NHVR
National Heavy Vehicle Regulator

July | 2016

National heavy vehicle mass and dimension limits

Heavy Vehicle National Law

The Heavy Vehicle National Law (HVNL) provides General Mass Limits (GML), Concessional Mass Limits (CML) and Higher Mass Limits (HML) for heavy vehicles operating on the national road network. This fact sheet summarises the conditions for operating general access and restricted access vehicles, relating to axle mass and configurations.

High productivity vehicles, such as B-doubles and HML vehicles are important to the efficiency of the freight task in Australia. The larger capacity of these vehicles also reduces the number of vehicles required to transport a given amount of freight.

National heavy vehicle dimension requirements

The prescribed dimension requirements for heavy vehicles are set out under the *Heavy Vehicle (Mass, Dimension and Loading) National Regulation 2013 (the Regulation)*.

The information contained within this fact sheet has been extracted from the regulation.

Index

GML	General Mass Limits
CML	Concessional Mass Limits
HML	Higher Mass Limits
HVNL	Heavy Vehicle National Law
GVM/GCM	Gross Vehicle Mass/Gross Combination Mass
NHVAS	National Heavy Vehicle Accreditation Scheme
NLS	Non Load Sharing
LS	Load Sharing
PBS	Performance Based Standard
‘S’ dimension	Measurement from the front articulation point to the rear overhang line

The information contained in this fact sheet is accurate at the time of publication and in the unlikely event of any conflict the HVNL prevails.

This document does not cover the authorised access. Some vehicles are not permitted to operate in some states.

This document does not cover PBS Vehicles, if you require this information about PBS vehicles, please refer to the PBS Fact Sheet.

Prescribed dimensions

Width

The width limit for heavy vehicles is 2.5 metres, excluding:

- rear vision mirrors, signalling devices and side-mounted lamps and reflectors
- anti-skid devices mounted on wheels, central tyre inflation systems, tyre pressure gauges
- permanently fixed webbing-assembly-type devices, such as curtain-side devices, provided that the maximum distance measured across the body including any part of the devices does not exceed 2.55 metres.
- removable load restraint equipment, if the maximum distance across the body of the heavy vehicle, including any part of the equipment, is not more than 2.55m.

Height

The height limit for heavy vehicles is 4.3 metres unless it is a:

- vehicle built to carry cattle, horses, pigs or sheep - 4.6 metres
- vehicle built with at least 2 decks for carrying vehicles - 4.6 metres
- double-decker bus - 4.4 metres

Length

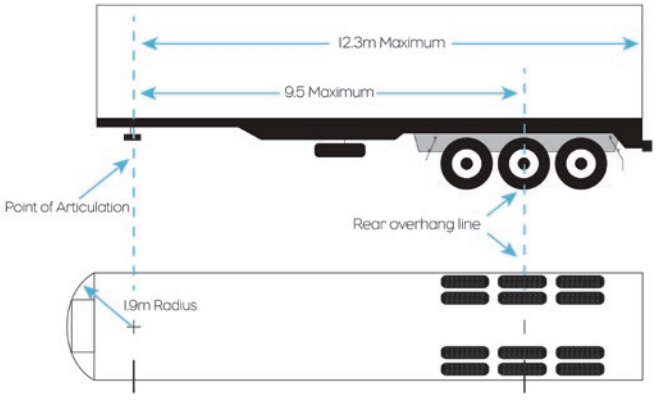
For overall vehicle lengths, refer to the axle mass tables on pages 5-10.

Length for trailers

On a semitrailer or dog trailer the distance from the front articulatic point to the rear over hang line must not be more than 9.5 metres a the distance from the front articulation point to the rear of the trail must not be more than 12.3 metres.

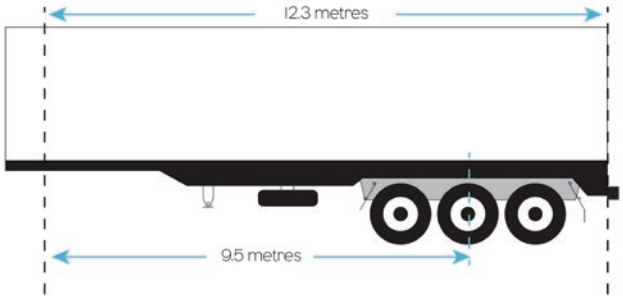
The maximum forward projection of a semi-trailer, or anything attached to a semi-trailer must not protude beyond a 1.9 metre arc from the towing pivot pin (King pin).

