

Loading of ro-ro ramp

Conversion factor

The ro-ro ramp at Haraholmen is owned and managed by Piteå Hamn AB. This quick reference guide has a simplified conversion factor of 1:10 between kg and Newtons. I.e. 10 kN = 1 tonne and 10 N = 1 kg

Type vehicles

This document gives examples of normally occurring vehicles, so that operators and shipping companies can easily know whether the ro-ro ramp is suited to their particular vehicles. In the event of uncertainty and difficulty in interpreting, the port office must be contacted.

Capacity of the ro-ro ramp

Dimensions

- The depth is at least the depth of the shipping channel 12.5 m or greater.
- The width is 24.6 m between the outside of the concrete dry cargo quay and the ro-ro ramp.
- The length is 44.2 m between the outsides of the concrete on the ro-ro ramp.
- The upper surface is executed in a radius of 150 m with the possibility of mooring from both directions.
- The level of the top edge runs from +1.42 m to +3.03 m RH 2000 (Baltic Sea Chart Datum 2000).

Equipment

- Heated upper surface for ice- and snow-free platform.
Started manually before vessels with a need for the ro-ro function call.
- General lighting and 400 V/63 A.
- Socket for shore-side electricity supply 6kV/55 Hz.
- 30 tonne bollard for mooring on outside of ro-ro ramp.
- Wooden spar 50 mm/2" as scrape protection against ships.

Loading of different vehicles

Ordinary road vehicles

- Vehicles approved to travel on roads with load-bearing capacity 4 (BK 4) according to the Swedish Transport Administration can be driven via ro-ro without taking account of frequency, number or other parameters.
See: www.trafikverket.se/for-dig-i-branschen/vag/bk-barighetsklasser-pa-vagar-och-broar/

Other road vehicles

- Vehicles and trailers fitted with rubber wheels with an axle pressure of less than 11 tonnes/110 kN and a width of at least 2.2 m between the outsides of the tyres can be driven via ro-ro without taking account of frequency, number or other parameters.
- Vehicles and trailers fitted with rubber wheels with an axle pressure of more than 11 tonnes/110 kN and a width of at least 2.2 m between the outsides of the tyres **must be approved in each individual case by the port office.**

Tractors, lift trucks and similar

- Tractors, lift trucks and similar fitted with air-filled rubber wheels, with at least 2 axles and a total weight of:
 - 40 tonnes, if the total weight between axles is above 3.5 m and the width between the outsides of the tyres is above 3.0 m
 - 65 tonnes, if the total weight between axles is above 4.5 m and the width between the outsides of the tyres is above 3.5 mcan be driven via ro-ro without taking account of frequency, number or other parameters.
- Other tractors, lift trucks and similar with a total weight exceeding 65 tonnes **must be approved in each individual case by the port office.**

Tracked machinery

- Tracked machinery with a total weight of less than 40 tonnes/400 kN can be driven via ro-ro without taking account of frequency, number or other parameters.
- The ro-ro ramp can also handle tracked machinery with a total weight exceeding 40 tonnes but **must be approved in each individual case by the port office.**

MAFI roll trailers

- Cargo weighing 45 tonnes on any MAFI roll trailer can be driven via ro-ro without taking account of frequency, number or other parameters.
- Cargo weighing 60 tonnes on a MAFI roll trailer, L=12 can be driven via ro-ro without taking account of frequency, number or other parameters.
- Cargo weighing up to 75 tonnes on a MAFI roll trailer which is at least L=12 m, in order to be allowed to be driven via ro-ro, require the loading from the cargo to be distributed exactly centred sideways and lengthways, 45% on the tow tractor and 55% on the wheel pair of the roll trailer. Each individual case requires separate written reporting to the port office in advance.
- Further increase in weight of cargo on a MAFI roll trailer may be approved. **However, investigation at expertise level under the responsibility of the port is required, at the customer's expense.**

Expanded load

- The ro-ro ramp can be loaded with expanded loads of 3.5 tonnes/tonnes/m² or 35 kN/m² without taking account of frequency, time or other parameters.
- After special assessment, the ro-ro ramp can handle 5 tonnes/m² or 50 kN/m² **but must be approved in each individual case by the port office.**

Geographical location of ro-ro ramp



Roro ramp in plan

