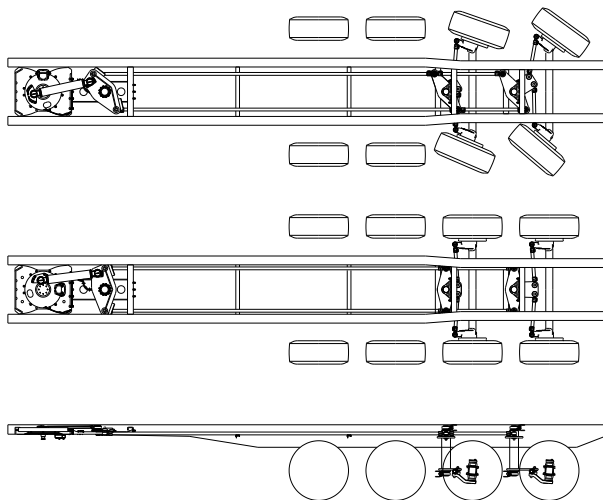


Application

TF the mechanical king-pin axle steering system



TF Mechanical steering system

The TF steering system for trailers with king-pin steered axles, is mainly installed when limited space for large wheel-movement from turntable steering systems is available; such as e.g. concrete mixers, semi-low-loaders and exceptional designs. The TF combines the advantages from an affordable and reliable mechanical steering system with the packaging advantages a king-pin steered axle offers. The TF-V steering system is mainly installed at semi-low-loaders. The fifth wheel unit is designed to match the shape of the gooseneck. For flatbed trailers with a single steered axle, TRIDEC offers the lightweight TF-D steering system.

The TF systems steers one, two or three axle, possibly in combination with one or more rigid axles. The system allows the operator to make more efficient use of the trailer through improved manoeuvrability, making inner city 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, one or two steering rods transmit this steering motion directly and without any play to the rear axle-units. Every steered king pin axle is fitted with an axle unit. By the use of track rods, the axle-units steer the king-pin axles.

