EXTE Rail PRODUCTS & REFERENCES



Index

04	SR12	
25	SR8	
29	SR6	

03 Introduction

- 31 SR2
- 32 SR Steel & SR Pipe
- 36 Product Descriptions
- 37 SR12 Timber Bunk
- 38 SR12 HC Timber Bunk
- 39 SR8 Timber Bunk
- 40 SR6 Timber Bunk
- 41 ExTe SR Steel & SR Pipe
- 42 ExTe Universal
- 43 ExTe Multi
- 44 ExTe SR2 & SR3
- 45 Fastening Systems
- 47 Support Bolsters
- 48 End Walls
- 49 Winch System 602
- 50 Special Designs
- 51 Testing
- 52 Durability in real life
- 53 Customers
- 54 Certificates

Cover photo: Courtesy of Green Cargo



ExTe Introduction

For more than a hundred years, ExTe has successfully in house developed, manufactured and delivered products for safe cargo securement.

With customers and safety in focus, we are looking forward to the next 100 years. Our aim to secure cargo as safe as possible at lowest possible

Cur aim to secure cargo as sate as possible at lowest possible LCC is a long term commitment.



Of the annual turnover, roughly 80% is derived from the road sector and around 20% from the rail market. ExTe has direct involvement in 35 countries, and of the annual turnover, 75% is export.

If you are active in the sector of rail transportation of timber, lumber or steel products, we believe that you might find this brochure informative and interesting.

In the first half of this brochure, you'll find a listing of our main rail customers so far, and in the latter half, a bit more detailed descriptions of our most common rail products.

Regarding timber bunks, loading areas (m²) stated on the following pages are calculated fully loaded, stanchion top to stanchion top, with no (zero) crowning of the load above the height of stanchions.

One of ExTe's strengths is fast and cost-efficient changes of jigs and fixtures so that proven bunk designs easily can be altered regarding width, height, fastening type, etc. (as displayed on the following pages). This regardless of new or old wagons.

If you have any questions, please do not hesitate to contact us.

Owe Ljunghammer MANAGER, RAIL BUSINESS

ExTe / Extendo owe.ljunghammer@extendo.se + 46 70 5201707 Or contact: ExTe Sales

sales@exte.se + 46 651 175 01



Rail Freight Company: Green Cargo AB (former Swedish State Railway, SJ)

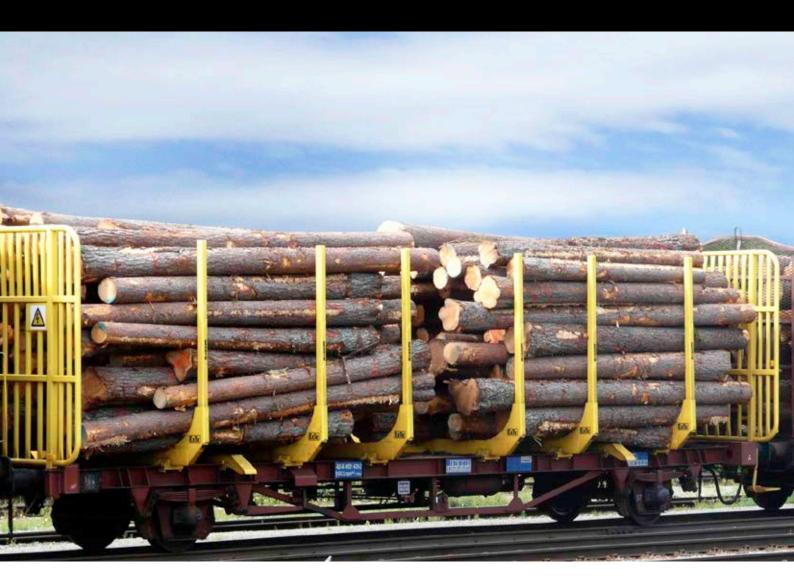


Facts:

Wagon type: Lnps. 22.5 ton axle load. Year of delivery: 1988-1993 Number of wagons: 1,020 two-axle wagons Fastening type: Weld and bolt Loading area: 7.6 m² Number of timber bunks: 5,400 Number of support bolsters: NA Number of end walls: NA

The SR12 timber bunk was designed and developed for this operators need in the latter half of the 1980-ties. After some 30 years with around 300 load trips per year in an operational environment considered being one of the roughest in Europe (both regarding terminal handling and climate), wagons with the original equipment are still going strong.





Facts:

Wagon type: Lnps. 22.5 ton axle load Year of delivery: 2005 and 2016 Number of wagons: 165 two axle wagons Fastening type: Clamp Loading area: 7.3 m² Number of timber bunks: 990 Number of support bolsters: 330 Number of end walls: 330





Facts:

Wagon type: Laaps. 25 ton axle load Year of delivery: 2003-2004 Number of wagons: 186 twin platform wagons with two axles per platform Fastening type: Bolt Loading area: 9.2 m² Number of timber bunks: 2,232 Number of support bolsters: 744 Number of end walls: NA





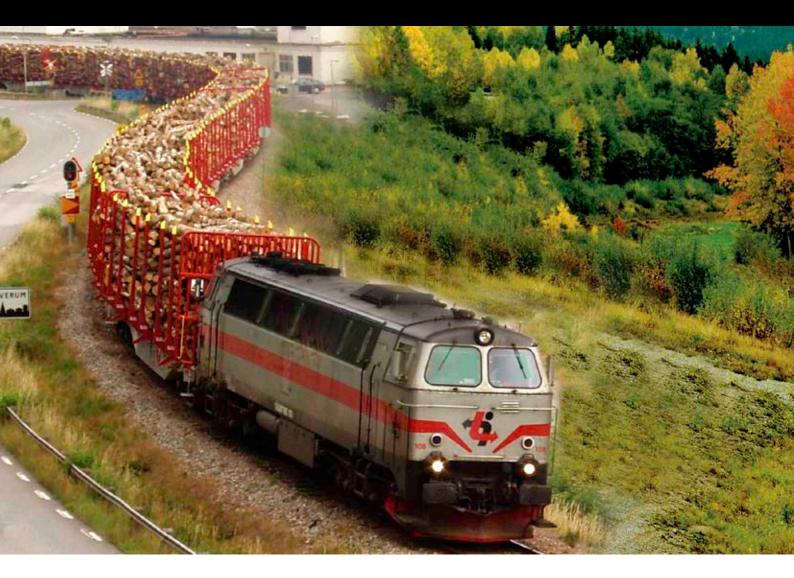
Photo: Courtesy of NetRail AB

Facts:

