

## Application

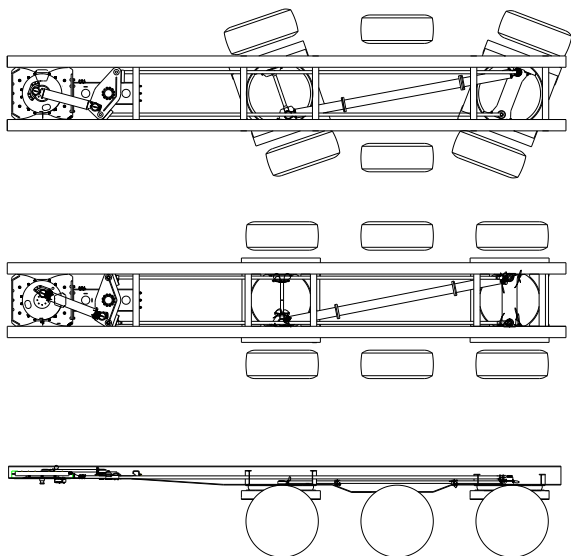
### TR-X for short trailers in heavy distribution transport



#### TR-X Mechanical Steering System

The mechanical TR-X steering system is used primarily for short trailers in heavy distribution transport such as e.g. tippers, milk-distribution and construction-transport. This system steers the first and last axle of a three axle trailer. The first steered axle steers in the opposite direction of the last steered axle.

The TR-X steering system allows the operator to make more efficient use of the trailer through improved manoeuvrability, making construction- and farm-deliveries easier and providing the ability to negotiate small roundabouts on urban roads.



#### Savings on

- Time, through better manoeuvrability
- Fuel consumption
- Tyre wear
- Vehicle maintenance
- Vehicle damage

#### Steering principle

While making a turn, the movement between the truck and (semi)trailer is transmitted by the fifth wheel plate, locked into the fifth wheel coupling by the steering wedge. From the fifth wheel unit two steering rods transmit this steering motion directly and without any play to the rear axle mounting frame. The first axles is controlled by a steering bar connecting the last and the first axle mounting frame.

## Technical Specification

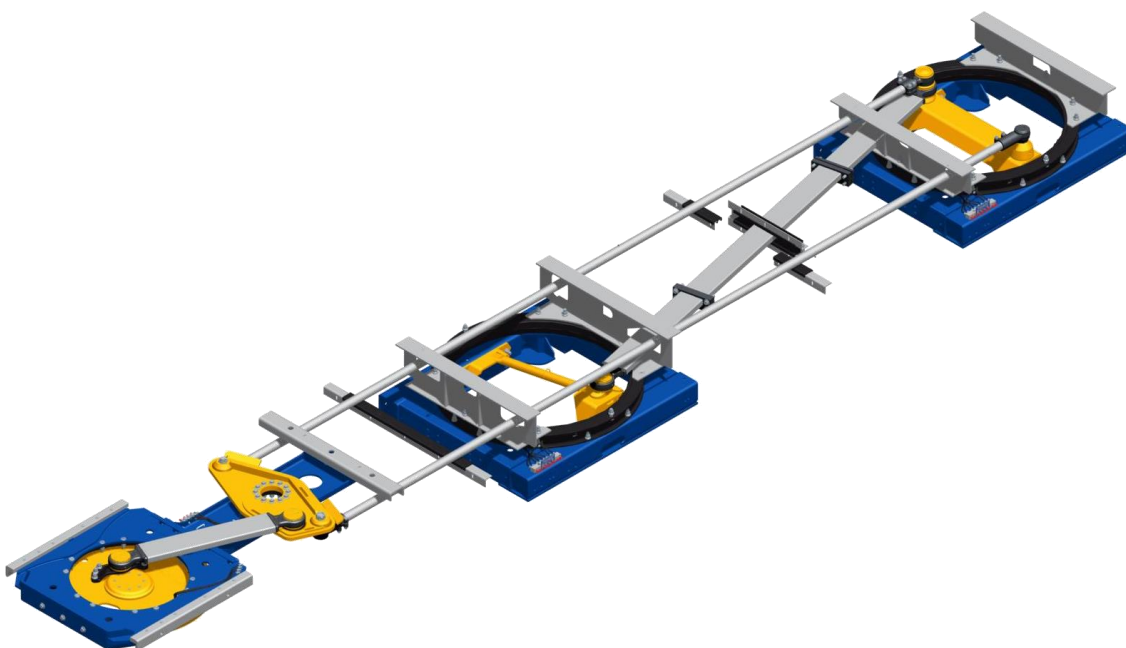
### TR-X for short trailers in heavy distribution transport