The articulation point to the rear of a semitrailer may be up to 13.2 metres if the trailer has a distance of not more than 9.5 metres fron the front articulation point to the rear overhang line, does not operate in a B-double or road train combination and otherwise complies dimensionally.

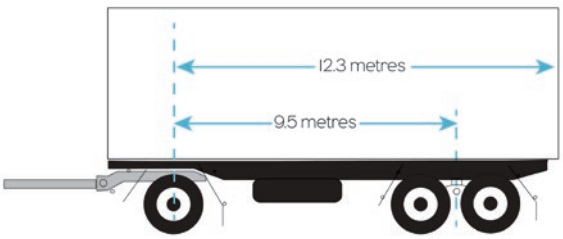


Examples

Semi trailer



Dog trailer



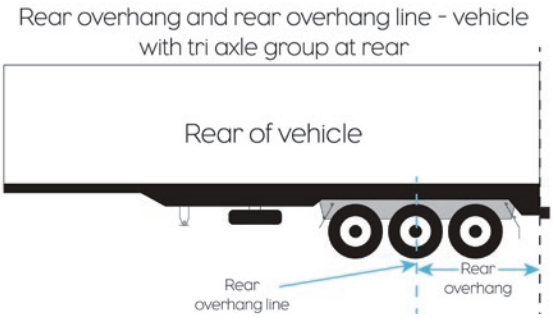
Rear overhang and rear overhang line

The rear overhang of a vehicle is the distance between the rear of the vehicle and the rear overhang line of the vehicle.

If a vehicle's rear axle group comprises of only 1 axle, the rear overhang line is the centre-line of that axle.

If a vehicle's rear axle group comprises of 2 axles, 1 of which is fitted with twice the number of tyres as the other, the rear overhang line is located at one-third the distance between the 2 axles and is closer to the axle with the greater number of tyres.

If a vehicle's rear axle group comprises of 3 or more axles, the rear overhang line is the centre-line of the axle group.

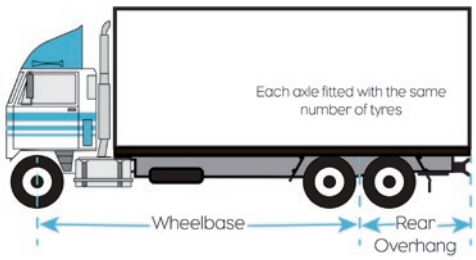


Note: Any steerable axle is to be disregarded unless—

- the group comprises of only 1 axle and that axle is a steerable axle; or
- all the axles in the group are steerable axles.

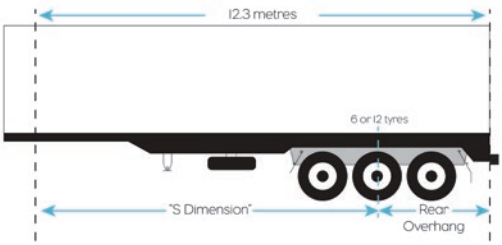
Rear overhang on rigid trucks

Lesser of 3.7 metres or 60% of wheelbase.



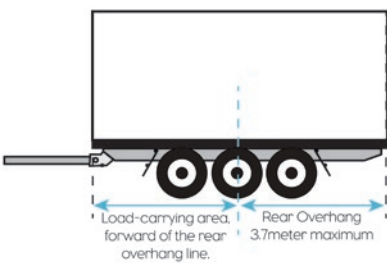
Rear overhang on a semi-trailers and dog trailers

Lesser of 3.7 metres or 60% of 'S' dimension.



Rear overhang on a pig trailer

Rear overhang on a pig trailer must not exceed the lesser of the length of the load-carrying area, forward of the rear overhang line or 3.7 metres.