Wagon type: Sgnss60'. 22.5 ton axle load Year of delivery: 2019-2024 Number of wagons: 103 Fastening type: Clamp Loading area: 9.3 m² Number of timber bunks: 927 Number of support bolsters: 309 Number of end walls: 206



Rail Freight Company: TÅGAB (Tågåkeriet i Bergslagen AB)

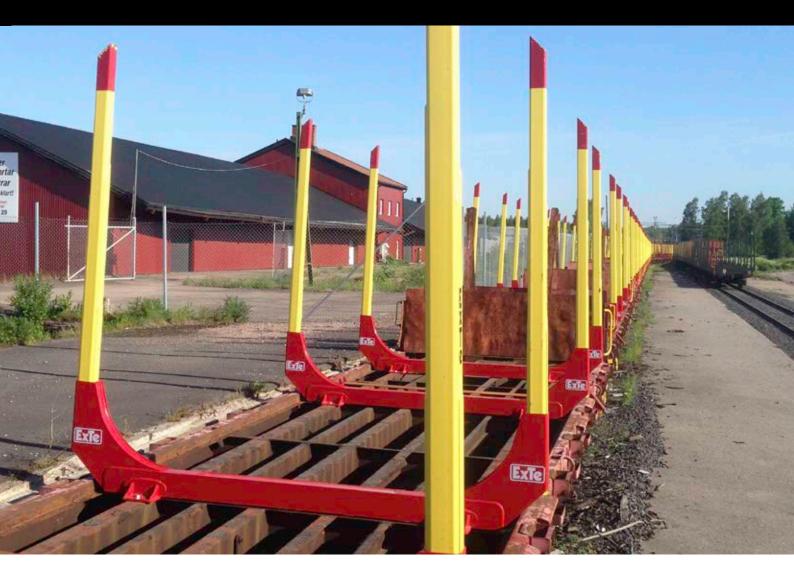


Facts:

Wagon types: Sgnss60' / Sns-x60' 22,5 ton axle load and Rps 20 ton axle load Year of delivery: 2005-2023 Number of wagons: 117 bogie wagons Fastening type: Bolt Loading area: 8.3-9.6 m² Number of timber bunks: 970 Number of support bolsters: 418 Number of grapple protections: 100 Number of end walls: 70



Rail Freight Company: TÅGAB

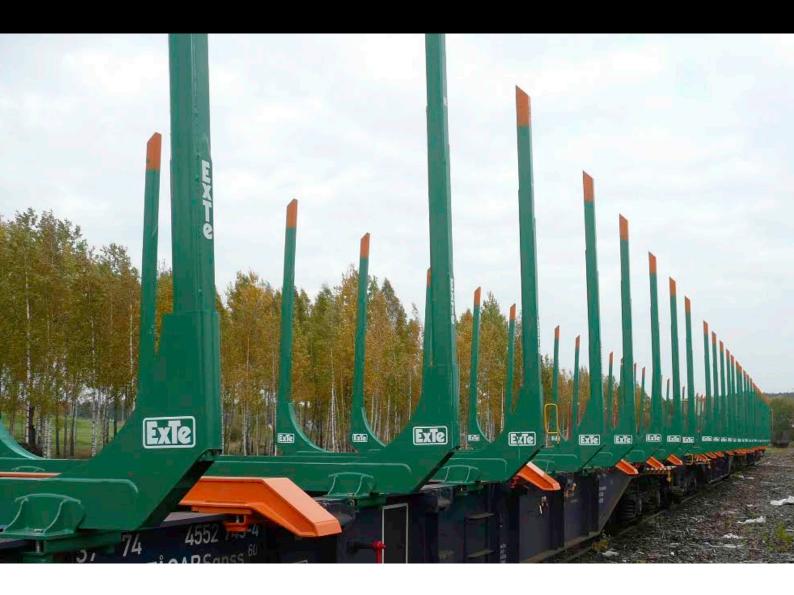


Facts:

Wagon type: Kbps-x, 2-axle with 22.5 ton axle load Year of delivery: 2015 Number of wagons: 28 Fastening type: Bolt Loading area: 9.2 m² Number of timber bunks: 112 Number of grapple protections: 56



Rail Shipping Company: Svea Skog (Swedish State Forestry, wagons operated by TÅGAB)



Facts:

Wagon type: Sgnss60'. 22.5 ton axle load Year of delivery: 2010 Number of wagons: 18 bogie wagons Fastening type: Clamp Loading area: 8.3 m² Number of timber bunks: 180 Number of support bolsters: 126 Number of end walls: NA



Rail Freight Company: Former OBAS and Peterson Rail AB. Now operated by Hector Rail AB and TÅGAB



Facts:

Wagon type: Sgnss60' 22.5 ton axle load and Rps 20 ton axle load Year of delivery: 2005-2010 Number of wagons: 60 bogie wagons Fastening type: Clamp Loading area: 8.3 m² Number of timber bunks: 548 Number of support bolsters: 368 Number of end walls: 94



Rail Freight Company: TX (TX Logistik AB/AG). Wagons currently operatded by Hector Rail AB and BLS Rail



Facts:

Wagon type: Sgnss60'. 22.5 ton axle load Year of delivery: 2007-2009 Number of wagons: 75 bogie wagons Fastening type: Clamp Loading area: 8.3-9.4 m² Number of timber bunks: 690 Number of support bolsters: 348 Number of end walls: 26



Rail Freight Company: Hector Rail AB



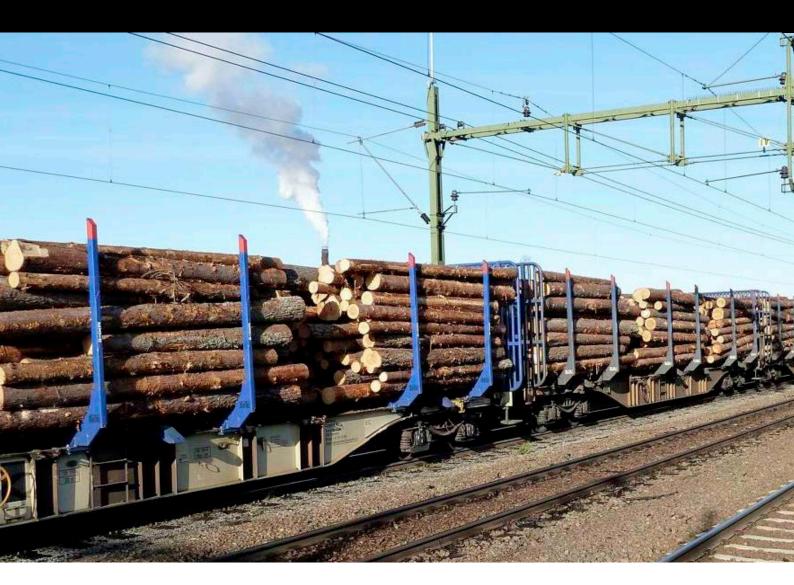
Photo: Courtesy of NetRail AB

Facts:

Wagon type: Sgnss60'. 22.5 ton axle load Year of delivery: 2006-2024 Number of wagons: 234 bogie wagons Fastening type: Bolt and clamp Loading area: 8.3 m² Number of timber bunks: 2,126 Number of support bolsters: 936 Number of end walls: 468



Rail Freight Company: Former CargoLink AS. Currently operated by Hector Rail AB and BLS Rail



Facts:

Wagon type: Sgns60'. 22.5 ton axle load Year of delivery: 2009-2010 Number of wagons: 41 bogie wagons Fastening type: Clamp Loading area: 8.1 m² Number of timber bunks: 282 Number of support bolsters: 159 Number of end walls: 82



Rail Leasing Company: Three T/Railcare (and former Inlandsgods). Some currently operated by TÅGAB



Facts:

Wagon type: Srrs 22.5 ton axle load, Sps/Rs 20 ton axle load and Rps 20 ton axle load Year of delivery: 2007-2008 Number of wagons: 77 bogie wagons Fastening type: Bolt and clamp Loading area: 8.0-9.0 m² Number of timber bunks: 382 Number of support bolsters: 191 Number of end walls: 40



Rail Freight Company: Inlandståget AB/IBAB



Facts:

Wagon type: Laaps. 22,5 ton axle load Year of delivery: 2012 Number of wagons: 10 twin platform wagons with two axles per platform Fastening type: Clamp Loading area: 7.3 m² Number of timber bunks: 80 Number of support bolsters: 40 Number of end walls: NA



Rail Freight Company: KiwiRail, New Zealand

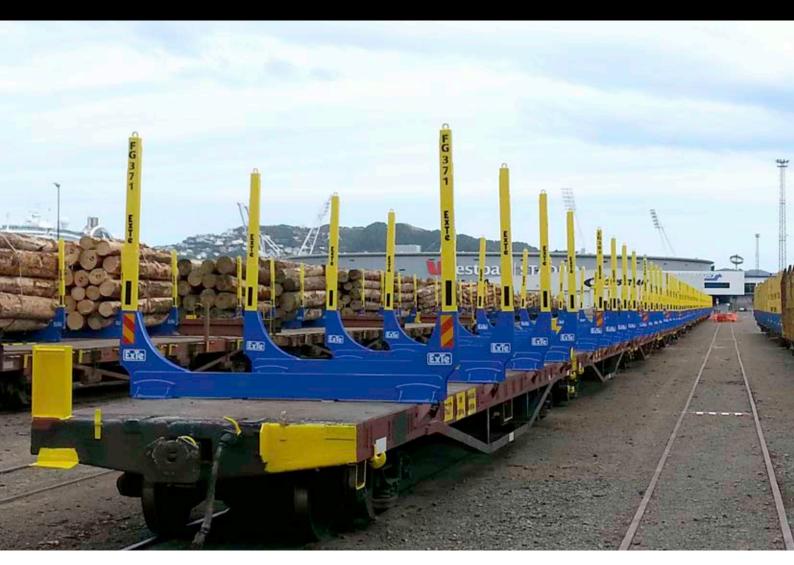


Photo: Courtesy of KiwiRail

Wagon type: FE/FEG. 14-18 ton axle Year of delivery: 2011-2020 Number of wagons: 570 bogie wagons Fastening type: Bolt Loading area: 5.3-5.6 m² Number of timber bunks: 2,734 Number of support bolsters: NA

Number of end walls: NA

Facts:



Rail Freight Company: KiwiRail, New Zealand



Photo: Courtesy of KiwiRail

Wagon type: New 60' container wagons (with 2 or 3 special 20' cassettes for flexible utilization) Year of delivery: 2022-2023 Number of wagons: Ca 500 bogie wagons Fastening type: Bolt to cassette Loading area: 6.1 m² Number of 20' Timber Cassettes: Ca 800 Number of timber bunks: 1,868 Number of support bolsters: NA Number of end walls: NA

Facts:



Rail Freight Company: Grenland Rail AS, Norway

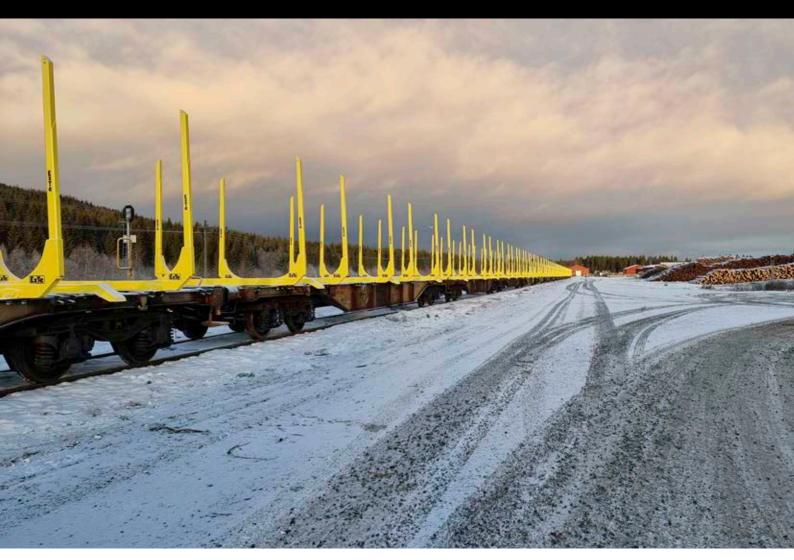


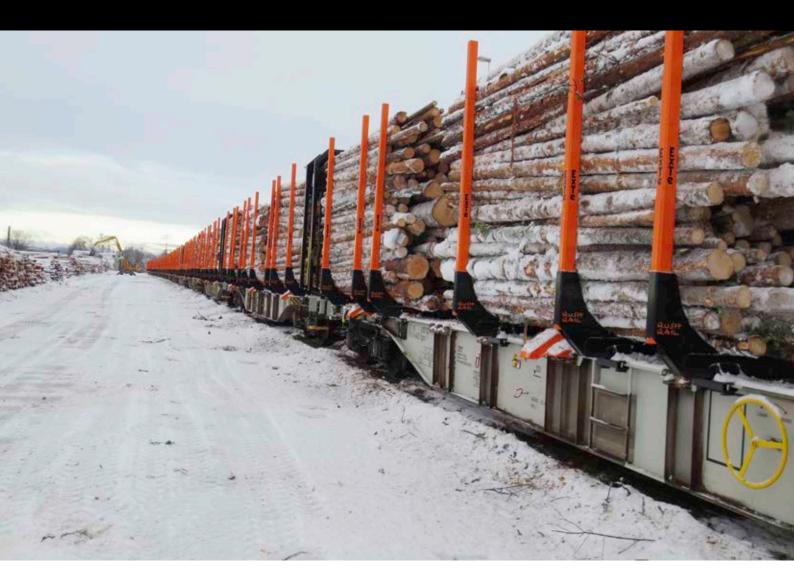
Photo: Courtesy of RS Mekaniske AS in Elverum, Norway

