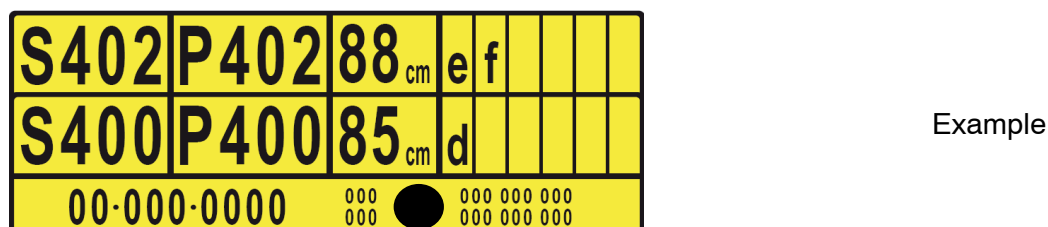
The code number plates must be produced in accordance with *UIC Leaflet 596-6, Appendix A* and affixed to both sides of the semi-trailer.

Code number plates for semi-trailers requiring larger clearance envelopes.




- 1 Wagon compatibility code
- 1a Seating device height 113 cm, 98 cm, 88 cm or 85 cm
- 1b UIC approved identification letters for a specific recess wagon with defined clearance envelopes (compatibility code)

Semi-trailer code number plate for loading in recess wagons with seating devices of various heights



1.3.3 - Markings on recess wagons

	d
+ 6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - CFL - NSB
0	FS - PKP

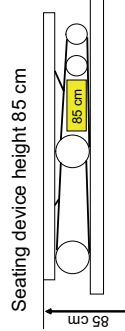
Example

Wagon capacity is defined in accordance with the coding procedure laid down in *UIC Leaflet 596-6*.

1.4 - Compatibility of semi-trailers and clearance envelopes (according to compatibility code)

Seating device height

New



Seating device height 85 cm

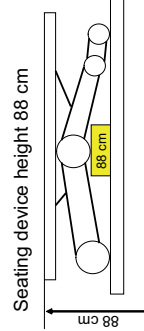
S000	P000	85 cm	d						
00 • 000 • 0000		000	000	000	000	000	000	000	000

Code number plate

Wagon marking

	d	Recess wagon type: - Mega 2	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - CFL - NSB		
0	FS - PKP		

New



Seating device height 88 cm

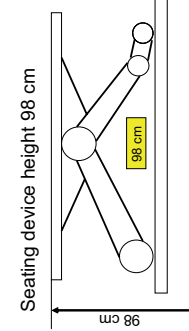
S000	P000	88 cm	e	f					
00 • 000 • 0000		000	000	000	000	000	000	000	000

	e	Recess wagon type: - Recess wagon 5	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - NSB		
0	FS - SNCF - PKP - CFL		

	f	Recess wagon type: - Recess wagon 3000	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - NSB		
0	FS - SNCF - PKP - CFL		

Semi-trailers in accordance with multilateral agreement (P)

Old



Seating device height 98 cm

↓	(P)000								
00 • 000 • 0000	000	000	000	000	000	000	000	000	000

Recess wagon type:
- Recess wagon 4, 5, 3000
- Mega 2
- DB BA 739, 744

	+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - CFL - NSB		
0	FS - PKP			

New



Seating device height 98 cm

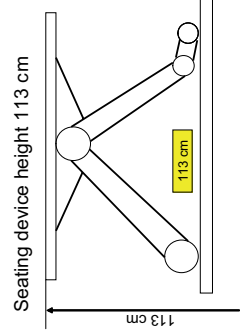
S000	P000	98 cm	a	d					
00 • 000 • 0000		000	000	000	000	000	000	000	000

	a	Recess wagon type: - Recess wagon 4	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - NSB		
0	FS - SNCF - PKP - CFL		

	d	Recess wagon type: - Mega 2	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - CFL - NSB		
0	FS - PKP		

Conventional semi-trailers

New



Seating device height 113 cm

S000	P000								
00 • 000 • 0000		000	000	000	000	000	000	000	000

	Recess wagon		
--	--------------	--	--

	e	Recess wagon type: - Recess wagon 5	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - NSB		
0	FS - SNCF - PKP - CFL		

	f	Recess wagon type: - Recess wagon 3000	
+6	SBB - DB - NS - ÖBB - SNCB GC(SJ) - DK(DSB) - NSB		
0	FS - SNCF - PKP - CFL		

Table showing the compatibility between semi-trailers with existing markings and new design recess wagons

Table 1 :

			P	↓ (P)
Wagon type	Code	Seating device height	113	98
Recess wagon 1a, 1b	P	113 cm	X	--
Recess wagon 4, 5, Mega 2, 739, 744	(P)	98 cm	--	X
		113 cm	X	--
Recess wagon 4	Pa	98 cm	--	X
		113 cm	X	--
Recess wagon 739 / 744	Pb	98 cm	--	X
		113 cm	X	--
Recess wagon 2000	Pc	98 cm	--	X
		113 cm	X	--
Recess wagon 4.2	Ph	98 cm	--	X
		113 cm	X	--
Recess wagon Mega 2	Pd	85 cm	--	--
		98 cm	--	X
		113 cm	X	--
Recess wagon 5	Pe	88 cm	--	--
		98 cm	--	X
		113 cm	X	--
Recess wagon 3000	Pf	88 cm	--	--
		98 cm	--	X
		113 cm	X	--
Recess wagon Twin	Pg	88 cm	--	--
		98 cm	--	X
		113 cm	X	--

NB : Semi-trailers with code (P) may also be loaded onto recess wagons with compatibility codes a, b, c, d, e, f, g, h with seating device heights of 98 cm.

o 2 - Semi-trailers with N coding

2.1 - Procedure and system pre-requisites

The semi-trailers used must comply with the road traffic regulations applicable in the countries where they are registered. The procedure involves the conveyance of semi-trailers with N coding on recess wagons, where the following prerequisites apply:

- **Semi-trailers**, which possess:
 - a manufacturer's certificate testifying to the equipment's compliance with the provisions of the present leaflet,
 - proof of loading tests carried out on the type of semi-trailer in question on the wagon type foreseen for such transport,
 - N coding in accordance with *UIC Leaflet 596-6*.
- **Gantry equipment / industrial vehicles with grab handles**, loading capacity 40 t.
- **Recess wagons**
Recess wagon types 1a and 1b shall be used, equipped in accordance with *point 3.1.5 of UIC Leaflet 571-4*:

2.2 - Technical requirements

Semi-trailers with N coding must comply with points **1.2 - page 3** and meet the following additional requirements:

2.2.1 - Supporting shoes

These semi-trailers should be fitted at the front with 2 supporting shoes in accordance with Appendix **E - page 15**. The supporting shoes must be able to withstand the weight of the semi-trailer positioned on the wagon and loaded at 1,25 R and accelerations of 0,8 g applied longitudinally and 0,3 g applied horizontally and transversely when the semi-trailer is loaded at 1R. If the shoes are retractable, they should be locked in the active position by means of an appropriate device.

2.2.2 - Coupling pin - last axle distance

The distance between the coupling pin and the last axle must be 7 659 mm - 10 174 mm.