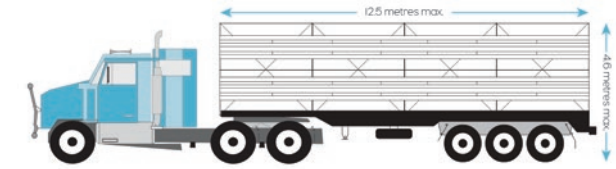


Dimensions relating to specific trailer types

Livestock carriers

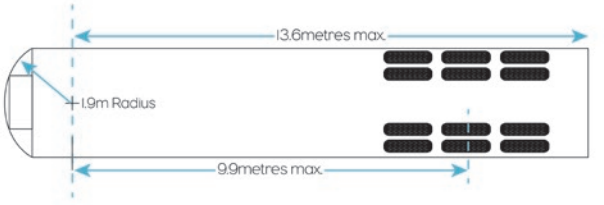
- A trailer built to carry cattle, horses, pigs or sheep on two or more partly or completely overlapping decks must not have more than 12.5 metres of its length available to carry cattle, horses, pigs or sheep.
- In a B-double built to carry cattle, horses, pigs or sheep, the two semi-trailers must not have more than 18.8 metres of their combined length available to carry cattle, horses, pigs or sheep.

Note - the length available for the carriage of cattle, horses, pigs or sheep on a trailer is measured from the inside of the front wall or door of the trailer to the inside of the rear wall or door of the trailer, with any intervening partitions disregarded



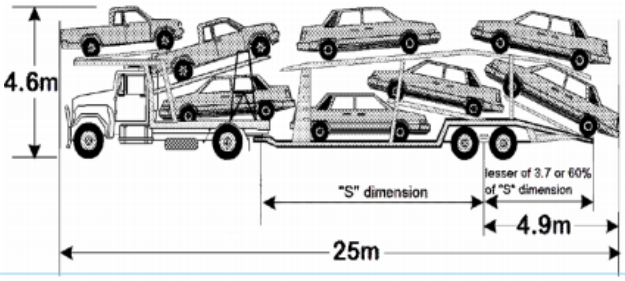
Refrigerated van trailers

The front articulation point to the rear of a semi-trailer may be up to 13.6 metres if the trailer is designed and constructed for the positive control of temperature through the use of refrigerated equipment. Also, the distance from the front articulation point to the rear overhang line of not more than 9.9 metres does not operate in a B-double or road train combination and otherwise complies dimensionally.



Car carriers

The distance measured at right angles between the rear overhang line of a trailer carrying vehicles on more than one deck and the rear of the rearmost vehicle on the trailer must not exceed 4.9 metres.



Axle mass limits comparison tables

- The **Mass limits for single axles and axle groups** table denotes the GML that applies under the HVNL
- For CML and HML refer to the tables on pages 6-10.
- Dog and pig trailers must not be heavier than the truck towing them.
- The maximum GML for a combination is 42.5 tonnes unless operating under a notice permit or specific scheme.
- CML heavy vehicles must be accredited under the NHVAS.
- HML heavy vehicles must be fitted with road friendly suspension and accredited under the NHVAS.
- Additional information is available from the HVNL or the NHVR website: www.nhvr.gov.au

Table disclaimers

* Heavy vehicles with a GVM over 15 tonnes fitted with specified technologies, including an engine complying with ADR 80/01 (Euro IV), Front Under-run Impact Protection that meets UN ECE Regulation no 93 or ADR 84, and cabin strength that meets the requirements of UN ECE Regulation no 29, are permitted up to 6.5 tonnes on the steer axle provided it does not exceed the manufacturers rating. Allowable GVM/GCM may then also be increased by up to 0.5 tonnes.

The type of Road train configurations may vary between jurisdictions.

Under the Queensland Class 3 Heavy Vehicle additional concessional mass limits exemption notice.

[a] Heavy vehicles may travel on roads throughout Queensland with an additional 250kg on a single front steer axle and an additional 1tonne on a twin steer front axle when operating under a CML Class 3 Notice (to be advised).

[b] Steer axle mass limit can be increased to 7.1t for a prime mover forming part of a road train fitted with tyres of at least 375mm.

[c] Heavy Vehicles may travel on roads throughout Queensland with an additional 3 tonnes above General Mass Limits, if the maximum mass permitted under GML is > 85 tonnes and an additional 4 tonnes if it is > 120 tonnes.