Facts:

Wagon type: Sgnss60'. 22,5 ton Year of delivery: 2021-2024 Number of wagons: 57 bogie wagons Fastening type: Bolt Loading area: 8.3 m² Number of timber bunks: 445 Number of support bolsters: 225 Number of end walls: NA



Rail Leasing Company: AAE/VTG for Trätåg AB/Hector Rail AB (ExTe equipment recently purchased by Hector Rail)



Facts:

Wagon type: Sgnss60'. 22,5 ton axle load Year of delivery: 2012 Number of wagons: 200 bogie wagons Fastening type: Clamp Loading area: 9.3 m² Number of timber bunks: 1800 Number of support bolsters: 600 Number of end walls: 400



Rail Leasing Company: Wascosa AG (currently operated by TÅGAB)



Facts:

Wagon type: Sgnss60'. 22,5 ton axle load Year of delivery: 2016 Number of wagons: 28 bogie wagons Fastening type: Bolt Loading area: 9.3 m² Number of timber bunks: 252 Number of support bolsters: 84 Number of end walls: 56



Rail Freight Company: BLS RAIL AB



Photo: Courtesy of RS Mekaniske AS in Elverum, Norway

 Wagon type: Sgnss60'. 22,5 ton axle load

 Year of delivery: 2023

 Number of wagons: 25

 Fastening type: Bolt

 Loading area: 8.3 m²

 Number of timber bunks: 126

 Number of support bolsters: NA

 Number of end walls: NA



Rail Freight Company: CargoNet AS, Norway



Facts:

Wagon type: Rps. 20 ton axle load Year of delivery: 2020 Number of wagons: 10 Fastening type: Bolt Loading area: 7.1 m² Number of timber bunks: 90 Number of grip protections: 30 Number of End Walls: 20





Facts:

Wagon type: Sgmmnss40'. 22,5 ton Year of delivery: 2022 Number of wagons: 44 bogie wagons Fastening type: Bolt Loading area: 10.6 m² Number of timber bunks: 264 Number of support bolsters: 88 Number of end walls: 88



Rail Leasing Company: TRANSWAGGON AG via Tatravagonka Poprad, Slovakia (TVP)

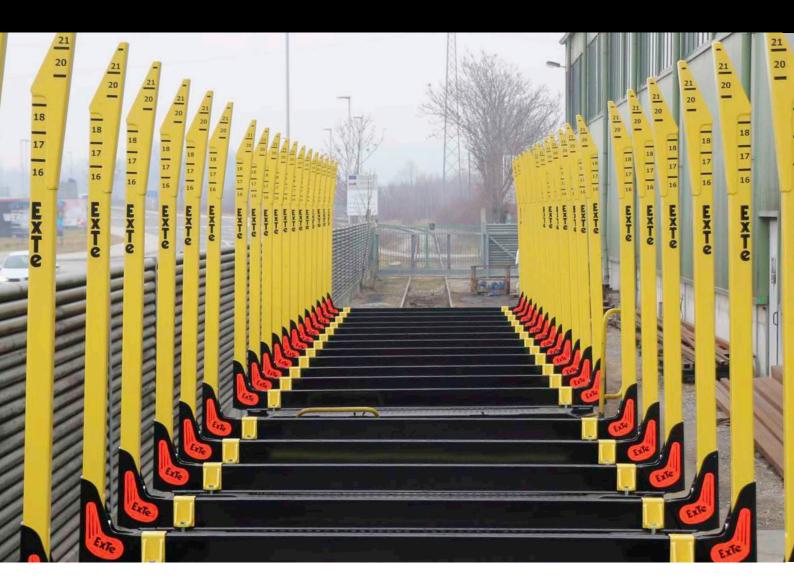


Facts:

Wagon type: Snps63'. 22,5 ton axle load Year of delivery: 2015-2022 Number of wagons: 409 bogie wagons Fastening type: Bolt Loading area: 6.9 m² Number of timber bunks: 4,908 Number of Winch System 602: 4,090



Customer: Container d.o.o., Slovenia (SR8 used for 20' and 30' timber cassettes)



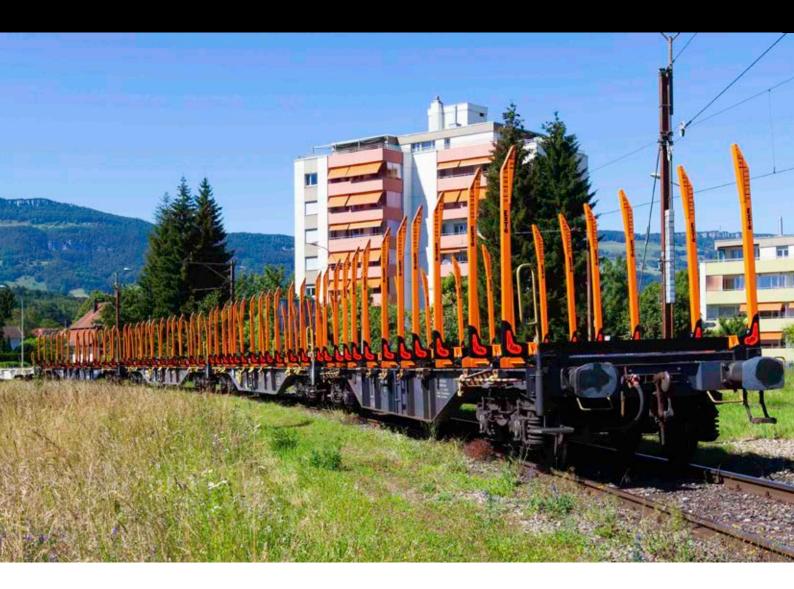
Facts:

Wagon type: NA Year of delivery: 2017-2019 Number of 20' cassettes: 402 Fastening type: Bolt to cassette Loading area: 5.5-6.0 m² Number of timber bunks: 1,608 Number of Winch System 602: 1,206