#### General

- A TR-X system enables to steer two axles on a three (or four) axle trailer, the first and last axle steer in opposite direction
- RDW test report according EEC guideline (70/311), available at request (no. 56210050).
- Special TRIDEC spline bolts used for most bolt connections. No loosening of bolts and re-tightening not necessary.
- Gross Weight: upon 1068kg. Net weight of steering system is reduced due to the replacement of a conventional rubbing plate with the TRIDEC fifth wheel unit and modifications to rear of chassis to accommodate the turntable.
- Possible steering angles: up to 30°.
- Components: fifth wheel unit, steering rods, axle mounting frames.

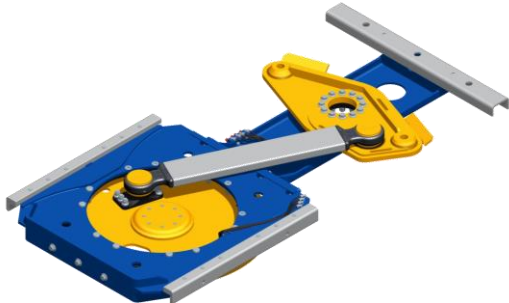
#### Technical Specification

Feature	Value
Number of steered axles	2
Fifth wheel load	15/20t
Axle load	10t
Spring centres	980/1100/1200/1300mm
Chassis centres	980/1200mm
Gross weight	Upon 1086kg
Steering angles	Up to 30°



## Components

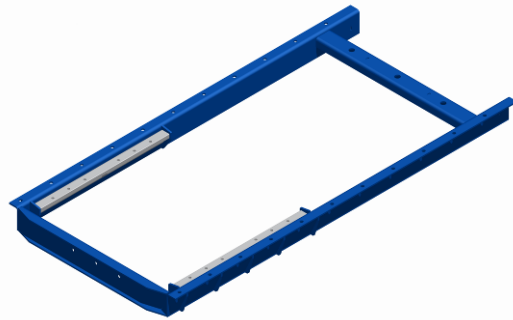
Linear:



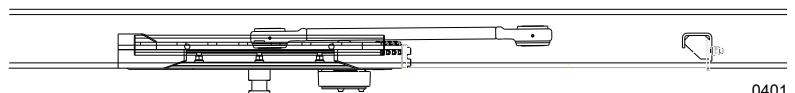
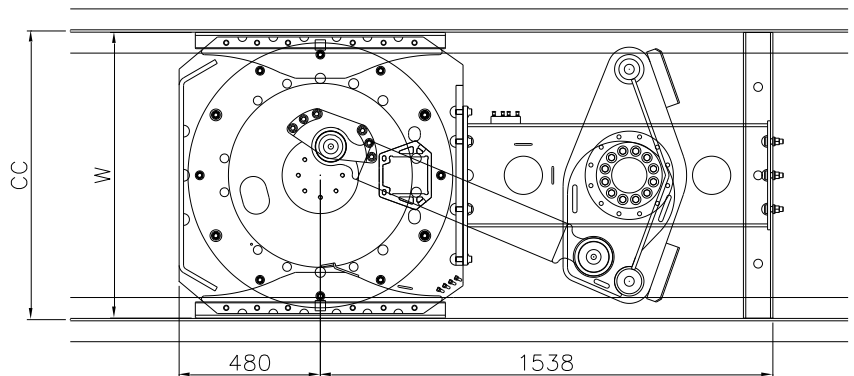
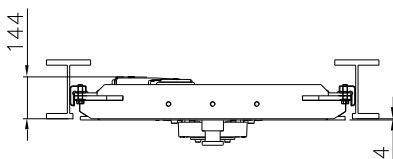
### Fifth wheel unit

- Bolted into the chassis by supplied mounting profiles, which are welded into the chassis resulting in simple and quick installation
- Easy maintenance and possible repairs
- Equipped with JOST turntable, 2" king pin, TRIDEC steering wedge
- Treatment: KTL
- Available in a special version for tanker trailers
- Linear steering characteristics

Tanker frame:



Fifth wheel unit **Linear**



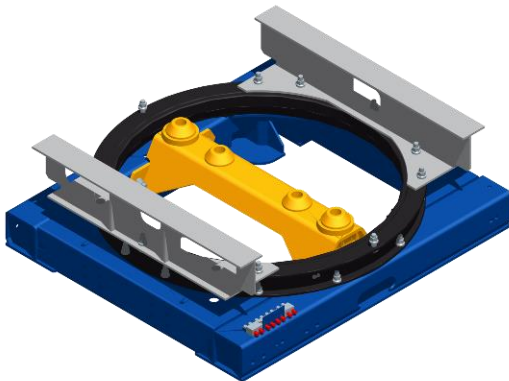
0401

Max. load (t)	CC (mm)	W (mm)	Weight (kg)
15	980	970	348
20	980	970	361
15	1200	1190	410
20	1200	1190	428



#### Steering rods

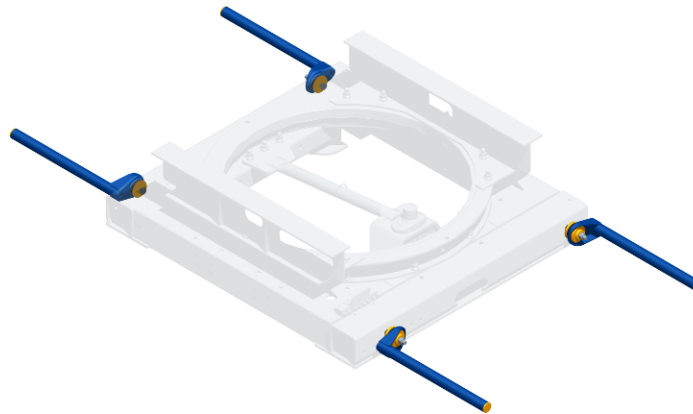
- The round steering rods connect the fifth wheel unit to the rear axle mounting frame
- The rectangular rod transfer the steering movement to the first axle mounting frame
- The round steering rods are equipped with high quality and maintenance free ball joints
- The rectangular rod is equipped with maintenance-poor 'sealed for life' bearing constructions
- Easy alignment, length of steering rods can easily be adjusted
- To prevent bending and chattering of the steering rods, steering rod supports are included
- Treatment: round steering rods are galvanised, ball joints and rectangular rods are KTL treated



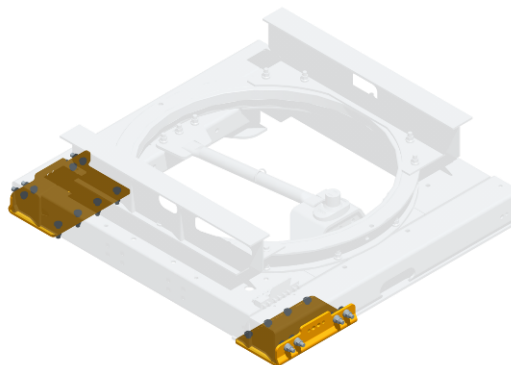
#### Axle mounting frames

- Suitable for most common tyre dimensions and axles with air suspension
- Axle load 10t (legally approved)
- Spring centres: 980/1100/1200/1300mm
- The standard mounting frame height is 140mm (optional 30/100 mm)
- TRIDEC specific JOST turntable with a diameter of 1100 or 1200mm, 90mm height, KTL treated
- Cross members to support the turntable are included as part of the supplied kit
- Greasing points centralized on one greasing block
- Welding of thrust plates no longer required, due to use of special TRIDEC spline bolts for mounting the turntable on the chassis
- Optional mudguard supports (lengths 455/575/770 mm) with vibration reducing rubbers bolted to the turntable frame
- Treatment: KTL (standard). Optional: galvanised, supplied with two hanger bracket mounting plates