2.2.3 - Suspension

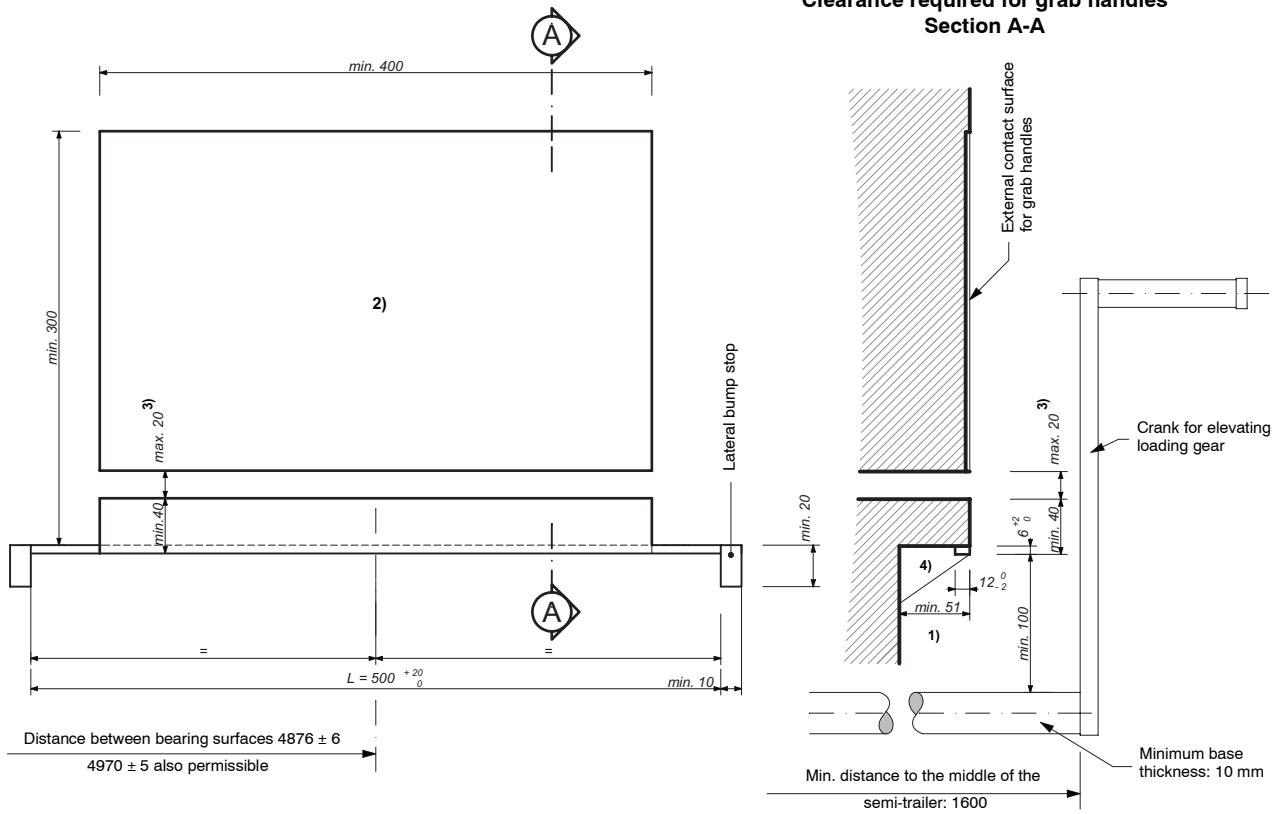
These semi-trailers must be air-sprung. The air suspension should deflate automatically before being loaded onto the wagon.

2.2.4 - Identification plates and markings

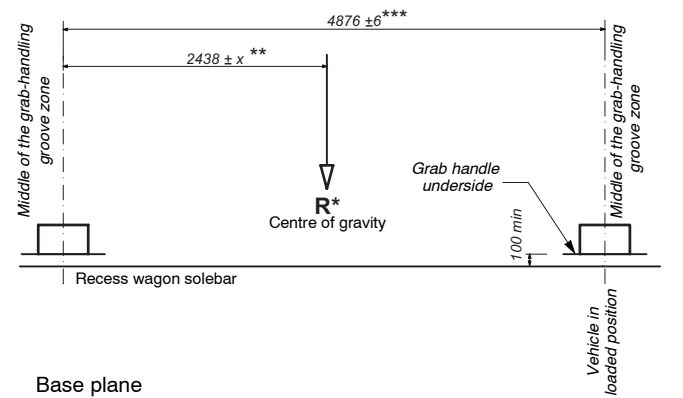
In addition to the identification plates and markings described under point **1.2.9 - page 5**, the pictogram shown in Appendix **F - page 16** is to be affixed to the front of the semi-trailer.

Semi-trailers with the N coding should not possess an additional P coding.

Appendix A - Measurements and arrangement of grab handles on semi-trailers

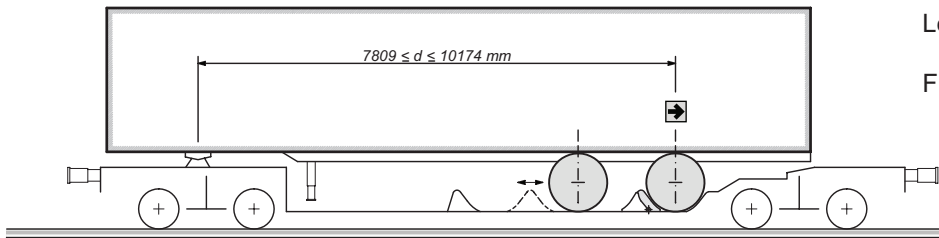


- 1) No rigid or mobile part may foul this zone.
- 2) It is recommended that a wear-resistant plate be affixed to this section of the partition over the whole length of the grab zone, to ensure protection of the side wall. This plate must not protrude beyond the bearing plane of the grab-handling groove, nor fall short.
NB :The entire length of the grab-handling grooves must be marked by a yellow strip, approximately 100 mm above the grooves.
- 3) Distance allowed between the grab lifting surface and the inner edge of the side wall: 20 mm.
- 4) Lateral bump stop.



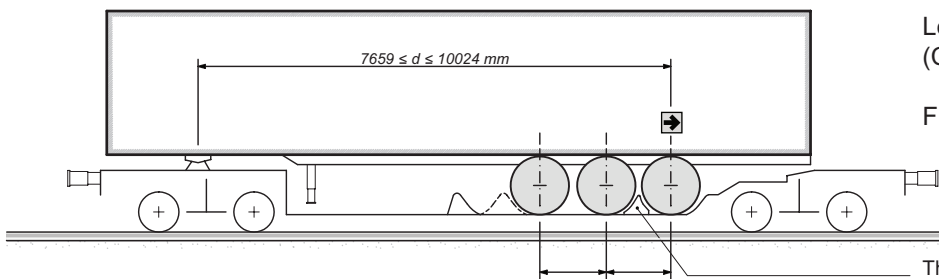
- * The centre of gravity R is that of the semi-trailer with its maximum load uniformly distributed.
- ** To facilitate construction, the value x can reach 400 mm.
- *** Dimension of 4970 ± 5 also permissible.

Appendix B - Fixing/positioning of semi-trailer road combinations in the loading position on standard recess wagons



Long semi-trailer

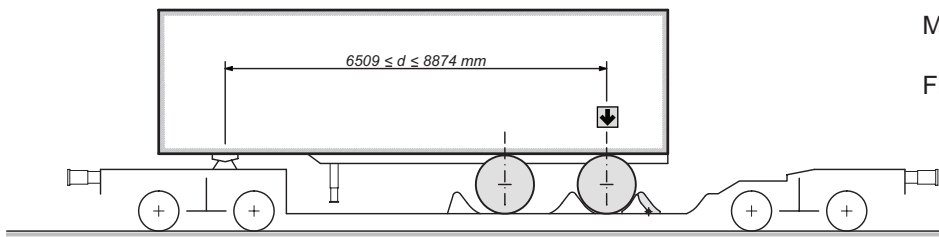
Fig. 1a



Long semi-trailer
(Compact Tridem)

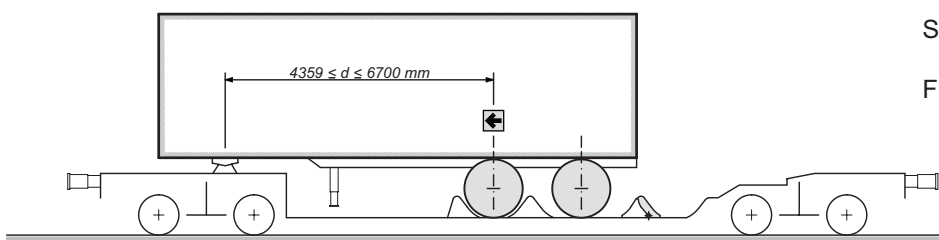
Fig. 1b

The moveable part of the scotch block is to be displaced laterally into the middle part of the wagon before loading



