

## Application

### TR for heavy distribution transport



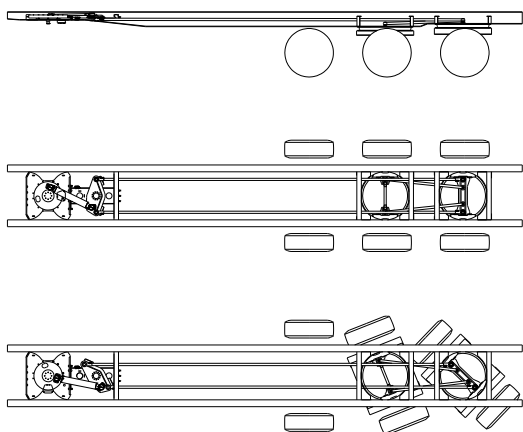
#### TR Mechanical Steering System

The TR steering arrangement is a mechanical system which is used primarily in heavy distribution transport. This system steers one, two or three axles on a one to five axle trailer.

The TR steering system allows the operator to make more efficient use of their trailer through improved manoeuvrability, making inner city deliveries easier and providing the ability to negotiate small roundabouts on urban roads. Common applications of the TR steering system are transport of construction material, tippers and tankers.

#### 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. In case more than 1 axle is steered the steering motion from the rear axle is transmitted to the other axle(s) with two steering rods.

## Technical Specification

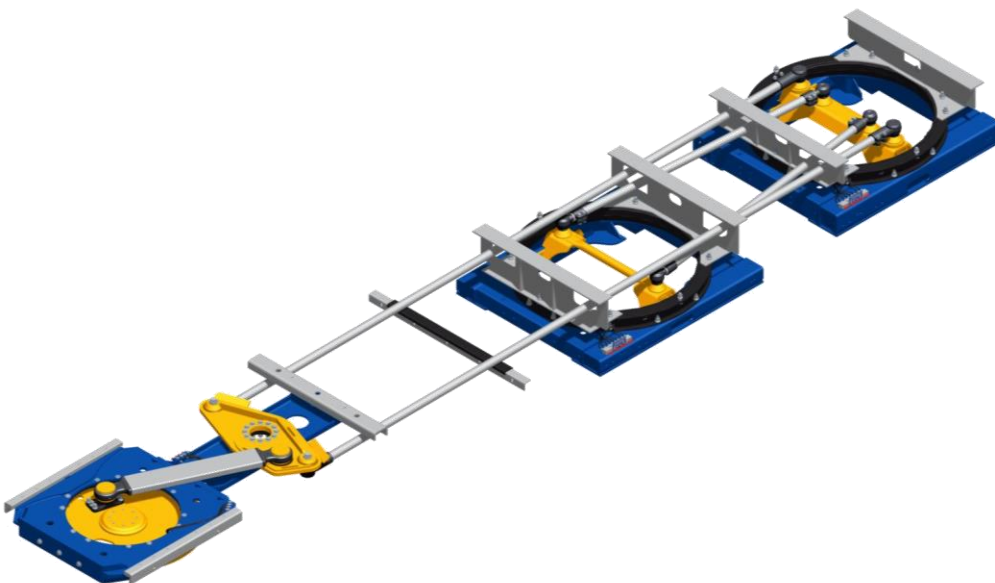
### TR for heavy distribution transport

#### General

- A TR system enables you to steer 1, 2 or 3 axles on a 1 to 5 axle trailer
- Also available for trailers with a gooseneck
- RDW test report according EEC guideline (70/311) for most common TR configurations 1 to 2 axles steered, 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: 750-1770kg (1-3 axles steered). 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 45°
- Components: fifth wheel unit, steering rods, axle mounting frame(s)

#### Technical Specification

Feature	Value
Number of steered axles	1/2/3
Fifth wheel load	15/20/26.5t
Axle load	10t
Spring centres	980/1100/1200/1300 mm
Chassis centres	980/1200mm (15t and 20t) or 1060mm (26.5t)
Gross weight	750-1770kg (1-3 axles steered)
Steering angles	up to 45°