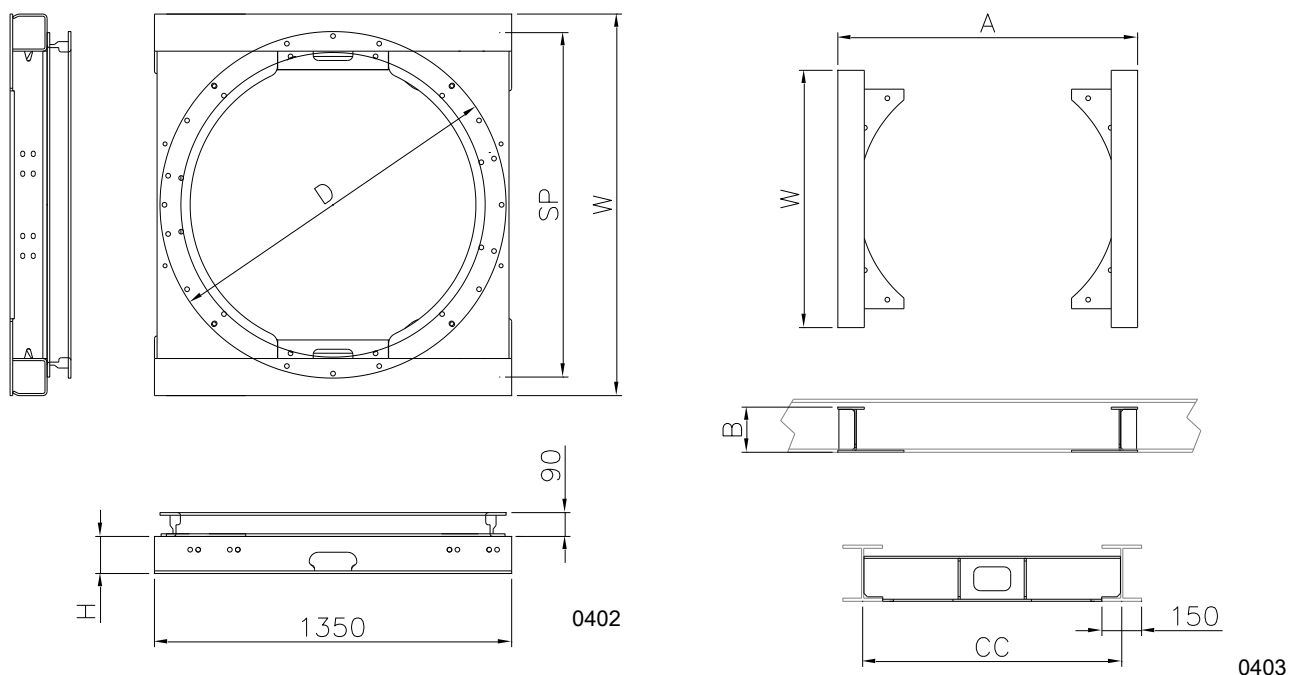
Mudguard supports:



Hanger bracket mounting plates:



## Axle mounting frame and cross members



### Axle mounting frame

Spring centre SP (mm)	Height H (mm)	Width W (mm)	Turntable D (mm)
900-980	30/100/140	1100	Ø 1100
1100	30/100/140	1240	Ø 1100 / 1200
1200	30/100/140	1340	Ø 1100 / 1200
1300	30/100/140	1440	Ø 1100 / 1200

### Cross members

Chassis centre CC (mm)	Width W (mm)	Height B (mm)	Turntable D (mm)	A (mm)
980	970	170 / 230	Ø 1100	1134
1200	1190	170 / 230	Ø 1200	1236

## Order references

### TR-X Mechanical Steering System

Code	Description
0501	TR-X steering system (Frame 980-140, 1100-140 or 1200-140)

### TR-X Options

Code	Description
0520	20 tons fifth wheel unit
0523	Fifth wheel unit to bolt in chassis, for tanker chassis
0524	Axle mounting frame 30mm height instead of standard 140mm
0525	Axle mounting frame 100mm height instead of standard 140mm
0526	Axle mounting frame for 1300mm spring centre
0527	Adjustable mudguard support galvanised (set of 2, length 455, 575 or 770mm)
0528	Hanger bracket support plate, to bolt to the axle mounting frame (set of 2 pieces)
0529	Galvanised axle mounting frame with KTL treated turntable and 2 hanger bracket support plates (each turning unit)

The information contained in this document gives an indication of the possibilities. Not all exceptional models are included in this document. Please contact our sales department to determine whether a particular configuration of the system can be used in your trailer or that special solutions are possible.

### Sales contact

TRIDEC Transport Industry Development Centre B.V.  
Ekkersrijt 6030, 5692 GA SON – the Netherlands  
Phone: +31 499 49 10 52  
Fax: +31 499 46 00 58  
E-mail: [sales@tridec.com](mailto:sales@tridec.com)