Medium semi-trailer

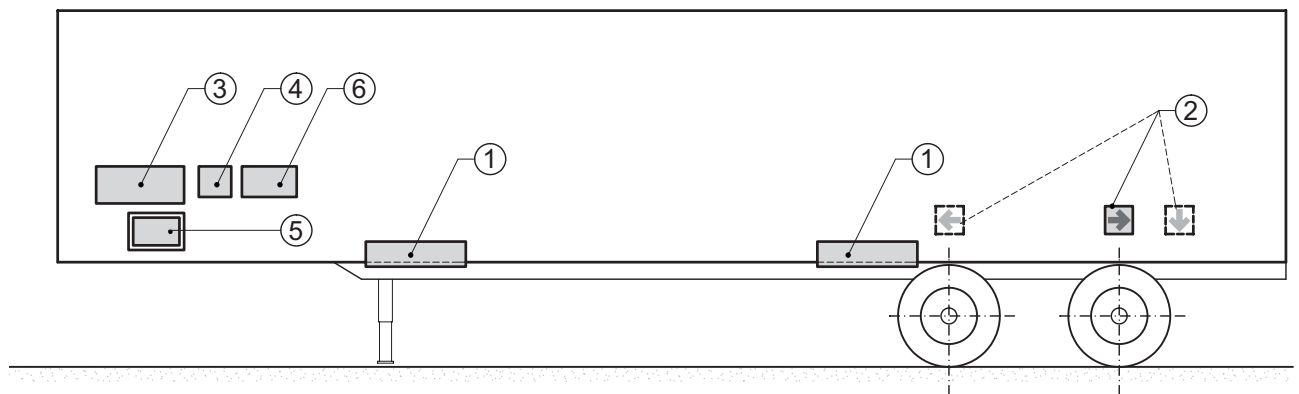
Fig. 2



Short semi-trailer

Fig. 3

Appendix C - Arrangement of identification plates and markings on semi-trailers



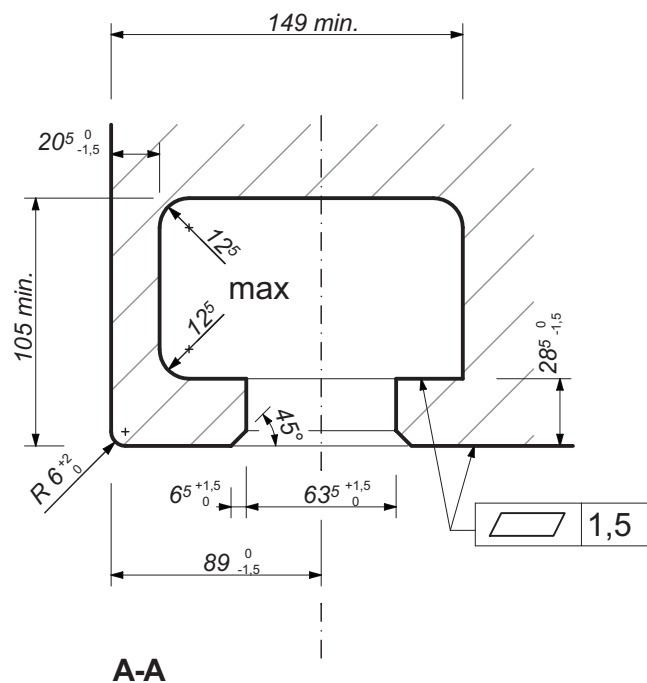
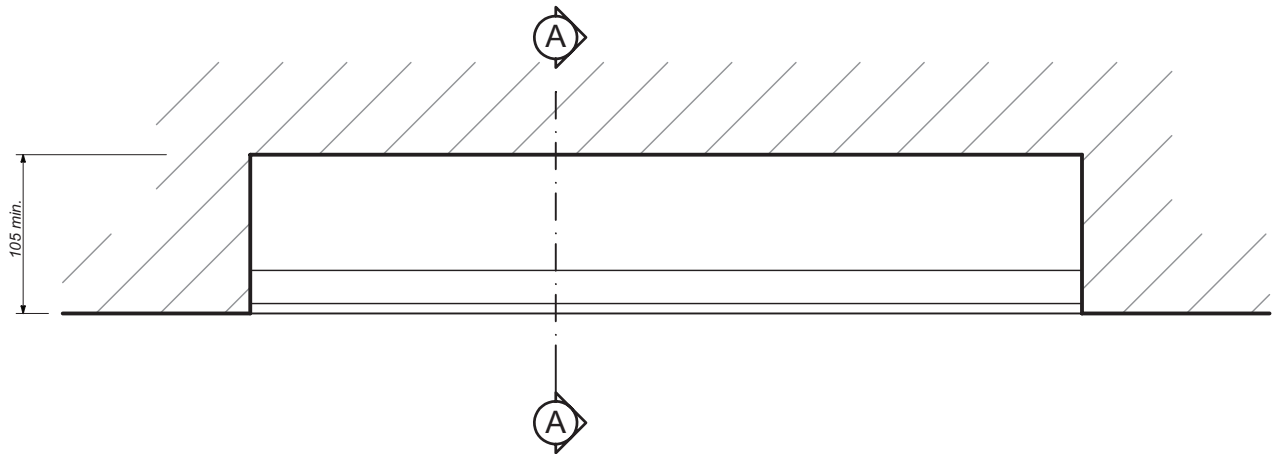
(see point 1.2.9 - page 5)

1. Grab-handling groove markings.
2. Loading position pictogram.
3. Code number plate.
4. Pneumatic spring pictogram.
5. "N" semi-trailer marking.
6. XL code marking.

Appendix E - Semi-trailers with N coding - supporting shoe

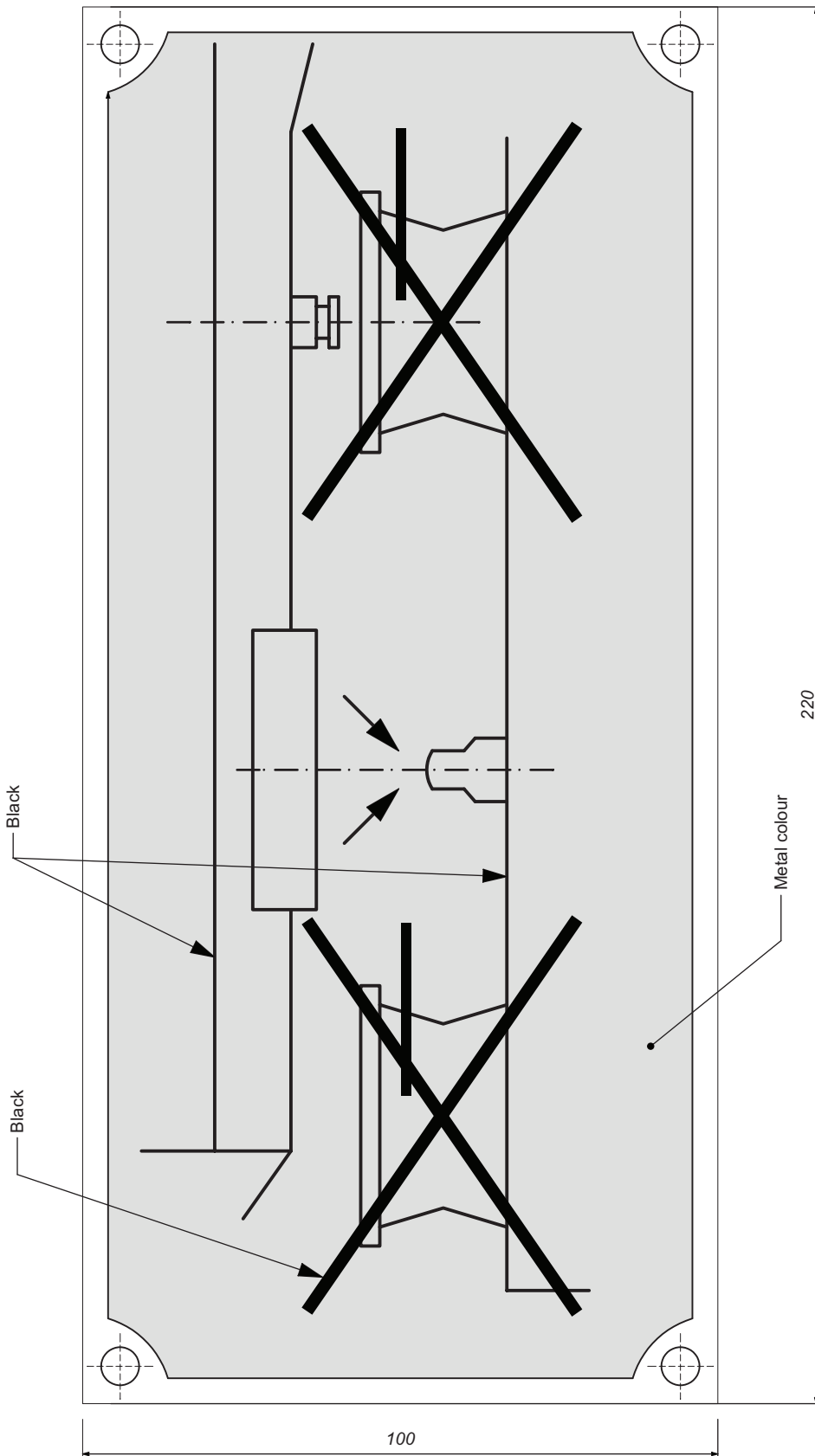
Internal dimensions of supporting shoe

or min. 550 for wheelbase 9835
min. 680 for wheelbase 9610



(as per ISO profile - UIC Leaflet 592-2 - see Bibliography - page 30)