Customer: MHS, Poland (SR8 used for 20' timber cassettes)

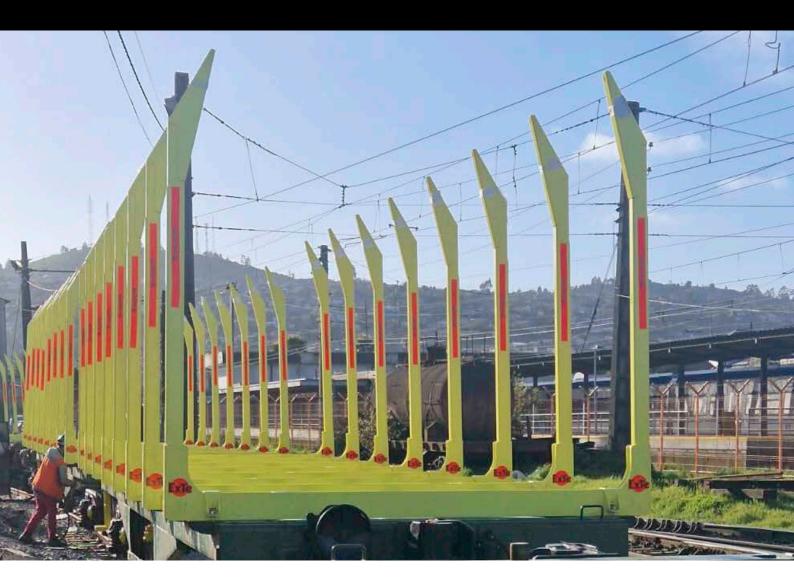


Facts:

Wagon type: NA Year of delivery: 2014 - 2015 Number of 20' cassettes: 21 Fastening type: Bolt to cassette Loading area: 5.5 m² Number of timber bunks: 84 Number of Winch System 602: 60



Rail Freight Company: FEPASA, Chile

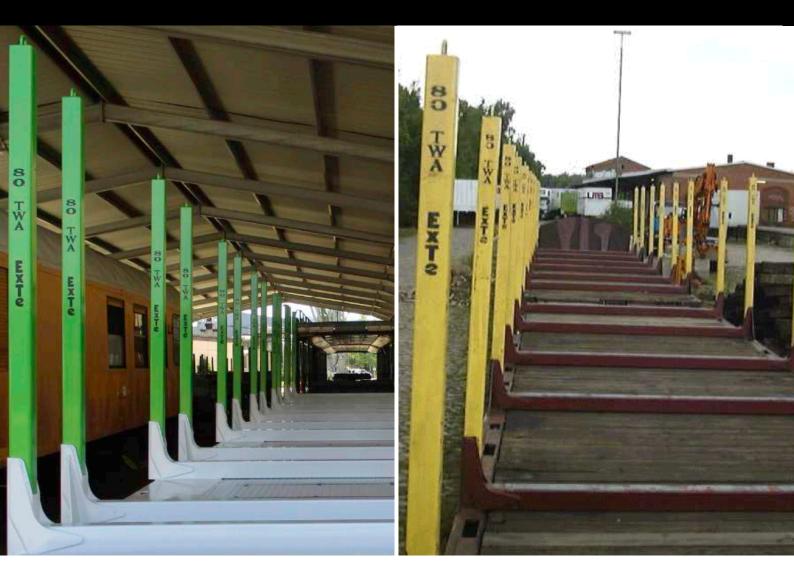


Facts:

Wagon type: 50' flat wagon. 20 ton axle load Year of delivery: 2023 Number wagons: 19 Fastening type: Bolt Loading area: 7.0 m² Number of timber bunks: 152



Rail Leasing Company: TRANSWAGGON AG



Facts:

Wagon type: Laaps and Snps. 20 and 22.5 ton axle load Year of delivery: 1997-2018 Number of wagons: 800 platform wagons Fastening type: Weld Loading area: 5.0 m² Number of timber bunks: 6,530 Number of Winch System 602: 1,120



Rail Freight Company: Vida Timber AB



Facts:

Wagon type: Kbps. 20 ton axle load Year of delivery: 2006 - 2010 Number of wagons: 60 two axle wagons Fastening type: Weld Loading area: 5.4 m² Number of timber bunks: 360 Number of support bolsters: NA Number of end walls: NA



Rail Freight and Leasing Companies: VIDA, NetRail, Rail-X, TÅGAB, Structon and CargoNet



Facts:

Wagon type: Kbps, Os, Rs and Rps. 20 ton axle load Year of delivery: 2017-2024 Number of wagons: 80 Fastening type: Socket Loading area: 5.0 m² Number of stanchions: 2,550 Number of grip protections: NA Number of End Walls: NA

SR Steel (OVAKO)

Rail Freight Company: Green Cargo AB, for OVAKO traffic

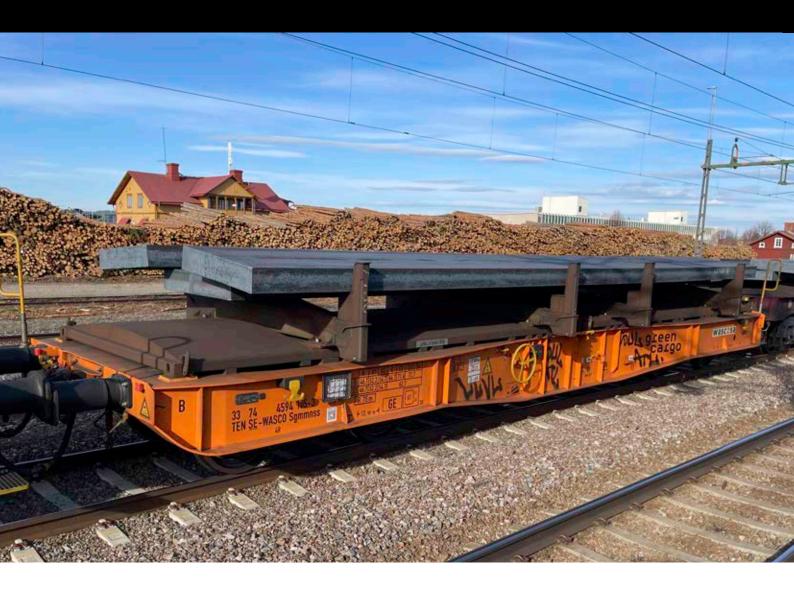


Facts:

Wagon type: Smmnps. 22.5 ton axle load Year of delivery: 2017 Number of wagons: 60 bogie wagons Fastening type: Bolt Number of bunks: 240