Technical specification

TF(-V) the mechanical king-pin axle steering system

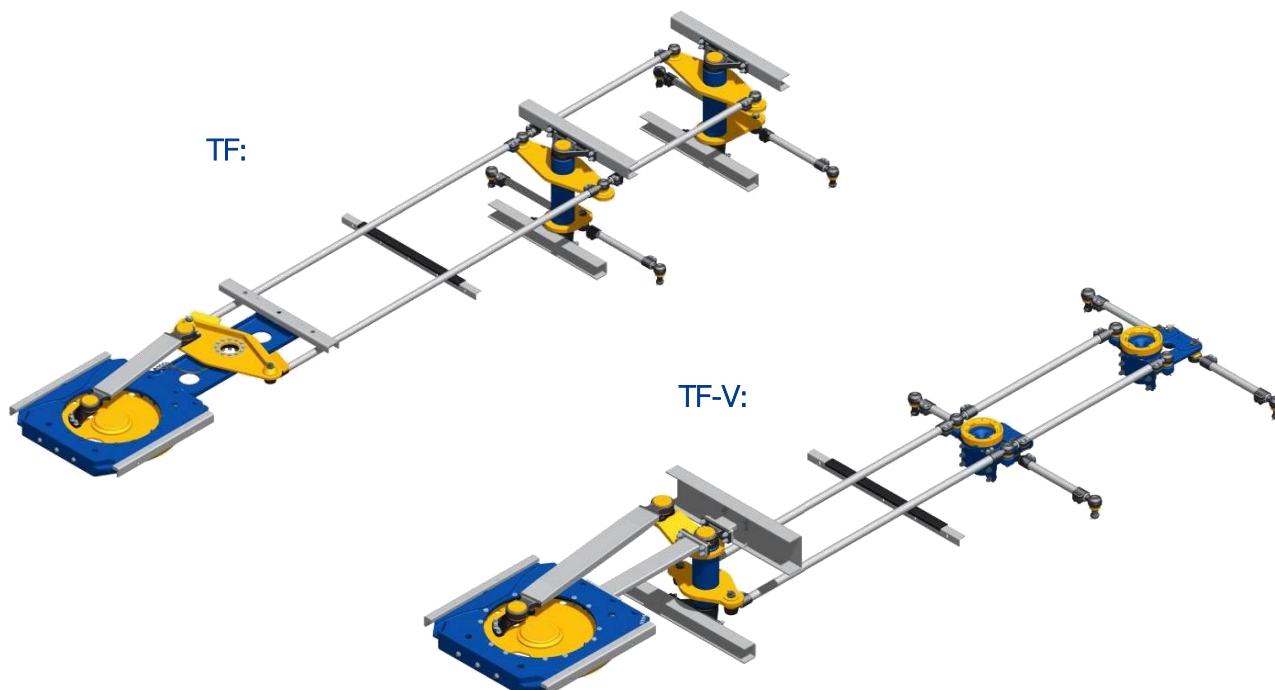
General

- The TF(-V) system steers 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 (R79) for most common TF configurations up to 3 steered, available at request (no. 56210113)
- Special TRIDEC spline bolts used for most bolt connections. No loosening of bolts and re-tightening not necessary
- Gross Weight: 478-880 kg (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
- Possible steering angles: up to 40° (axle is the limiting factor)
- Components: fifth wheel unit, steering rods, axle-units

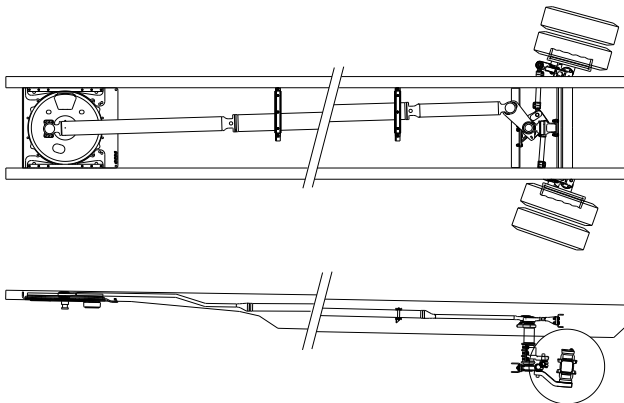
Technical specification

Feature	Value
Number of steered axles	1/2/3
Fifth wheel load	15/20/26.5t
Axle load	10t
Chassis centres (neck)	980/1200mm (15t & 20t), 1060mm (26.5t)
Gross weight TF	480-880kg (1-3 axles steered)
Gross weight TF-V	478-766kg* (1-3 axles steered)
Steering axle	Up to 40°

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



TF-D the lightweight mechanical king-pin axle steering system



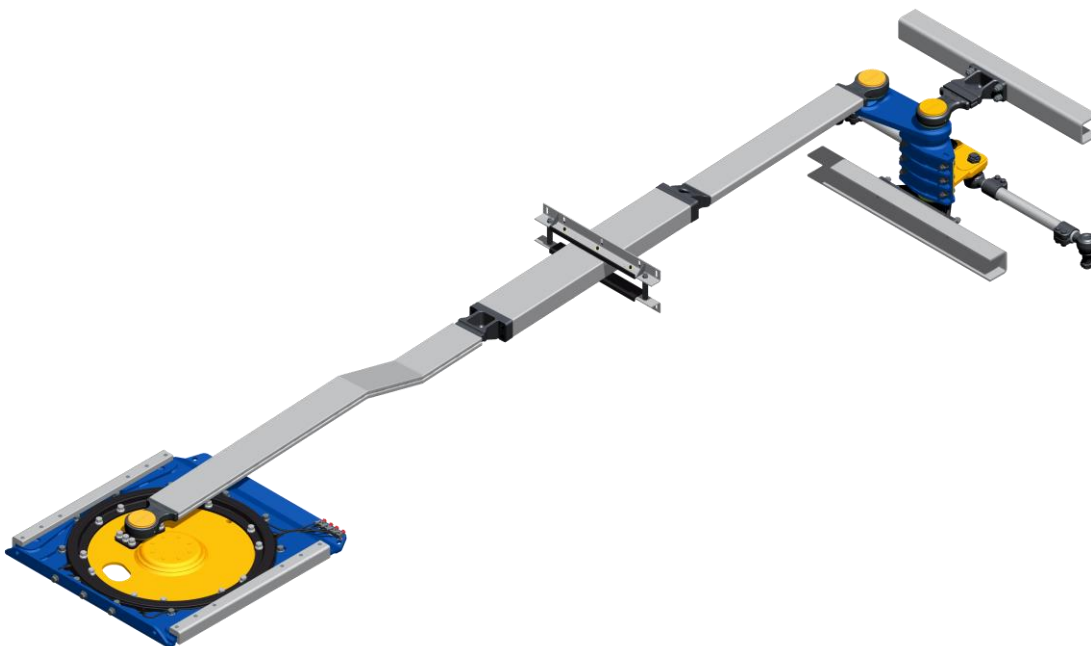
TF-D Mechanical steering system

For trailers with a single steered king-pin axle and a flat-bed, TRIDEC supplies the TF-D steering system. A rectangular steering bar connects the fifth wheel unit directly with the axle unit. This creates a lightweight and cost attractive steering system. The low fifth wheel-units height makes the TF-D system suitable for trailers with an extra low trailer neck.