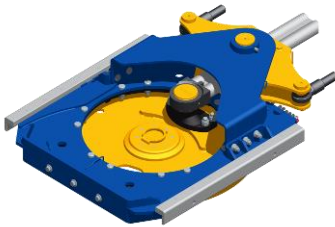


## Components

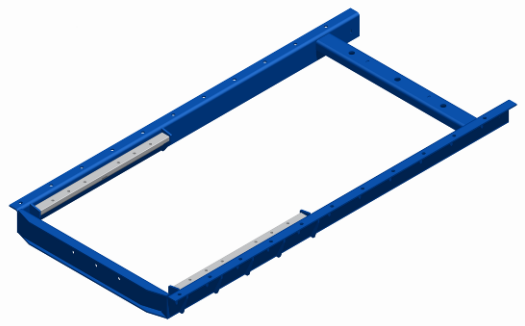
Linear:



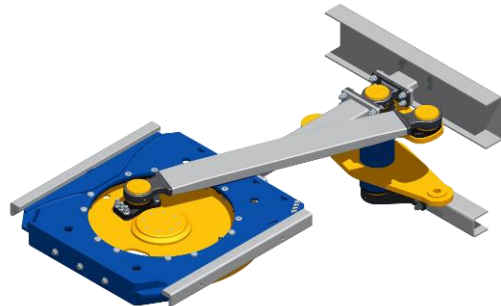
Progressive:



Tanker frame:



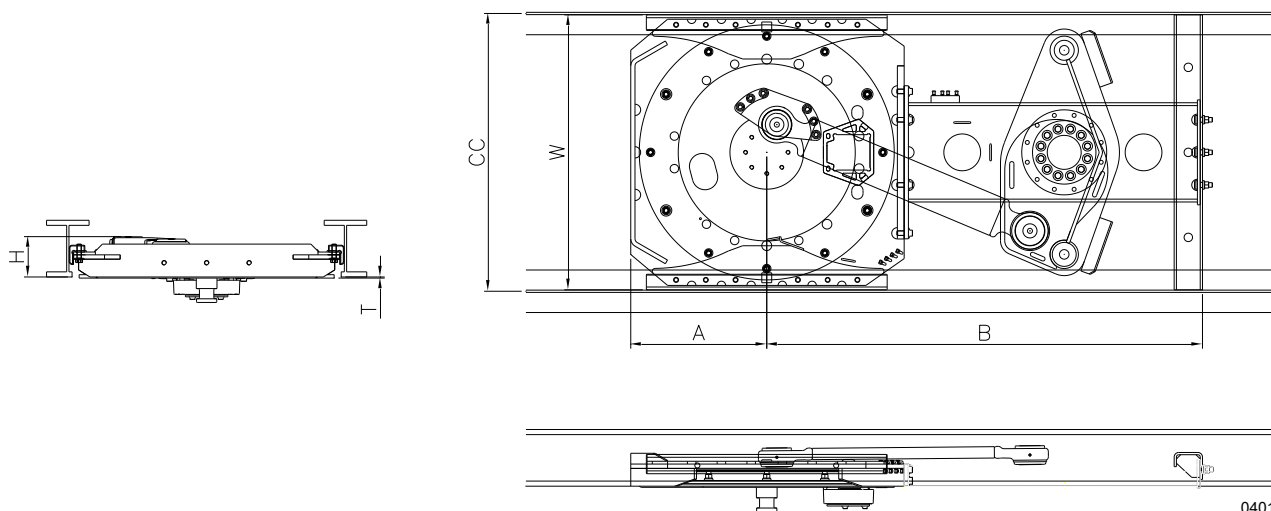
Gooseneck (TR-V):



### 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 (3,5" at 26.5t), TRIDEC steering wedge
- Optional for tankers with a linear fifth wheel unit a special mounting frame is available
- Treatment: KTL
- Two steering characteristics possible: linear and progressive
- The linear fifth wheel unit is also available in a special version for trailers with a gooseneck (TR-V)