SR Steel (SSAB)

Rail Freight Company: Green Cargo AB, for SSAB traffic



Facts:

Wagon type: Sgmmnss41'. 25 ton axle load Year of delivery: 2019 Number of wagons: 41 Fastening type: Bolt to cassette Number of bunks: 164



Rail Leasing Company: Wascosa AG (via TVP)



Facts:

Wagon type: Sgmmns41'. 22.5 ton axle load Year of delivery: 2024 Number of wagons: 200 Fastening type: Bolt to cassette Number of bunks: 400



Customer: RheinCargo GmbH (via TVP)



Facts:

Wagon type: Sggns80'. 22.5 ton axle load Year of delivery: 2024 Number of wagons: 45 Fastening type: Clamp Number of bunks: 276 ExTe

PRODUCT DESCRIPTIONS

In the following, ExTe's most common rail products are rudimentary described. It is important to note that the weights indicated can vary pending on the desired loading gauge (height and width) and on what type of fastening system that will be used.

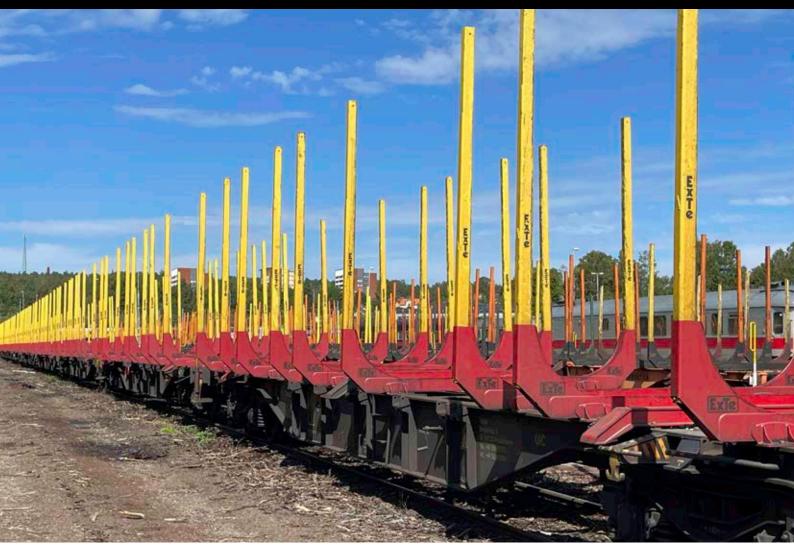
All of ExTe's bunks, stakes, holders and support bolsters are manufactured using high strength steel with a tensile between 700 and 1,400 MPa.

ExTe has three base models of rail timber bunks with different characteristics. Height, width and fastening system can vary pending on customer request, gauge limits and wagon type in question.

In addition to the SR Series of bunks, ExTe also offers different systems such as the ExTe Universal, Multi and 602 Winch System, etc.



SR12 Timber Bunk



The SR12 timber bunk is very common in Scandinavia and New Zealand. Since 1988, tens of thousands bunks of this type have been delivered and attached to a great variety of different new or old wagon types. Pending on customer, loading area varies from 5.3 to 9.6 m².

Facts:

ExTe SR12 timber bunk can carry a load of 12 ton each and can be attached to most flat wagons / container wagons. This even if the wagon type only has two outer frame sills (like most Sgnss designs). The weight is approximately 200-280 kg per bunk pending loading gauge and fastening system.

SR12 HC Timber Bunk



The SR12 HC timber bunk is developed foremost for 40' to 45' long bogie wagons and is designed for up to 11 m² loading area.

Facts:

The SR12 HC timber bunk can carry a load of over 12 ton each and can be attached to most types of flat wagons / container wagons. This even if the host wagon only has two outer frame sills (like most Sgnss and 40' Sgmmns). The weight per bunk is between 250 to 290 kg pending loading gauge and fastening system. Furthermore, the stanchion itself is designed in two parts. Both easily replaced at timber terminals and are designed to brake before a wagon itself is damaged or tipped over by a drunk terminal operator.

SR8 Timber Bunk



The photo above is showing SR8 bunks with European G2 loading gauge. This design is also available in G1, Iberian and UK loading gauges. Suggested loading area ranges between 5.5 to 7.5 m². Photo: Courtesy of SETG.



ExTe SR8 timber bunk can carry a load of 8 ton each and can be attached to most flat wagons / container wagons. This even if the wagon type only has two outer frame-sills (like most Sgnss designs). The weight is from 160 kg pending loading gauge and fastening system.

The SR8 timber bunk (and the SR6 timber bunk described on the following page), is well suited for the more restrictive continental European loading gauge. The bolster design of the SR8 bunk also makes the bunk suitable for only two sill wagons and for the transport of sawed lumber packages, pressed boards, etc besides timber.

SR6 Timber Bunk

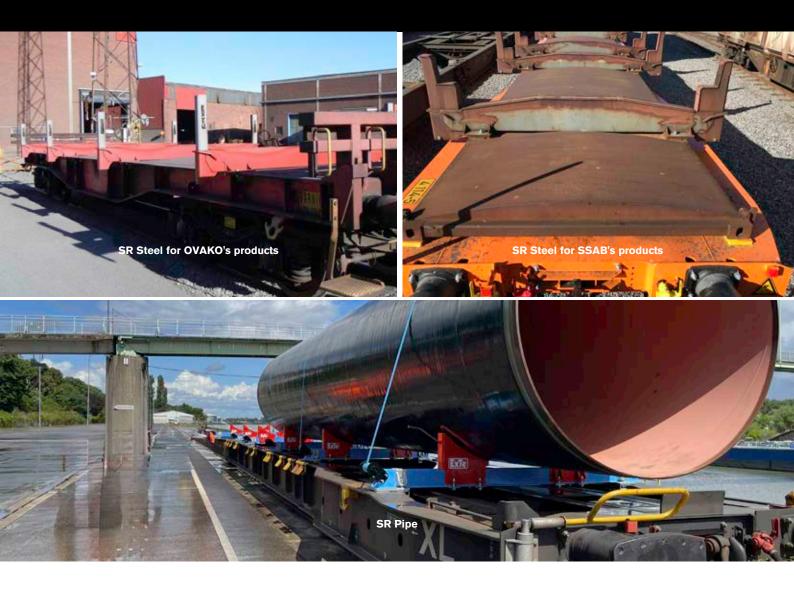


Since the mid 1990-ties, close to 7,000 timber bunks of the SR6 design have been delivered to various European customers. Recommended loading area is between 4.5 to 6.0 m^2 .