Technical specification

Feature	Value
Number of steered axles	1
Fifth wheel load	15/20t
Axle load	10t
Chassis centres (neck)	980mm
Gross weight TF-D	Upon 310kg
Steering angles	Max 40°

TF-D:



Components

TF:



Fifth wheel unit

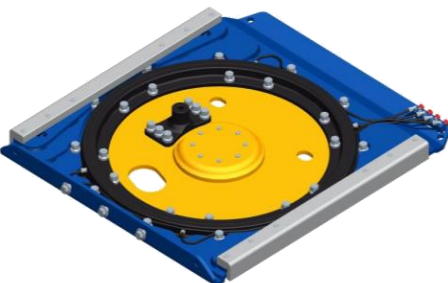
- Bolted into the chassis by included mounting profiles, which are welded into the chassis resulting in simple and quick installation
- Easy maintenance and possible repairs
- Equipped with JOST turntable, 2" king pin (3,5" at 26.5t), TRIDEC steering wedge
- Treatment: KTL

TF-V:



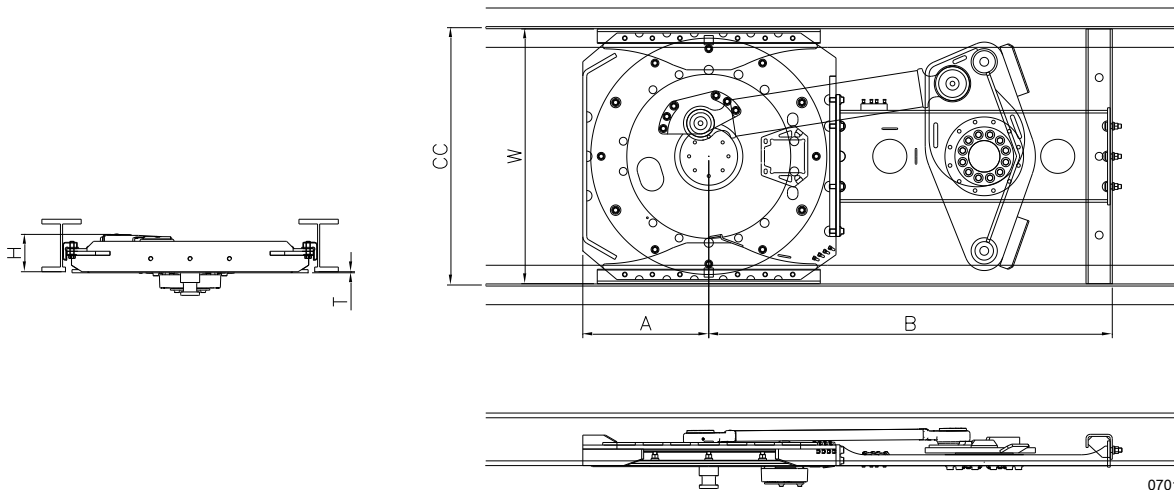
- Fifth wheel units length and transfer levers height are designed to match the trailers gooseneck

TF-D:



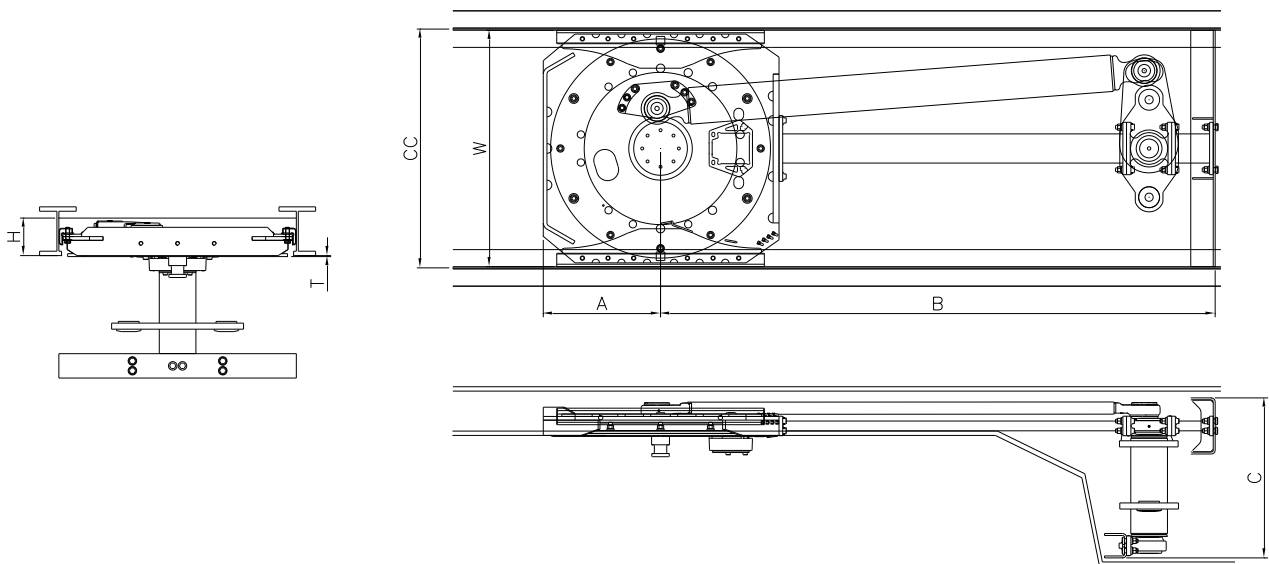
- Three versions available: TD-K, TD-T & TD-G
- Suitable for extra low trailer neck