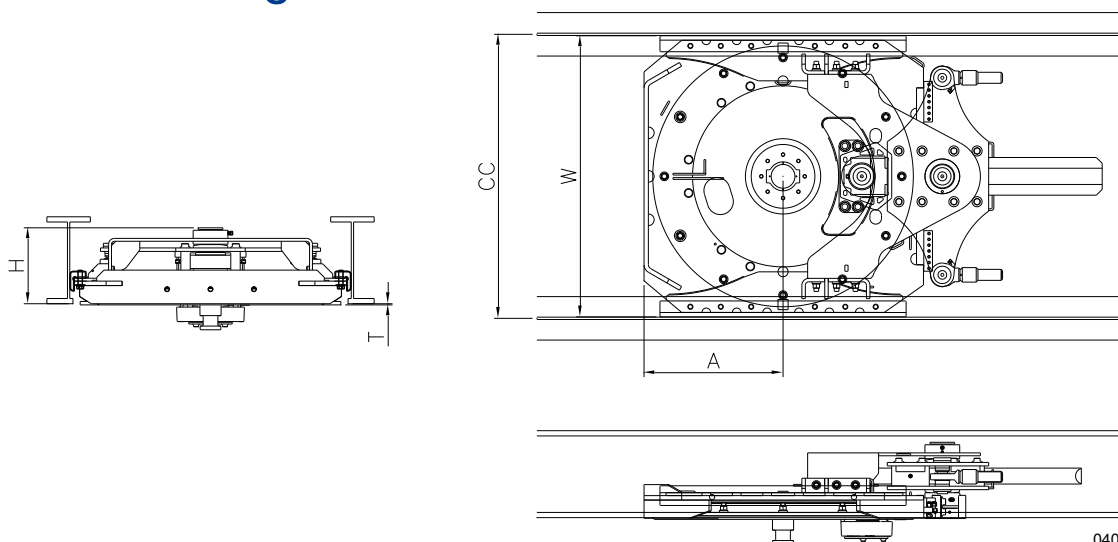
## Fifth wheel unit **Linear**



0401

Max. load (t)	CC (mm)	W (mm)	A (mm)	B (mm)	H (mm)	T (mm)	Weight (kg)
15	980	970	480	1538	144	4	348
20	980	970	480	1538	144	4	361
15	1200	1190	480	1538	144	4	410
20	1200	1190	480	1538	144	4	428
26.5	1060	1050	520	1583	150	6	415

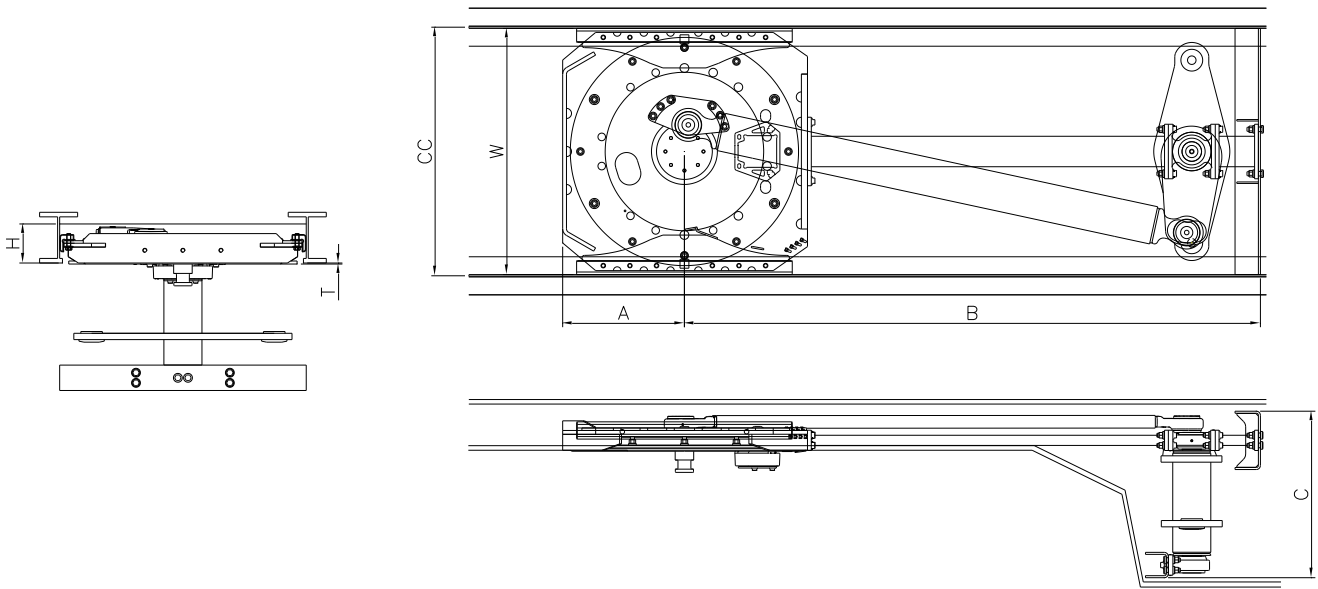
## Fifth wheel unit **Progressive**



0404

Max. load (t)	CC (mm)	W (mm)	A (mm)	H (mm)	T (mm)	Weight (kg)
15	980	970	480	264	4	375
20	980	970	480	264	4	375
15	1200	1190	480	264	4	437
20	1200	1190	480	264	4	437
26.5	1060	1050	520	265	6	392