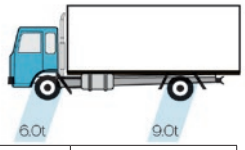
*, a, b For disclaimer clarification please refer to page 4

Mass limits for single axles and axle groups

Axle/s	Axle group/tyres	Axle/vehicle details	Mass limit (tonnes)
	Single axle Single tyres	Steer axle*, a, b Non steer axle, tyres less than 375mm Non steer axle, tyres 375mm to 449mm Non steer axle, tyres at least 450mm	6.0t 6.0t 6.7t 7.0t
	Single axle Dual tyres	Pig trailer Any other vehicle A complying bus, or a bus authorised to carry standing passengers under an Australian road law An ultra-low floor bus with no axle groups, only 2 single axles	8.5t 9.0t 10.0t 11.0t
	Twin-steer axle group Single tyres	Non load-sharing suspension system Load-sharing suspension system	10.0t 11.0t
	Tandem axle group Single tyres	Less than 375mm 375mm to 449mm At least 450mm	11.0t 13.3t 14.0t
	Tandem axle group Dual/single tyres	Single tyres on one axle and dual tyres on the other axle A complying bus	13.0t 14.0t
	Tandem axle group Dual tyres	Pig trailer Any other vehicle	15.0t 16.5t
	Tri-axle group Single tyres	Single tyres on all axles with section width less than 375mm, or single tyres on one or two axles and dual tyres on the other axle or axles Pig trailer with either single tyres with at least a 375mm section width, dual tyres on all axles or a combination of those tyres	15.0t 18.0t
	Tri-axle group Dual tyres	Vehicle other than a pig trailer with either single tyres with at least a 375mm section width, dual tyres on all axles or a combination of those tyres	20.0t

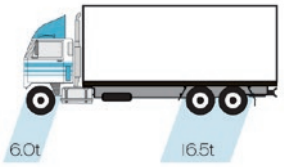
*, [a] For disclaimer clarification please refer to page 4

Common 2 Axle Rigid Truck



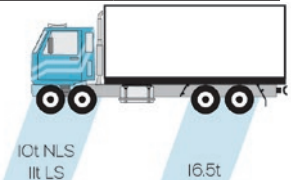
Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	12.5m	15.0t	6.0t*	N/A	9.0t	N/A	N/A
CML not permitted	12.5m	N/A	N/A	N/A	N/A	N/A	N/A
HML not permitted	12.5m	N/A	N/A	N/A	N/A	N/A	N/A

Common 3 Axle Rigid Truck



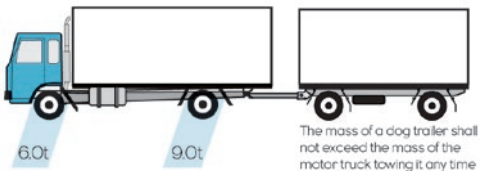
Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	12.5m	22.5t	6.0t*	N/A	N/A	16.5t	N/A
CML	12.5m	23.0t	6.0t*, [a]	N/A	N/A	17.0t	N/A
HML	12.5m	23.0t	N/A	N/A	N/A	17.0t	N/A

Common 4 Axle Twin Steer Rigid Truck



Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	12.5m	26.5t NLS 27.5t LS	N/A	10.0t NLS 11.0t LS	N/A	16.5t	N/A
CML	12.5m	27.0t NLS 28.0t LS	N/A	10.0t NLS 11.0t[a] LS	N/A	17.0t 17.0t	N/A
HML	12.5m	27.0t NLS 28.0t LS	N/A	10.0t NLS 11.0t[a] LS	N/A	N/A	N/A

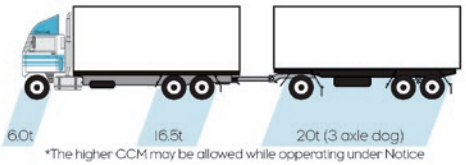
Common 2 Axle Rigid Truck and 2 Axle Dog Trailer



Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	30.0t	6.0t*	N/A	9.0t per single axle	N/A	N/A
CML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A
HML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A

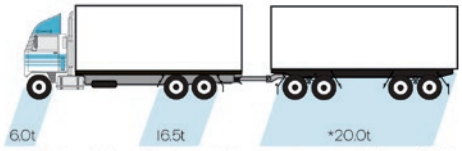
*, a For disclaimer clarification please refer to page 4

Common 3 Axle Rigid Truck and 3 Axle Dog Trailer



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	42.5t	6.0t*	N/A	N/A	16.5t per tandem axle group	N/A
CML	19.0m	43.5t	6.0t*, a	N/A	N/A	17.0t per tandem axle group	N/A
HML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A

Common 3 Axle Rigid Truck and 4 Axle Dog Trailer

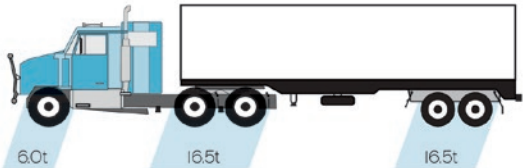


Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	42.5t	6.0t*	N/A	N/A	16.5t per tandem axle group	N/A
CML	19.0m	43.5t	6.0t*, a	N/A	N/A	17.0t per tandem axle group	N/A
HML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A