Fifth wheel unit **TF**



Max. load (t)	CC (mm)	W (mm)	A (mm)	B (mm)	H(mm)	T(mm)	Weight (kg)
15	980	970	480	1538	142	4	375
20	980	970	480	1538	142	4	375
15	1200	1190	480	1538	142	4	448
20	1200	1190	480	1583	142	4	448
26.5	1060	1050	520	1710	152	6	443

Fifth wheel unit **TF-V**

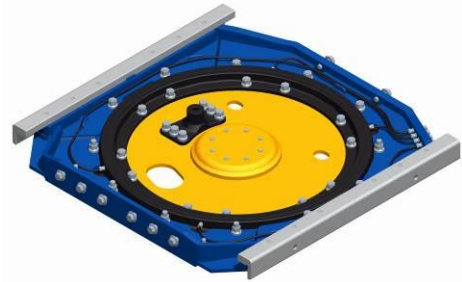
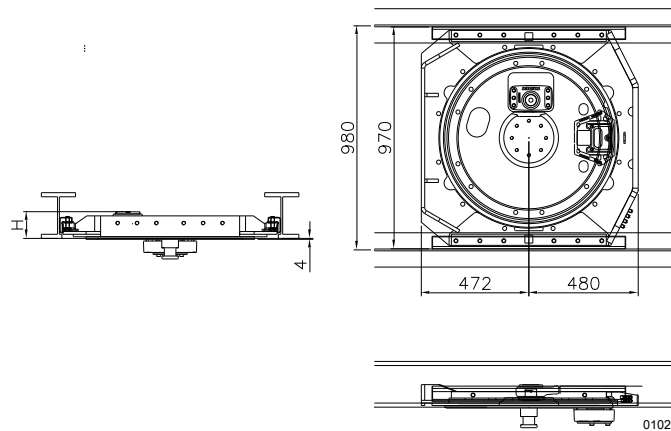


Max. load(t)	CC (mm)	W (mm)	A (mm)	B & C	H(mm)	T(mm)	Weight (kg)*
15	980	970	480	customer	154	4	375
20	980	970	480	specific	154	4	375
15	1200	1190	480	customer	154	4	438
20	1200	1190	480	specific	154	4	438
26.5	1060	1050	520	customer	153	6	443

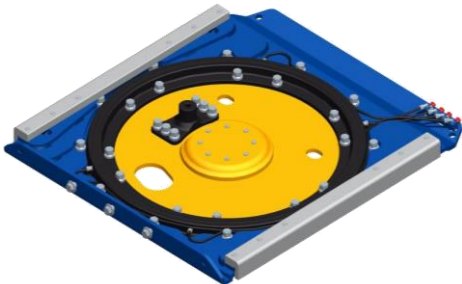
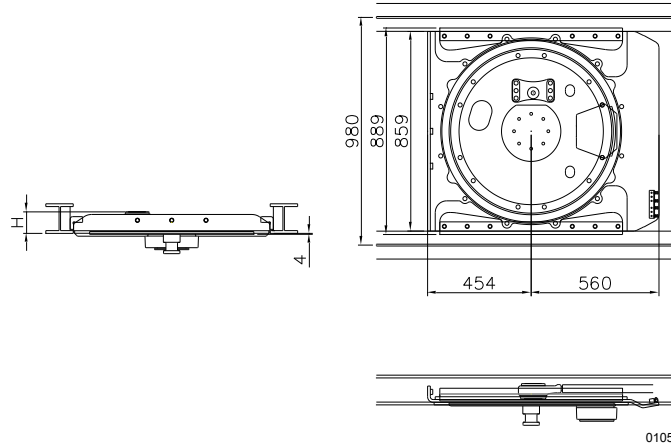
* Fifth wheel units length and transfer levers height are designed to meet the gooseneck, hence the total weight can vary.