Appendix F - Pictogram for semi-trailers with N coding



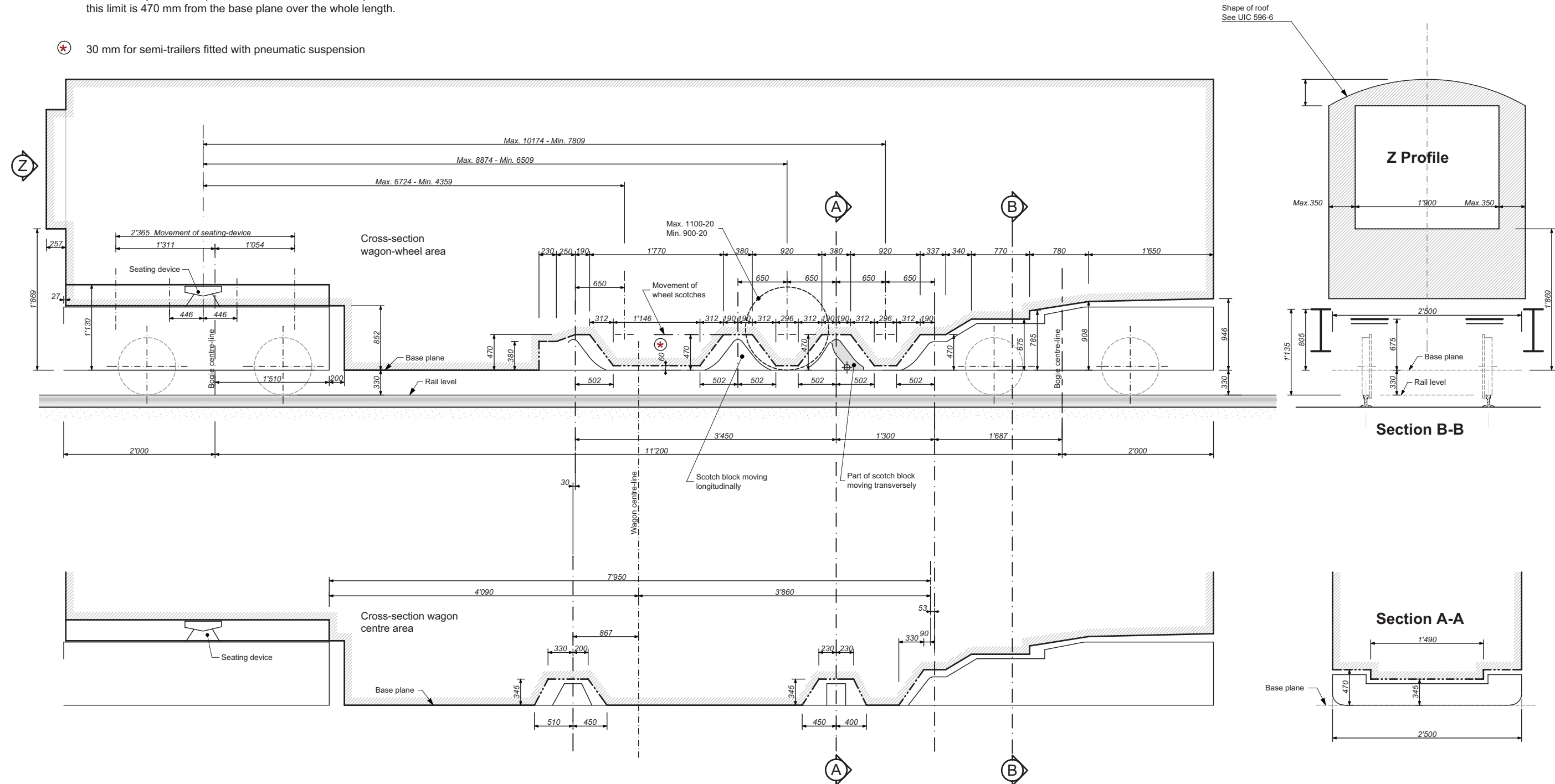
Appendix G - Overall gauge for P semi-trailers

KEY:

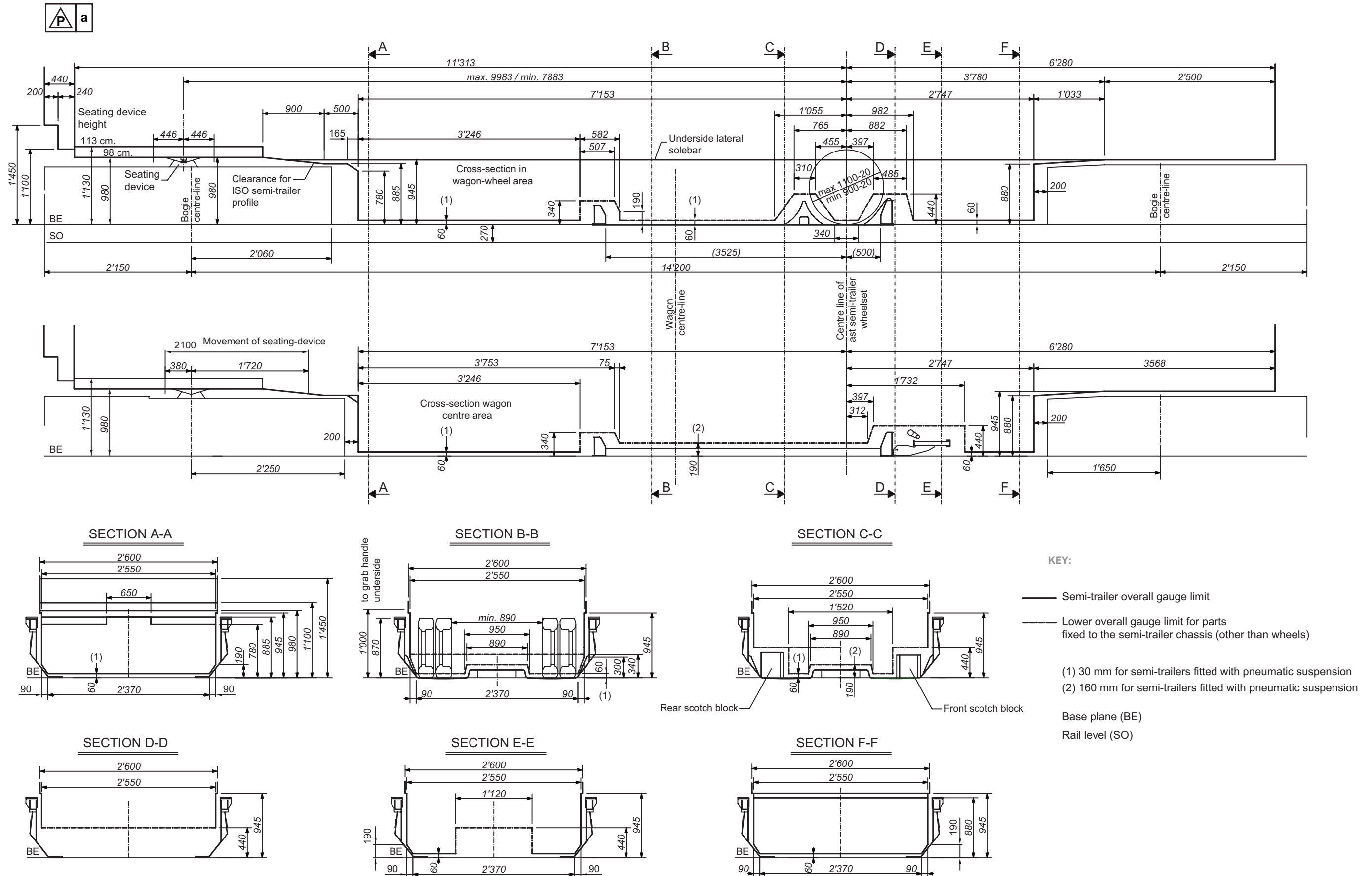
- Semi-trailer overall gauge limit
- - - Lower overall gauge limit for parts fixed to the semi-trailer chassis (other than wheels)

For the compact tridem (maximum wheelbase 1150 mm) this limit is 470 mm from the base plane over the whole length.