ExTe SR6 Timber Bunk can carry a load of 6 ton each and can be attached to most types of flat wagons with more than just two outher longitudinal wagon sills. The weight of this bunk is from 130 kg pending upon desired loading gauge, fastening system, etc.

ExTe SR Steel

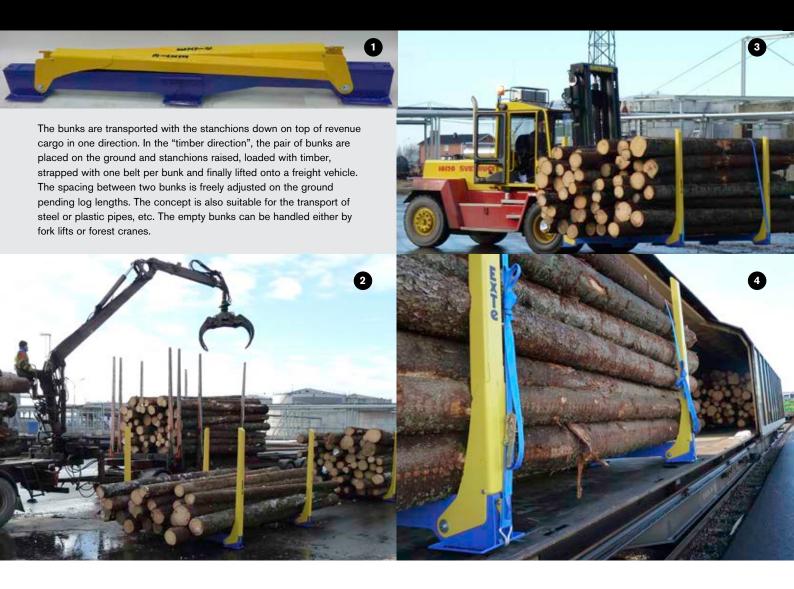


Facts:

The SR Steel family is designed to carry cold or hot steel slabs or rods with a temperature of up to 700° C. One single bolster can carry a load of up to 40 ton. Width of bolsters and height of stanchions can vary pending customer needs. Weight per bolster is between 210 kg to 370 kg depending on design.

The SR Pipe can designed for a variety of pipe diameters. Pending design, the weight can vary between 120-180 kg.

ExTe Universal



Facts:

ExTe Universal is designed for the use in covered or open lorries or rail wagons. This 8 ton design is very suitable in freight corridors where i.e. lumber (sawed boards), pressed boards and palleted cargo is transported in one direction, and timber/pulp wood in the opposite direction. The stanchions are of fold-down type.

The weight of this bunk is from 180 - 220 kg pending upon desired height and width. A pair of bunks can handle a log pile weighting 16 ton. The handling concept is as smart as it is simple.





The ExTended container spigots (the equipment pictured above) lift containers above timber bunk bolsters and support bolsters. This design is suitable for unit train operations only.



ExTe Multi is a flexible solution for the efficient transport of containers, timber and sawed lumber. ExTe has developed this system (based on either the SR12 or SR8 timber bunk designs) in order to make the transport of timber, containers and lumber possible on the same wagon without the need for any alterations to the wagon.

Due to loading gauge reasons, this design is especially suitable to meet most common rail transport needs within the Scandinavian forest industry. With this equipment, a wagon can in a very flexible manner alter between the transport of timber, containers and lumber. Handling of containers can be done either by forklifts or reach-stackers.

SR2 and SR3 Stanchions



ExTe SR2 in standard UIC sockets. More than 2,550 stanchions have been delivered since 2017.

ExTe's Maxi Socket. More than 50,000 Socket have been delivered since 1996. Both SR2 and SR3 stanchions are suitable for this socket.



Facts:

ExTe SR2 stanchion is designed in size and strength to fit the standard UIC sockets on common European flat wagons. The weight of this stanchion is 24 kg.

ExTe SR3 stanchion is designed in strength to better match ExTe's strong Maxi Socket. The weight of this stanchion is 27 kg.

The Maxi Socket provides for a secure and strong inter-fit between ExTe's SR2 and SR3 Stanchions and the wagon. The weight of the Maxi Socket is 11 kg.

Fastening Systems



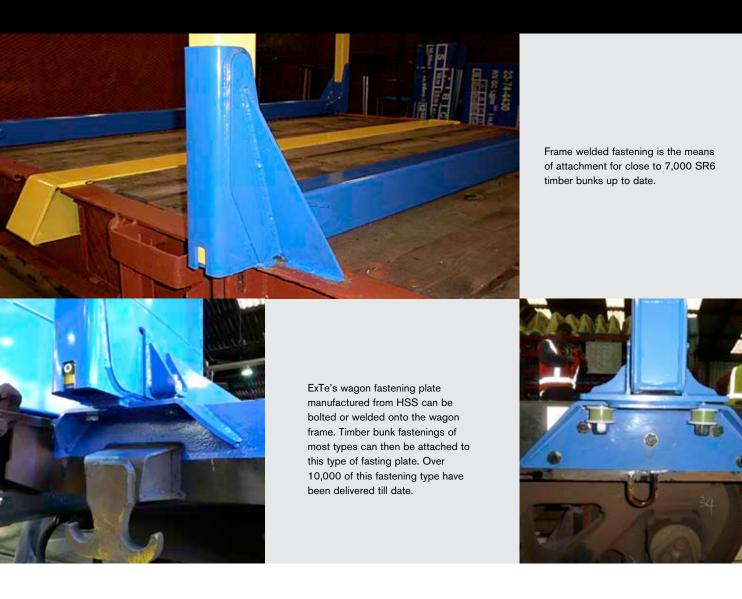
Bolted fastening with or without rubber pucks. At this time, around 13,000 timber bunks with this fastening system have been delivered.

Over-yoke fastening with bolts with or without rubber pucks. Close to 9,000 timber bunks have been delivered with this fastening system up till today.



Clamp fastening is a system used on around 7,000 timber bunks so far. This fastening type is also commonly used on ExTe's highway products (exceeding 250,000 timber bunks world wide).

Fastening Systems



Facts:

The SR12 and SR8 timber bunk designs can be used on most, if not all, types of flat wagons and container wagons. The attachments of the timber bunks onto wagons are done by the use of either clamp fastenings, bolt fastenings or overyokes with bolts. Sometimes attached to a fastening plates bolted or welded to the wagon sills.

ExTe Support Bolsters (for wagon protection and fast unloading)



Facts:

ExTe's support bolsters protect wagon frames from the forces of unloading machines / grapples and also allows for faster unloading.