Common 3 Axle Semitrailer

Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	24.0t	6.0t*	N/A	9.0t per single axle	N/A	N/A
CML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A
HML not permitted	19.0m	N/A	N/A	N/A	N/A	N/A	N/A

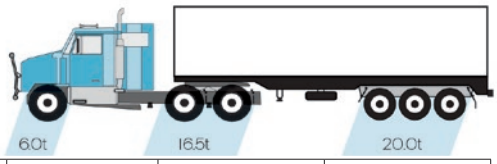
Common 5 Axle Semitrailer



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	39.0t	6.0t*	N/A	N/A	16.5t per tandem axle group	N/A
CML	19.0m	40.0t	6.0t*, a	N/A	N/A	17.0t per tandem axle group	N/A
HML	19.0m	40.0t	6.0t*	N/A	N/A	17.0t per tandem axle group	N/A

*, #, a For disclaimer clarification please refer to page 4

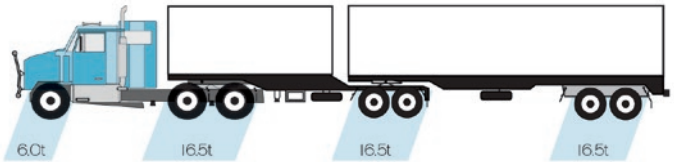
Common
6 Axle Semitrailer



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	42.5t	6.0t*	N/A	N/A	16.5t	20.0t
CML	19.0m	43.5t	6.0t*, a	N/A	N/A	17.0t	21.0t
HML	19.0m	45.5t	6.0t*	N/A	N/A	17.0t	22.5t

Common
7 Axle B-double

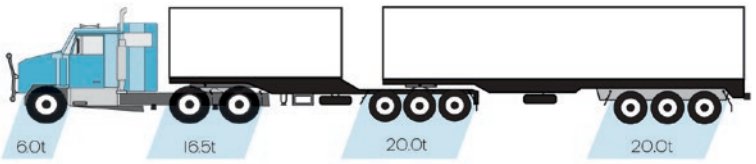
#Combination must meet mass limits relating to axle spacing's for the full mass entitlement.



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	19.0m	50.0t General access 55.5t Restricted access	6.0t*	N/A	N/A	16.5t per tandem axle group	N/A
CML	19.0m	57.0t Restricted access	6.0t*, a	N/A	N/A	17.0t per tandem axle group	N/A
HML	19.0m	57.0t Restricted access	6.0t*	N/A	N/A	17.0t per tandem axle group	N/A

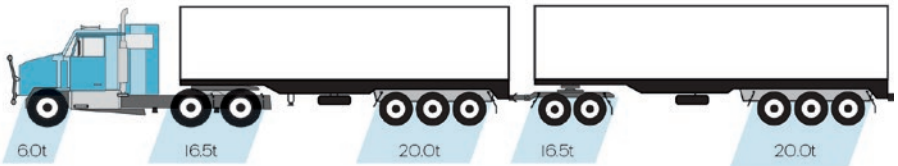
Common
9 Axle B-double

#26m is available for eligible vehicles.
#Combination must meet mass limits relating to axle spacing's for the full mass entitlement.



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	25.0m#	62.5t	6.0t*	N/A	N/A	16.5t	20.0t per tri axle group
CML	25.0m#	64.5t	6.0t*, a	N/A	N/A	17.0t	21.0t per tri axle group
HML	25.0m#	68.0t	6.0t*	N/A	N/A	17.0t	22.5t per tri axle group

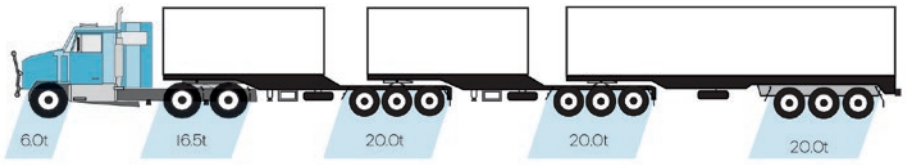
Common
Road train (Type I)