⊗ 30 mm for semi-trailers fitted with pneumatic suspension



G.1 - Overall gauge for P semi-trailers with compatibility code "a" on recess wagon type 4 with seating device height of 113 or 98 cm



G.2 - Overall gauge for P semi-trailers with compatibility code "b" on recess wagon types 739 and 744 with seating device heights of 113 or 98 cm



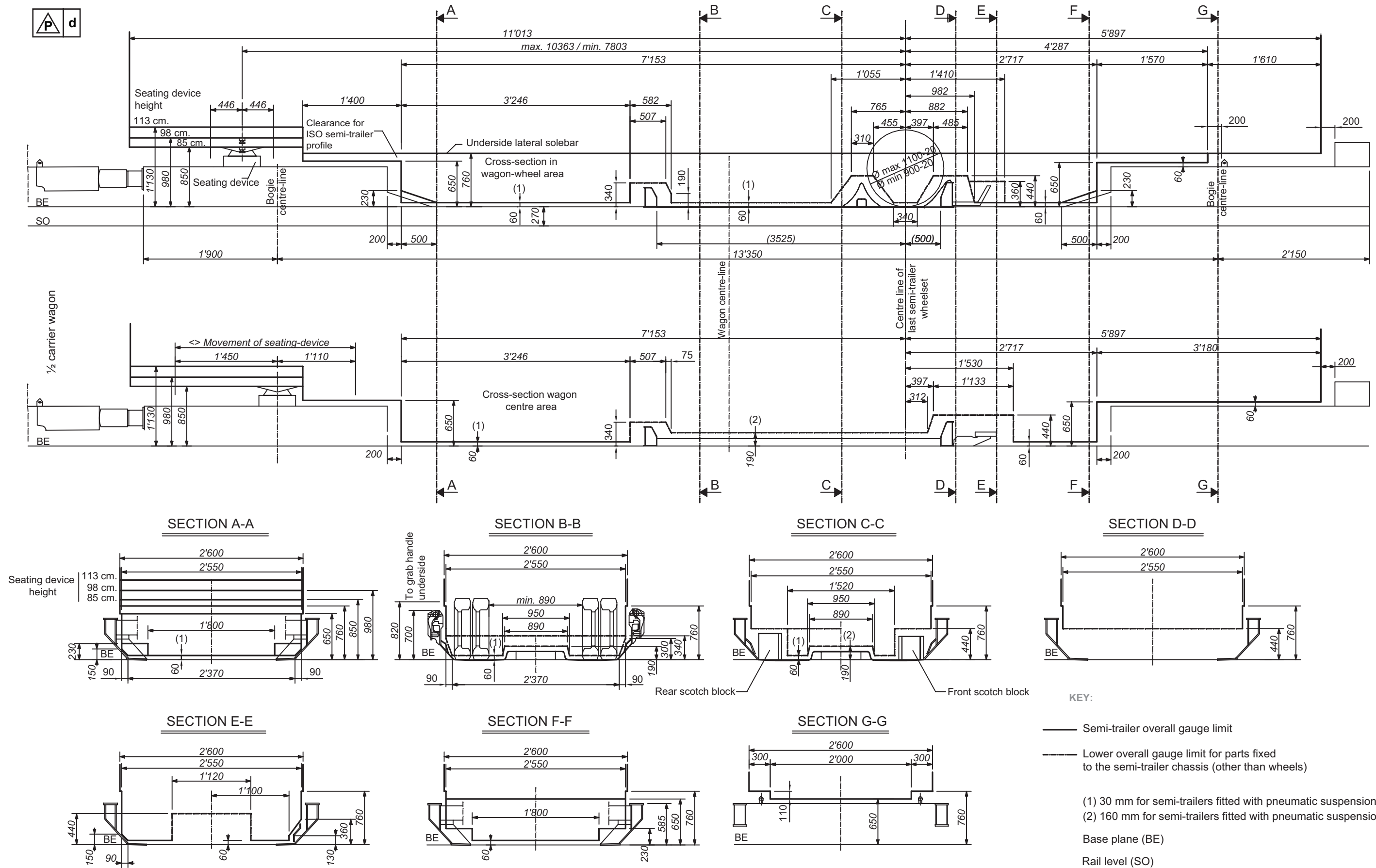
Reserved

G.3 - Overall gauge for P semi-trailers with compatibility code "c" on recess wagon type 2000 with seating device heights of 113 or 98 cm

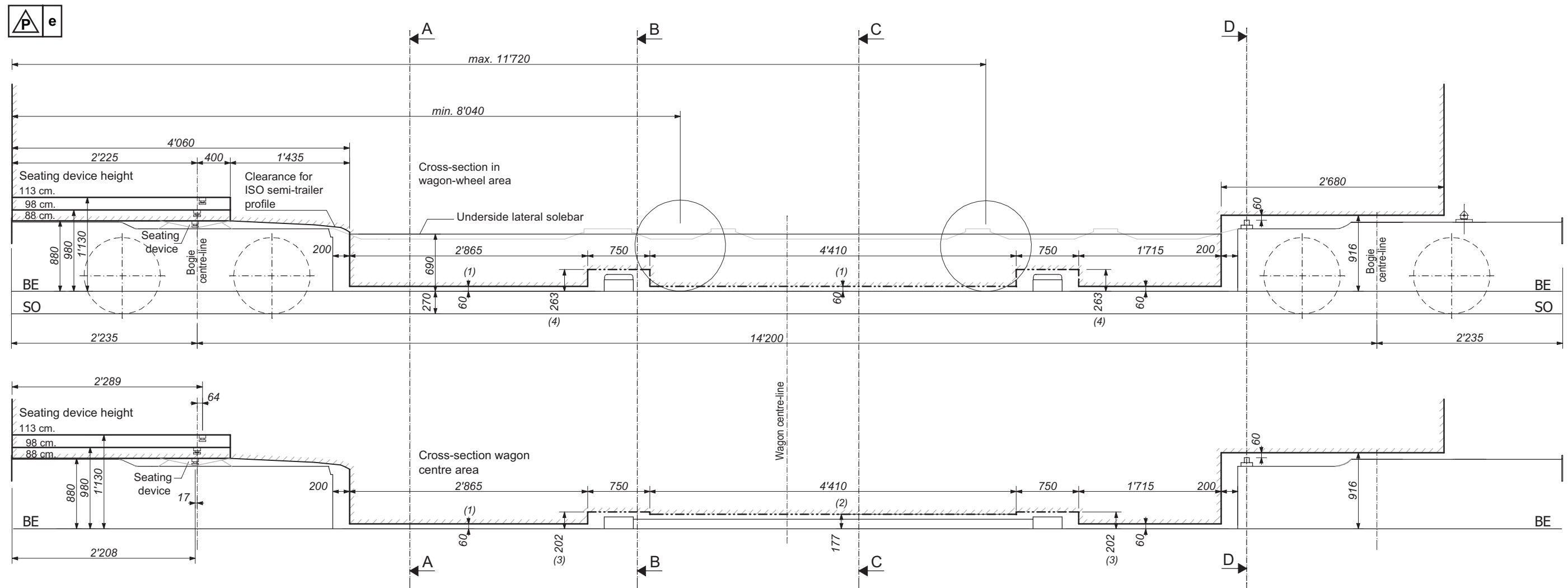


Reserved

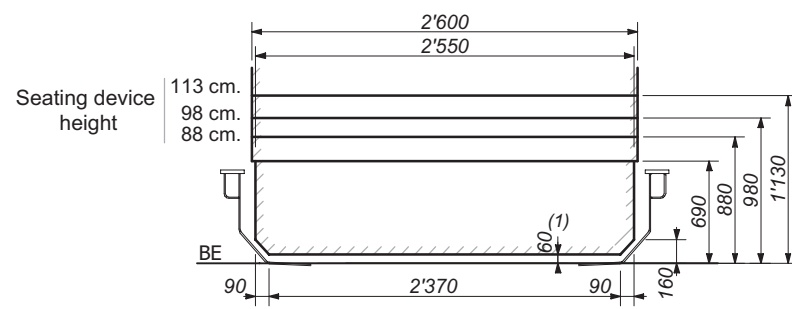
G.4 - Overall gauge for P semi-trailers with compatibility code "d" on recess wagon type Mega 2 with seating device heights of 113, 98 or 85 cm



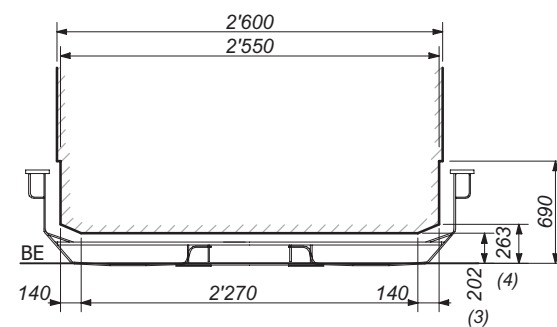
G.5 - Overall gauge for P semi-trailers with compatibility code "e" on recess wagon type Mega 2 with seating device heights of 113, 98 or 88 cm



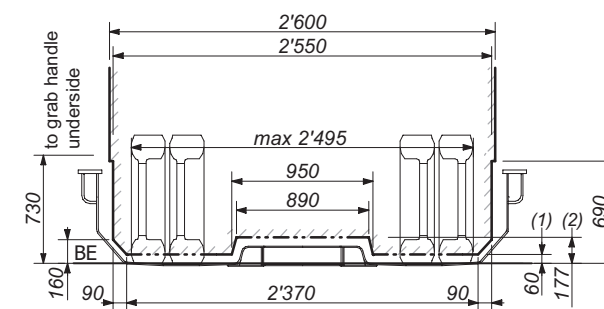
SECTION A-A



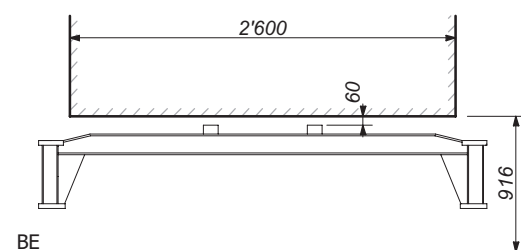
SECTION B-B



SECTION C-C



SECTION D-D



KEY:

- Semi-trailer overall gauge limit
- Lower overall gauge limit for parts fixed to the semi-trailer chassis (other than wheels)

- (1) 30 mm for semi-trailers fitted with pneumatic suspension
- (2) 147 mm for semi-trailers fitted with pneumatic suspension
- (3) 172 mm for semi-trailers fitted with pneumatic suspension
- (4) 233 mm for semi-trailers fitted with pneumatic suspension

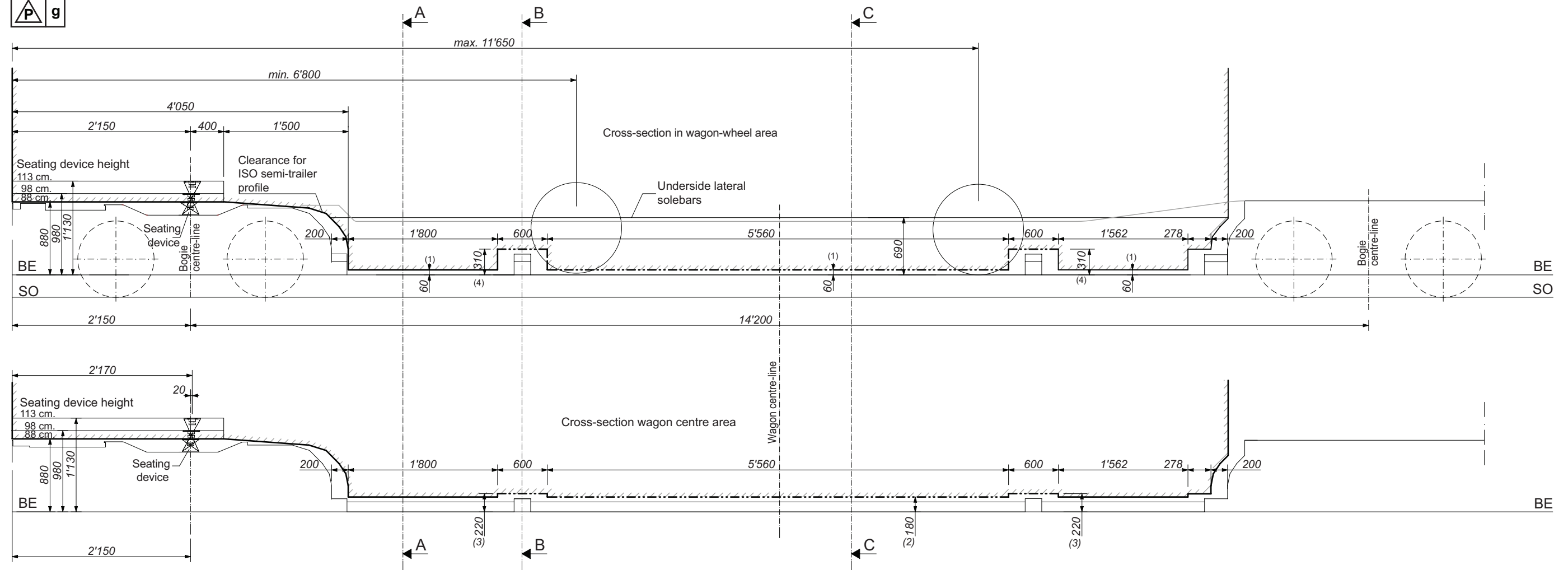
Base plane (BE)
Rail level (SO)

G.6 - Overall gauge for P semi-trailers with compatibility code "f" on recess wagon type 3000 with seating device heights of 113, 98 or 88 cm



Reserved

G.7 - Overall gauge for P semi-trailers with compatibility code "g" on recess wagon type Twin with seating device heights of 113, 98 or 88 cm



SECTION A-A

SECTION B-B

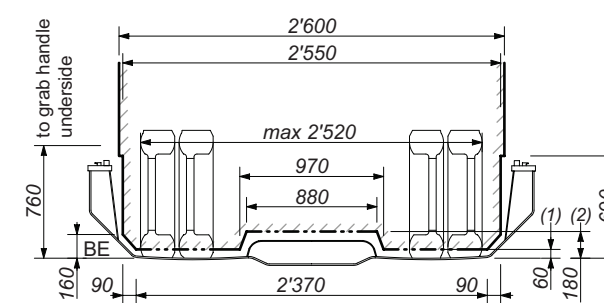
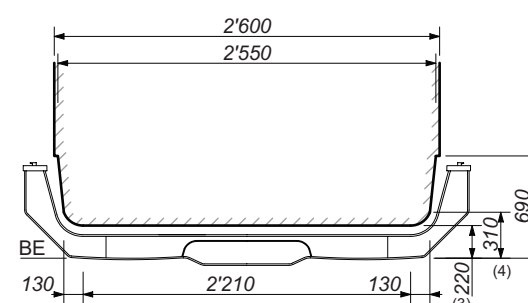
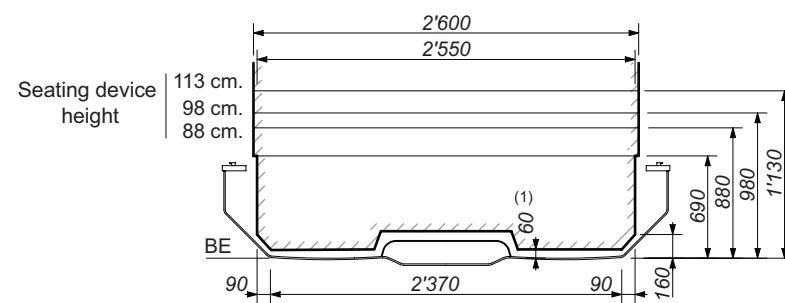
SECTION C-C

KEY:

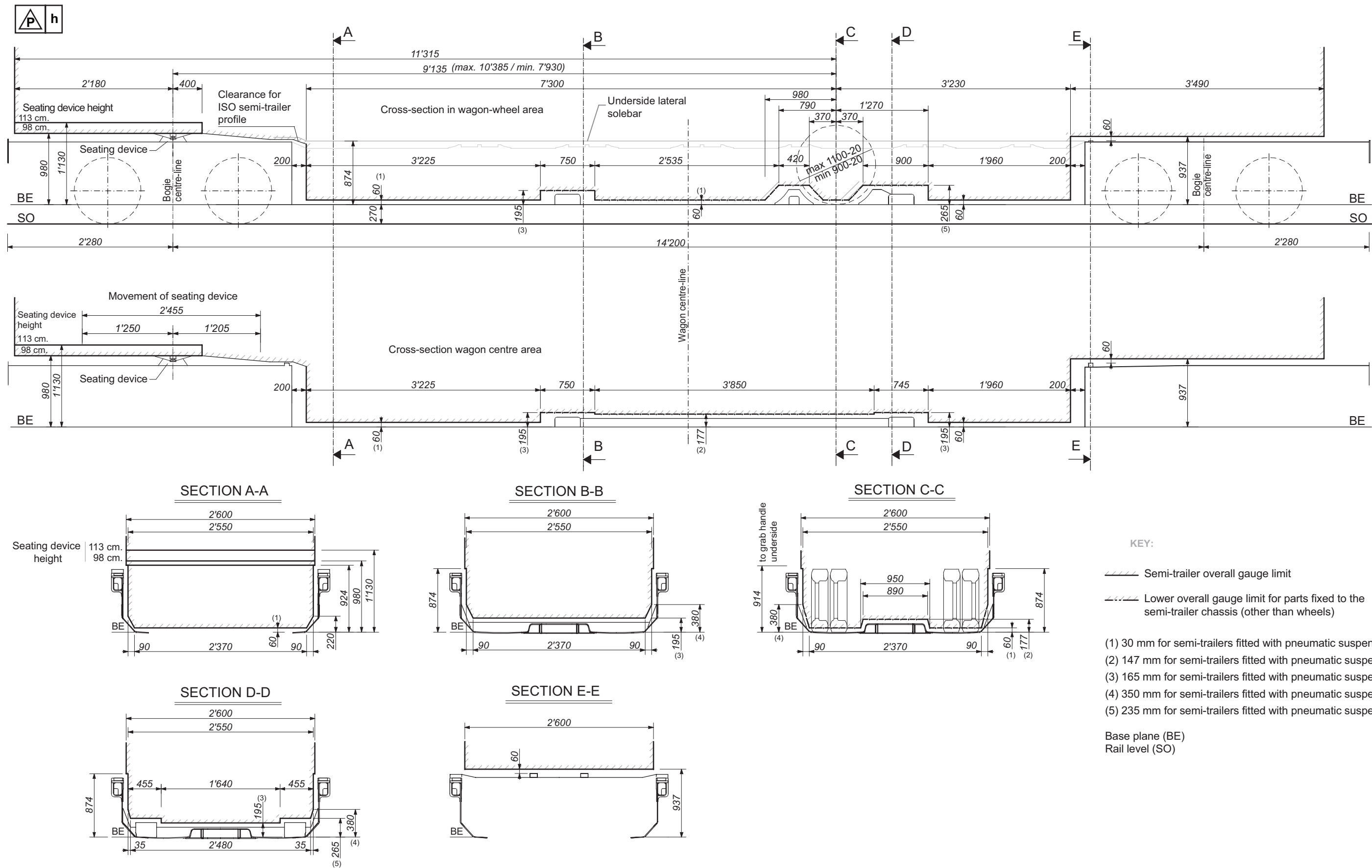
- Semi-trailer overall gauge limit
- Lower overall gauge limit for parts fixed to the semi-trailer chassis (other than wheels)

