

UIC - Deciphering the Freight Car Class

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In the first article of this series, "*UIC - RIV Freight Car Numbering Scheme*," I noted that the fifth and sixth digits of the UIC car number corresponded to the type of freight wagon as based on a number of recognized types.

- E** Open wagon, standard design, with side or end loading and flat floor
- F** Open wagon, non-standard design
- G** Closed Wagon, standard design (having 8 or more vents)
- H** Closed Wagon, non-standard design (sliding walls etc)
- I** Isolated/refrigerator wagon
- K** 2 axle flat wagon, standard design, with stakes and drop-down sides
- L** Fixed-axle flat wagon, non-standard design
- O** 2-axle flat or open wagon, standard design with fixed side boards and stakes
- R** Truck-equipped flat wagon, standard design, with stakes and drop-down end boards
- S** Truck-equipped flat wagon, non-standard design
- T** Wagon with opening roof
- U** Other non-standard wagons
- Z** Tank wagon (metal tank)

The complete wagon type code is usually a much longer set of letters beginning with the basic type (the upper-case letter) followed by several lower-case letters. Each lower case letter or pair of identical letters describes an additional characteristic of the wagon. These letters are appended to the basic type in alphabetical order. Single and double instances of the same letter are mutually exclusive, consequently, a wagon class could not include both 'a' and 'aa'.

Sub-type	Applies to Type:	Indicating:
a	E,F,G,H,I,T,U,Z	Two 2-axle trucks
	L,O	Three axles
	S	Two 3-axle trucks

Sub-type	Applies to Type:	Indicating:
aa	E,F,G,H,T,U,Z	Six or more axles; weight limit on 'C' class track = 60t or more
	I	Six or more axles
	L	Four single axles (no trucks)
	S	Eight or more axles
b without trucks	F	Capacity over 45 cubic meters
	G,H	Load length over 12 meters and capacity over 70 cubic meters
	I	Floor space between 22 and 27 square meters
	T	Load length over 12 meters
b with trucks	G,T	Load length over 18 meters
	H	Load length between 18 and 22 meters
	K	Long stakes
	L,S	Equipment for carrying non-ISO containers ('Von Haus zu Haus' containers and the like)
bb	H	Load length over 14 meters (wagon with single wheels) Load length over 22 meters (wagon with trucks)
	I	Floor space over 27 square meters (wagon with single wheels)
c	E	Floor unloading hatches
	F	Controlled gravity unloading; discharge gates are at least 70 centimeters above the railhead
	H,T	End doors
	I	Meat racks
	L,S	Pivoting deck
	U,Z	Compressed air unloading
cc	F	Controlled gravity unloading; discharge gates are so low as to prohibit the use of conveyors; non-tilting
	H	End doors and interior fittings for road vehicle transport

Sub-type	Applies to Type:	Indicating:
d	H	Opening floor
	I	Fittings for fish transport
	L,S	Fittings for transporting road vehicles on a single level
	T,U	Controlled gravity unloading; discharge gates are at least 70 centimeters above the railhead; non-tilting
dd	T,U	Controlled gravity unloading; discharge gates are so low as to prohibit the use of conveyors; non-tilting
e	H	Two floor levels (double deck)
	I	Electric air circulation
	L,S	Double-deck for road vehicle transport
	R	Hinged side boards
	T	Door height over 1.9 meters
	Z	Electric heating
ee	H	More than two floor levels
f	F,H,I,L,O,S,T,U,Z	Exterior dimensions matching the British loading gauge
g	G,H,T,U	Equipped for grain handling
	I	Mechanical refrigeration
	K,L,R	Container-carrying flat wagons
	S	Capable of carrying containers up to 60 feet long
	Z	Transport of compressed or liquefied gasses
gg	I	Cooling by compressed gas
	S	Capable of carrying containers up to 80 feet long
h	G,H	For fresh produce
	I	Super insulated
	L,R,S,T	Coil car, horizontal cradling
hh	L,R,S,T	Coil car, vertical cradling