Type of Mass Limits	Maximum Length (metres)	Allowable CVM/CCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	36.5m	79.0t	6.0t*, b	N/A	N/A	16.5t per tandem axle group	20.0t per tri axle group
CML	36.5m	81.0t	6.0t*, a	N/A	N/A	17.0t per tandem axle group	21.0t per tri axle group
HML	36.5m	85.0t	6.0t*	N/A	N/A	17.0t per tandem axle group	22.5t per tri axle group

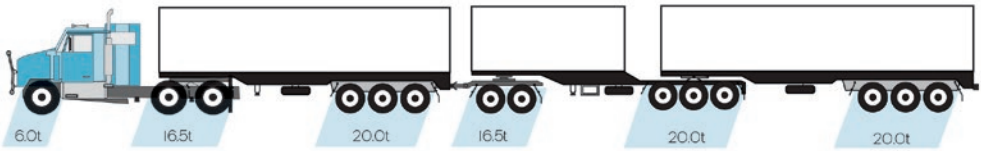
*, a, b, c For disclaimer clarification please refer to page 4

Common B Triple Road train



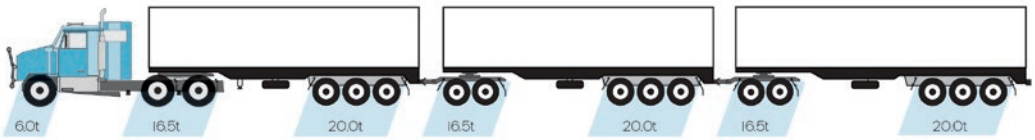
Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	36.5m	82.5t	6.0t*, b	N/A	N/A	16.5t	20.0t per tri axle group
CML	36.5m	84.5t c	6.0t*, a	N/A	N/A	17.0t	21.0t per tri axle group
HML	36.5m	90.5t	6.0t*	N/A	N/A	17.0t	22.5t per tri axle group

Common AB Triple Road train



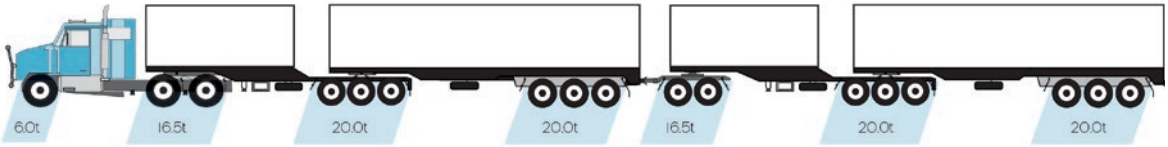
Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	36.5m	99.0t	6.0t*, b	N/A	N/A	16.5t	20.0t per tri axle group
CML	36.5m	101.0t c	6.0t*, a	N/A	N/A	17.0t	21.0t per tri axle group
HML	36.5m	107.5t	6.0t*	N/A	N/A	17.0t	22.5t per tri axle group

Common Road train (Type 2)



Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	53.5m	115.5t	6.0t*, b	N/A	N/A	16.5t per tandem axel group	20.0t per tri axle group
CML	53.5m	118.5t c	6.0t*, a	N/A	N/A	17.0t per tandem axle group	21.0t per tri axle group
HML	53.5m	124.5t	6.0t*	N/A	N/A	17.0t per tandem axle group	22.5t per tri axle group

Common BAB Quad Road train



Type of Mass Limits	Maximum Length (metres)	Allowable GVM/GCM (tonnes)	Single Steer Axle (tonnes)	Twin Steer Axle Group (tonnes)	Single Axle (tonnes)	Tandem Axle Group (tonnes)	Triaxle Group (tonnes)
GML	53.5m	119.0t	6.0t*, b	N/A	N/A	16.5t per tandem axle group	20.0t per tri axle group
CML	53.5m	121.0t c	6.0t*, a	N/A	N/A	17.0t per tandem axle group	21.0t per tri axle group
HML	53.5m	130.0t	6.0t*	N/A	N/A	17.0t per tandem axle group	22.5t per tri axle group

About the NHVR

The National Heavy Vehicle Regulator (NHVR) is Australia's dedicated independent regulator for heavy vehicles over 4.5 tonnes gross vehicle mass.

The NHVR was created to administer one set of rules for heavy vehicles under the Heavy Vehicle National Law (HVNL), improve safety and productivity, minimise the compliance burden on the heavy vehicle transport industry and reduce duplication and inconsistencies across state and territory borders.

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