- (1) 30 mm for semi-trailers fitted with pneumatic suspension
- (2) 150 mm for semi-trailers fitted with pneumatic suspension
- (3) 190 mm for semi-trailers fitted with pneumatic suspension
- (4) 280 mm for semi-trailers fitted with pneumatic suspension

Base plane (BE)
Rail level (SO)



G.8 - Overall gauge for P semi-trailers with compatibility code "h" on recess wagon type 4.2 with seating device heights of 113 or 98 cm



G.9 - Reserved



G.10 - Reserved



G.11 - Reserved



G.12 - Reserved

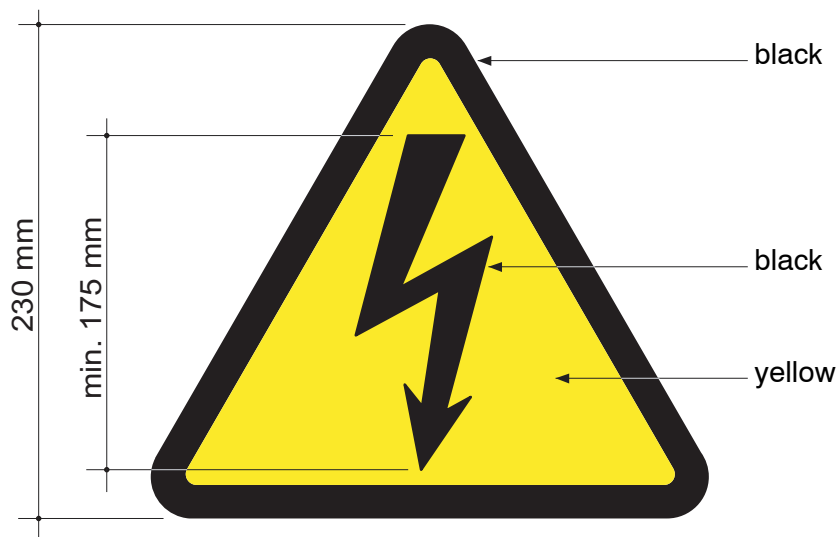


G.13 - Reserved



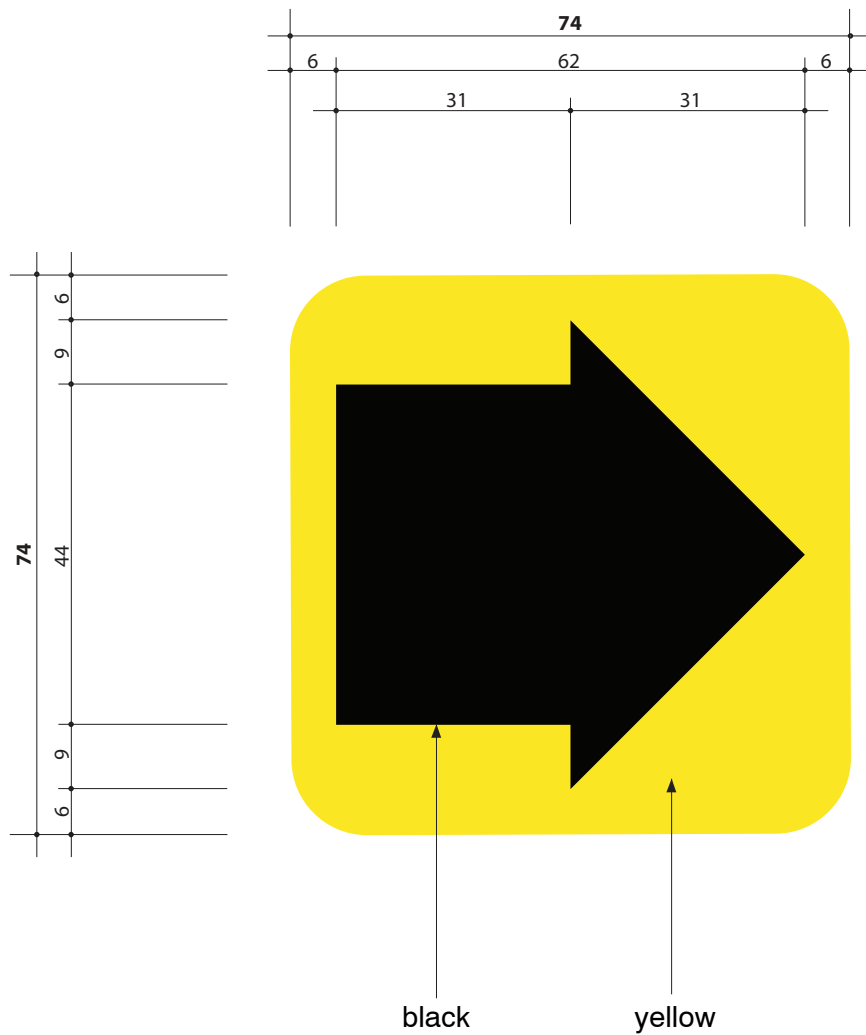
Appendix H - Pictogram for semi-trailers equipped with ladders/ascent platforms for accessing the upper section

(see point 1.2.9.5 - page 5)