Sub-type	Applies to Type:	Indicating:
i	H,T	Sliding side walls
	I	Mechanical refrigeration supplied by another wagon
	K,L,R,S	Removable cover and fixed ends
	U	Low loading deck
	Z	Non-metallic tank
ii	I	Refrigeration power car
j	K,L,R,S,T,Z	Shock control equipment
k	E,G,H,K,O,T	Two-axle wagon with weight limit less than 20t
	F,L,U,Z	Two-or three-axle wagon with weight limit less than 20t
	I	Two-axle wagon with weight limit less than 15t
	R	Weight limit less than 40t
	E,F,G,H,L,S,T,U,Z	Four-axle wagon with weight limit less than 40t
	E,F,G,H,S,T,U,Z	Six-axle wagon with weight limit less than 50t
kk	E,G,H,K,O,T	Two-axle wagon with weight limit between 20 and 25t
	F,L,U,Z	Two-or three-axle wagon with weight limit between 20 and 25t
	R	Weight limit between 40 and 50t
	E,F,G,H,L,S,T,U,Z	Four-axle wagon with weight limit between 40 and 50t
	E,F,G,H,S,T,U,Z	Six-axle wagon with weight limit between 50 and 60t
I	E	Not side-tipping
	F,T,U	Unregulated gravity unloading from both sides of the rails; discharge gates are at least 70cm above the railhead
	G	Fewer than eight air vents
	I	Heated car without ice bunkers
	K,L,O,R,S	Without stakes
II	F,T,U	Unregulated gravity unloading from both sides of the rails; discharge gates are so low as to prohibit the use of conveyors

Sub-type	Applies to Type:	Indicating:
m	E	Two-axle wagon with loading length under 7.7 meters Truck-equipped wagon with loading length under 12 meters
	G,H,T	Two-axle wagon with loading length under 9 meters Truck-equipped wagon with loading length under 15 meters
	I	Fixed-axle wagon with floor space less than 19 square meters Truck-equipped wagon with floor space less than 39 square meters
	K,O	Loading length between 9 and 12 meters
	L	Two-axle wagon with loading length between 9 and 12 meters Three- or four-axle wagon with loading length between 18 and 22 meters
	R	Loading length between 15 and 18 meters
	S	Four-axle wagon with loading length between 15 and 18 meters Six-axle wagon with loading length between 18 and 22 meters
mm	K,O	Loading length under 9 meters
	L	Two-axle wagon with loading length under 9 meters Three- or four-axle wagon with loading length under 18 meters
	R	Loading length under 15 meters
	S	Four-axle wagon with loading length under 15 meters

Sub-type	Applies to Type:	Indicating:
o	E	Non-tilting
	F,T,U	Unregulated gravity unloading between the rails; discharge gates are at least 70cm above the railhead; non-tilting
	G,H	Two-axle wagon with loading length under 12 meters and loading capacity of at least 70 cubic meters
	I	Ice bunkers less than 3.5 cubic meters in volume
	K	Fixed side boards
	R	Fixed ends under 2 meters in height
	S	Articulated wagon with three two-axle trucks
oo	F,T,U	Unregulated gravity unloading between the rails; discharge gates are so low as to prohibit the use of conveyors; non-tilting
	R	Fixed ends over 2 meters in height
p	F,T,U	Controlled gravity unloading between the rails; discharge gates are at least 70 centimeters above the railhead; non-tilting
	I	Without floor grating
	K,L,S	Without side boards
	R	Without end walls
pp	F,T,U	Controlled gravity unloading between the rails; discharge gates are so low as to prohibit the use of conveyors; non-tilting
	K,R	Removable side boards
q	All	Electrical heat line for all types of current
qq	All	Electrical heat line and heating mechanism for all types of current
s	All	Ability to travel at speeds up to 100 kph
ss	All	Ability to travel at speeds up to 120 kph

At first glance, the subtypes 'q' and 'qq' may not make a lot of sense. After all, what is the point of having electrical heating equipment on a freight car? You may recall that regularly available "car-in-tow" service allows vacationers to travel by train with their personal automobile loaded on an accompanying auto rack. These auto racks must have the train line electrical (and steam) connections in case they end up between the locomotive and the coaches. Other types of freight cars might find themselves in a passenger train (remember express reefers in North America?), however no other types were listed in DB's inventory as of the publication of Obermayer's book (see bibliography).

BIBLIOGRAPHY

Obermayer, Horst J. and Deppmeyer, J, Taschenbuch Deutsche Güterwagen. Stuttgart, 1985.
ISBN 3-440-04855-1.

Oxlade, John. (2000). What do the White Squares and Trapezoids Mean . . . ? *Information on the Railways of Germany*. <http://www.worldrailfans.org/Germany/History.shtml#Epochs>. (24 Jan 2001).

Union Internationale des Chemins de Fer. Overview of UIC. *International Union of Railways*.
<http://www.uic.asso.fr/>. (28 Nov 2000).

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