Fifth wheel unit **Gooseneck**



0405

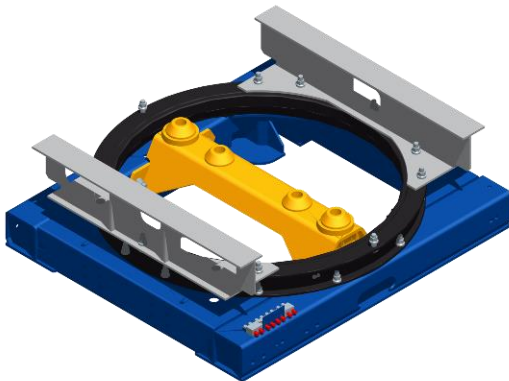
Max. load (t)	CC (mm)	W (mm)	A (mm)	B & C	H(mm)	T(mm)	Weight (kg)*
15	980	970	480	customer	154	4	375
20	980	970	480	specific	154	4	375
15	1200	1190	480	customer	154	4	438
20	1200	1190	480	specific	154	4	438
26.5	1060	1050	520	customer	153	6	443

\* Fifth wheel units length and transfer levers height are designed to meet the gooseneck, hence the total weight can vary.



#### Steering rods

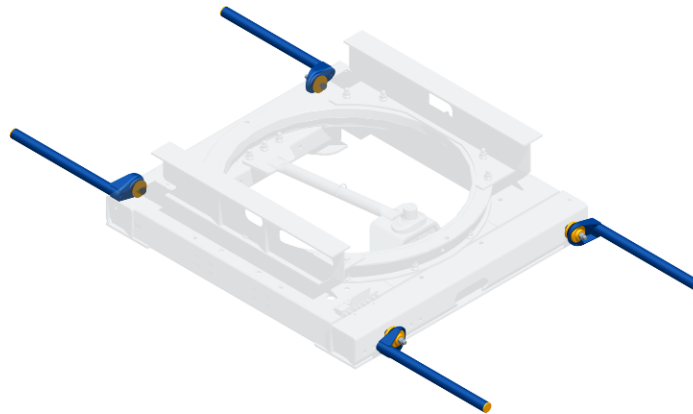
- The steering rods connect the fifth wheel unit to the axle mounting frame(s). In case more axles are steered the steering movement is transmitted from the rear axle to the other axle(s)
- Steering rods are equipped with high quality and maintenance free ball joints
- Easy alignment, length of steering rods can easily be adjusted
- To prevent bending and chattering of the steering rods, steering rod supports are included
- Treatment: steering rod is galvanised, ball joints are KTL treated



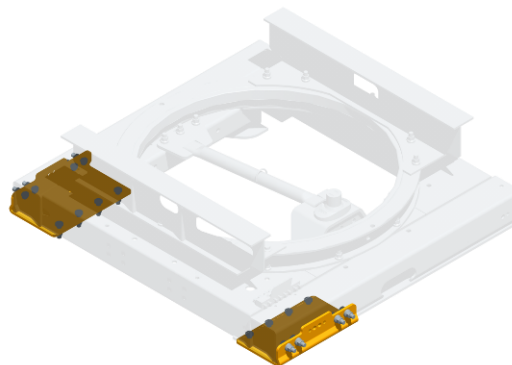
#### Axle mounting frames

- Suitable for use with 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 30/100mm)
- 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 455/575/770mm) with vibration reducing rubbers bolted to the turntable frame
- Treatment: KTL (standard). Optional: galvanised, supplied with two hanger bracket mounting plates

Mudguard supports:

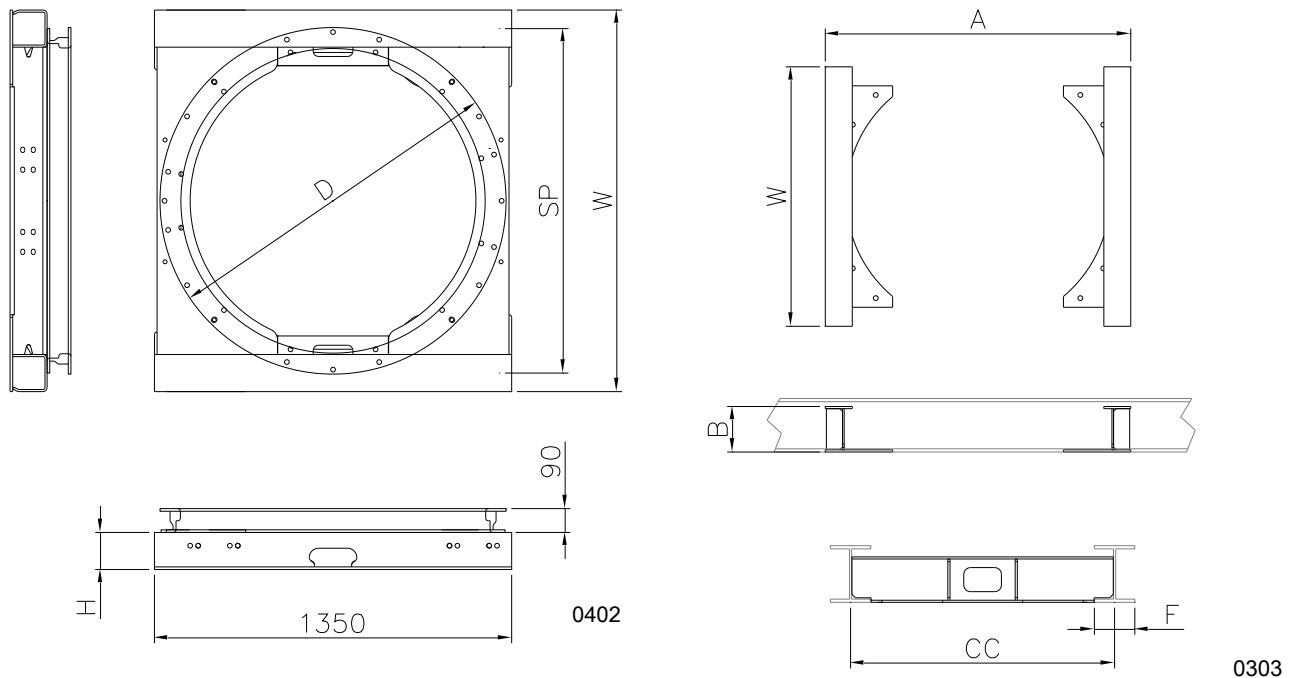


Hanger bracket mounting plates:





### Axle mounting frame and cross members



### Axle mounting frame

Spring centre SP (mm)	Height H (mm)	Width W (mm)	Turntable D (mm)
900-980	100 /140	1100	Ø 1100
900-980	30	1170	Ø 1100
1100	100 /140	1240	Ø 1100 /1200
1100	30	1250	Ø 1100
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)	Flange F (mm)	A (mm)
980	970	140 /170 /230	Ø 1100	150a	1134
1200	1190	140 /170 /230	Ø 1200	150	1236



## Order references

### TR Mechanical Steering System

Code	Description
0401	TR steering system 1 axle steering (Frame 980-140, 1100-140 or 1200-140)
0402	TR steering system 2 axles steering (Frame 980-140, 1100-140 or 1200-140)
0403	TR steering system 3 axles steering (Frame 980-140, 1100-140 or 1200-140)

### TR Options

Code	Description
0420	20 tons fifth wheel unit
0421	26.5 tons fifth wheel unit
0423	Fifth wheel unit to bolt in chassis, for tanker chassis
0424	Fifth wheel unit for gooseneck chassis
0425	Progressive fifth wheel unit
0426	Axle mounting frame 30mm height instead of standard 140mm
0427	Axle mounting frame 100mm height instead of standard 140mm
0428	Axle mounting frame for 1300mm spring centre
0429	Adjustable mudguard support galvanised (set of 2, length 455, 575 or 770mm)
0430	Leaf-spring bracket support plate, to bolt to the axle mounting frame (set of 2 pieces)
0431	Galvanised axle mounting frame with KTL treated turntable and 2 leaf-spring 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

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