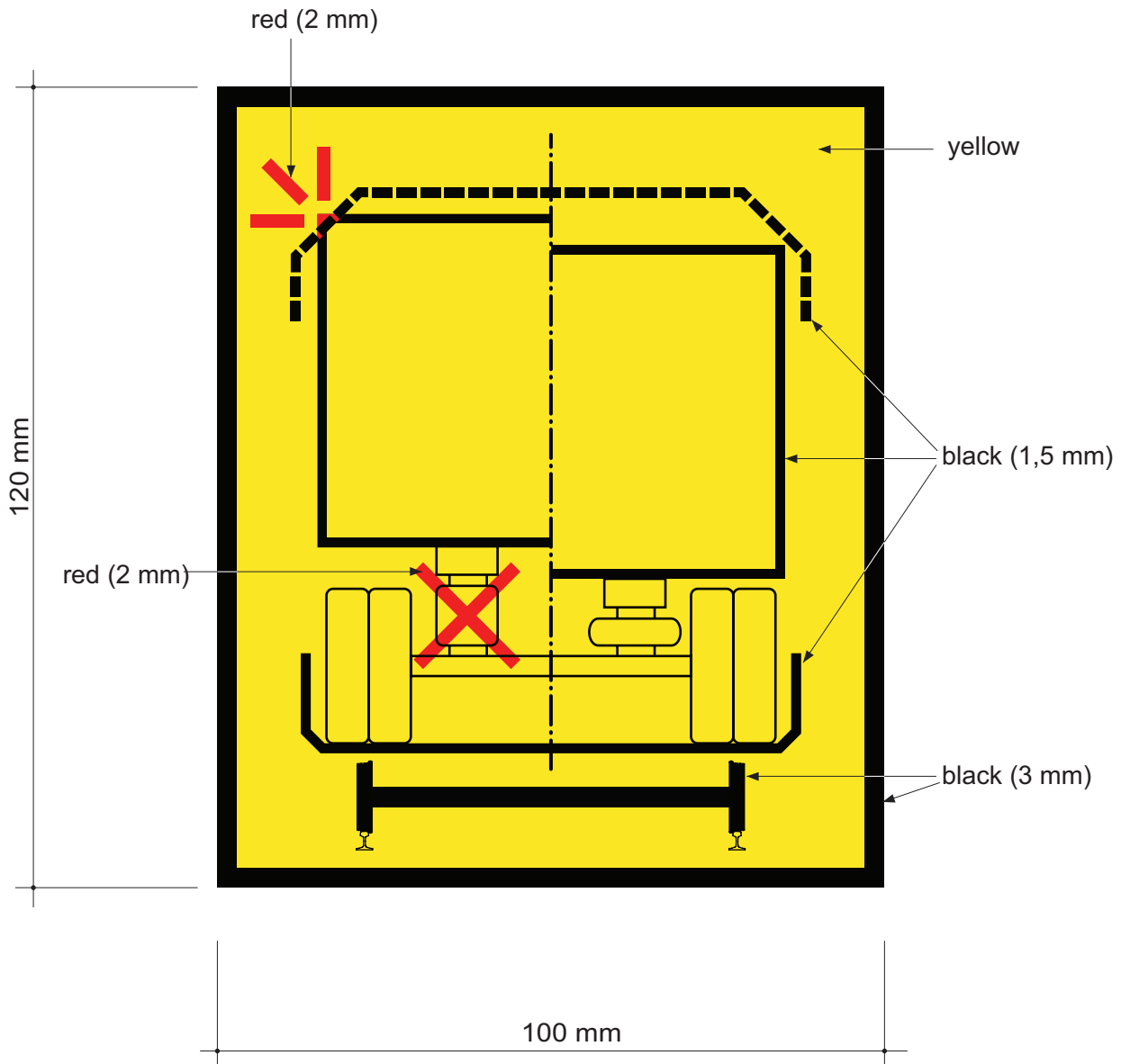
Appendix I - Loading position pictogram

(see point 1.2.9.4 - page 5)



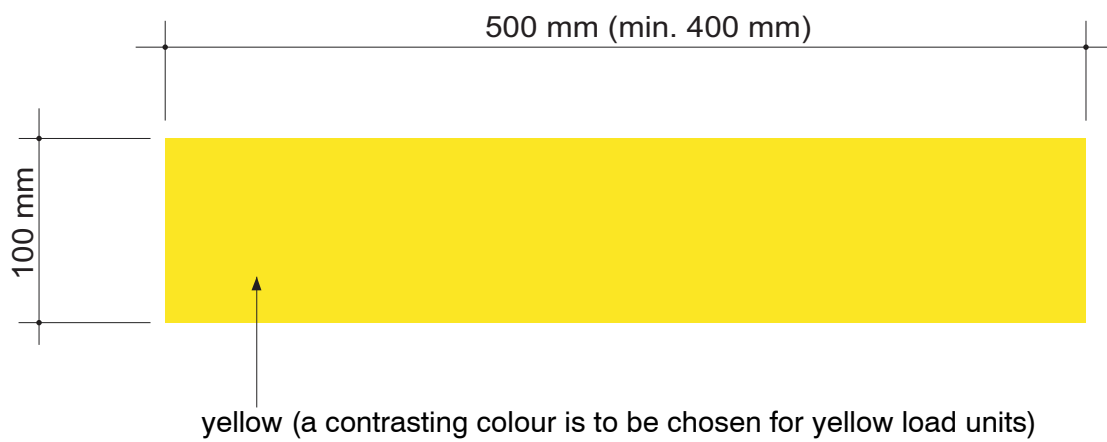
Appendix J - Pneumatic spring pictogram

(see point 1.2.9.3 - page 5)



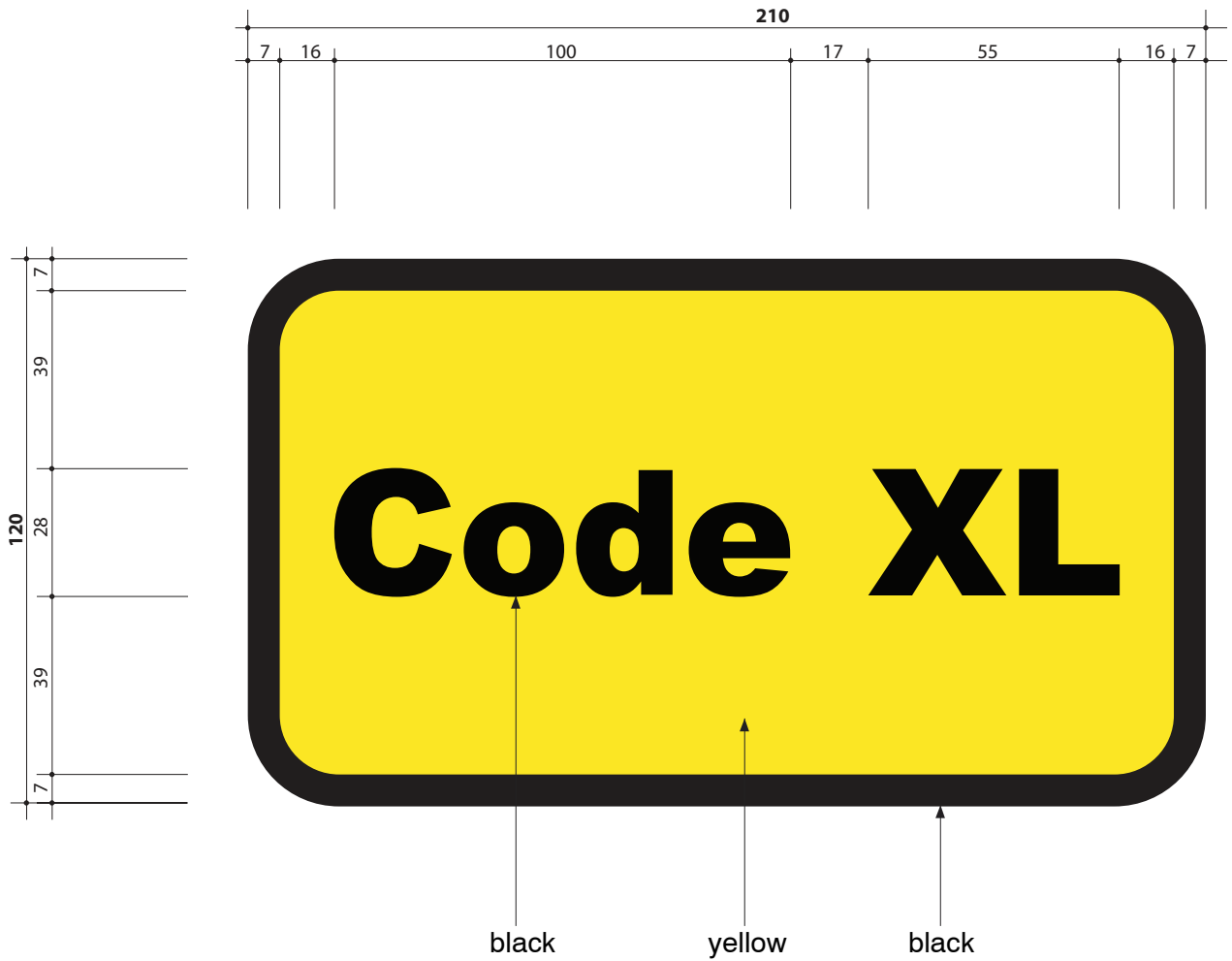
Appendix K - Grab-handling groove markings

(see point 1.2.9.2 - page 5)



Appendix L - XL code pictogram

(see point 1.2.9.6 - page 5)



Bibliography

1. UIC leaflets

International Union of Railways (UIC)

UIC Leaflet 571-4: Standard wagons - Wagons for combined transport - Characteristics, 4th edition, October 2004

UIC Leaflet 592-2: Large containers for transport on wagons - Technical conditions to be fulfilled by large containers accepted for use in international traffic, 6th edition, October 2004

UIC Leaflet 596-6: Conveyance of road vehicles on wagons - Technical organisation - Conditions for coding combined-transport load units and combined-transport lines, 5th edition, November 2006

UIC Leaflet 599: Equipment for loading and unloading containers or vehicles used in combined transport on/from wagons, 2nd edition of 1.1.86 and 2 Amendments

2. International standards

International Organization for Standardization (ISO)

ISO 337:1981 : Road vehicles - 50 semi-trailer fifth wheel coupling pin - Basic and mounting/interchangeability dimensions, June 1991

Deutsches Institut für Normung (DIN)

DIN 74080:1984 : Mechanische Verbindungen für Sattelkraftfahrzeuge; Zugsattelzapfen 50; Funktions- und Einbaumaße, Anforderungen, January 1984

3. European standards

European Committee for Standardization (CEN)

EN 12641-1:2005 : Swap bodies and commercial vehicles – Tarpaulins – Part 1: Minimum requirements, October 2005

EN 12641-2:2006 : Swap bodies and commercial vehicles - Tarpaulins - Part 2: Minimum requirements for curtainsiders, February 2007

EN 12642:2006 : Securing of cargo on road vehicles. Body structure of commercial vehicles. Minimum requirements, March 2007

European Parliament

Directive 94/20/EC of the European Parliament and of the Council of 30 May 1994 relating to the mechanical coupling devices of motor vehicles and their trailers and their attachment to those vehicles, 30 May 1994

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