In tests, ExTe's heavy-duty bolster withstood vertical loads of 27 ton in the middle (when mounted on a Sgnss alike frame structure with only two outer frame sills). The weight of the support bolster is between 120 to 150 kg pending fastening system and width. The support bolster is attached to the wagon by clamp fastenings or bolt fastenings.





Full height piping end wall.

Facts:

ExTe also produces end walls and end wall sockets for rail applications. One design is using piping for the grid and one design is of flat wall type. The end walls and sockets are entirely manufactured in high strength steel.



Full height covered end wall.

Winch System 602



This Winch System is very popular among European rail operators.

Facts:

The 602 Winch System is commonly used by European rail operators. The system includes a winch, a ten meter 6 ton lashing belt with triangle and a hook. The winch and the hook can either be bolted or welded onto the wagon, and the weight is in total around 9 kg. Throughout the past twenty years, more than 60,000 systems of this type have been delivered to the rail industry.

Special Designs

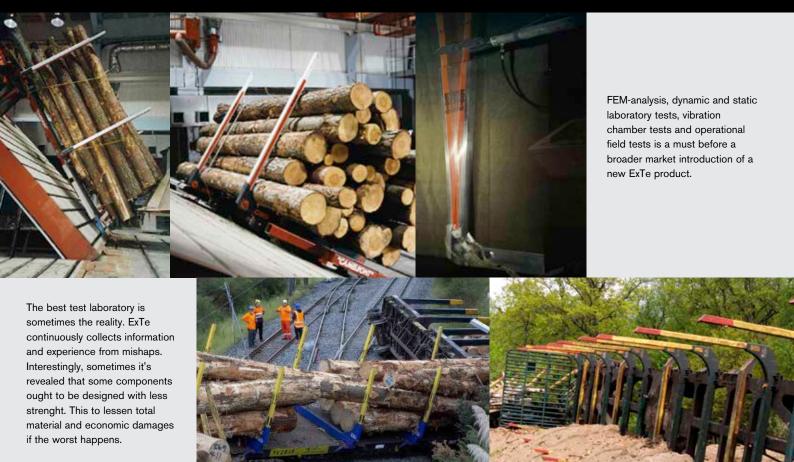


Facts:

Beside our mainstream load securing products, ExTe also offers related products based on specific customer requests. Example of such products are bunks for steel pipes and rods (picture 1). Shown in picture 2 is a bunk with fall-down stachions. Picture 3 shows example of ExTe load securing equipment for the needs of track authorities / track maintenance companies and picture 4 shows ExTe's container spigot beams for flat wagons modified to container wagons.

As the role, these products are manufactured using high strength steel. For ExTe, the costumer is always king, and we are listening. If a customer's desire is technically and economically feasible, ExTe will design, test and manufacture accordingly.

ExTe Testing



Facts:

Normally, a new design is borne after customer dialog and the customers' approval of final drawings. After that FEManalyzes are carried out, new products are always prototyped and tested in ExTe's laboratory in order to measure structural behavior and braking points. Finally, the products are tested in field conditions as test units. This always takes place ahead of any market introduction and series deliveries. Normally, ExTe's rail products are approved by rail authorities as integrated parts of a wagon approval (new wagon designs or after major modifications).

All of ExTe's stanchion and bunk designs fulfill TSI requirements regarding high strength stanchions and side mounted stanchions.

Durability in real life.



Facts:

ExTe Rail's products are designed to withstand rough operational conditions and over a long period of time offer low LCC. However, they are not designed to win a beauty contest after 20 some years of tough operation. The aim is instead to design products that can withstand overforces without causing stopping faults.

Rail Customers

BLS Rail, CargoNet, CFL Cargo, DB Cargo, EWS, FEPASA, Feve, GFR, Green Cargo, Grenland Rail, Hector Rail, Inlandståget, KiwiRail, Medway, Nordiska Tåg, Railcare, Trätåg, TXL, TÅGAB, Vida

ERR, MOVE Intermodal, Nacco, NetRail, OnRail, Rail-X, TRANSWAGGON, VTG/AAE, Wascosa

Container d.o.o., DDSV, Gniewczyna, Greenbrier-Astra, Inveho, MHS, Tatravagonka

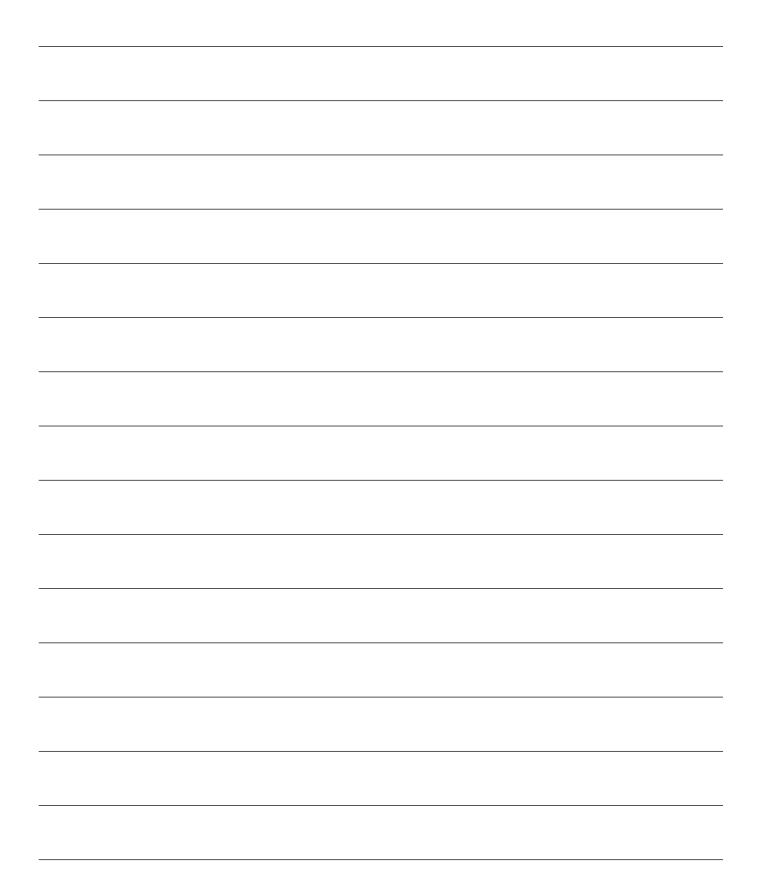
Bane Nor, Buffers, Euromaint, ExTe Vertriebs, Holmen Skog, Midwaggon, OVAKO, Strukton Rail, Sveaskog, Swemaint, Trafikverket











MORE EXTE. Both digitally and in print.







09/2024