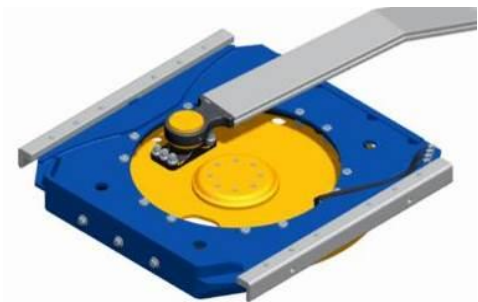
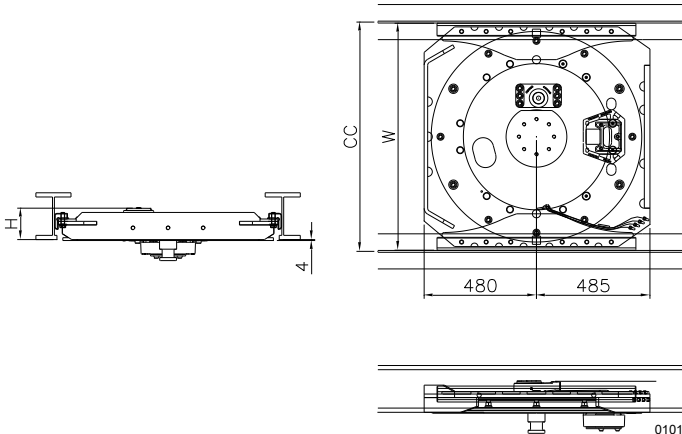
Fifth wheel unit **TD-K**



Fifth wheel unit **TD-T**



Fifth wheel unit **TD-G**



		Fifth wheel unit						
		TD-K	TD-T	TD-G				
Max. load	t	15	15	15		20		
Width W	mm	970	889	970	1190	970	1190	
Chassis centre CC	mm	980	980	980	1200	980	1200	
Weight	kg	174	163	225	282	235	299	

TF:



Axle-unit

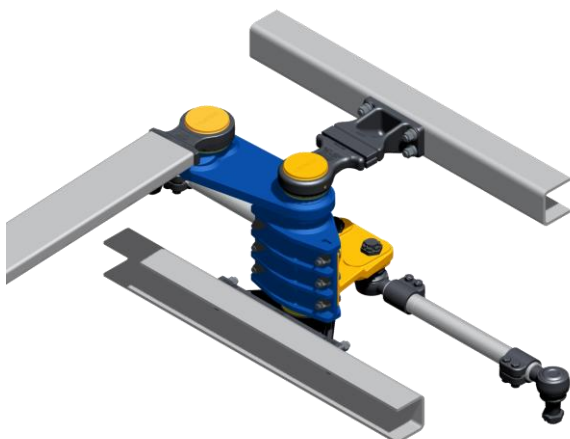
- Top cross-member is welded into the chassis, lower cross-member is welded onto the hanger-brackets
- Bolt connection ensures quick and easy installation
- Low-maintenance thanks to 'Sealed for life' bearing constructions and ball-joints
- Easy alignment, length of the steering rods easily adjustable
- Treatment:
 - Steering rods are galvanised
 - Axle-units and ball-joints are KTL treated

TF-V:



- Axle-units are bolted underneath the chassis by included mounting-rings, ensuring quick and easy installation

TF-D:



- Top cross-member is welded into the chassis, lower cross-member is welded onto the hanger-brackets



Steering rods

- The steering rods connect the fifth wheel unit to the axle-units and the axle-units to the king-pin axles
- Steering rods are equipped with high quality and maintenance free ball joints
- Easy alignment, length of steering rods can easily be adjusted
- Steering rod supports are included, preventing bending and chattering of the steering rods,
- Treatment: steering rod is galvanised, ball joints are KTL treated



Steering bar (TF-D only)

- The steering bar connects the fifth wheel unit to the axle-unit
- Consists of 3 sections that are supported by steering bar supports
- Front and rear steering bar available in various “off set” configurations to accommodate height differences between the front and rear of the chassis
- If necessary the middle section can also be manufactured with an additional off set
- Joints on both ends are equipped with a TRIDEC patented low-maintenance bearing
- Easy alignment of the steered axle by usage of a shim-set between the first 2 sections of the steering bar
- Treatment: front and rear steering bars are KTL treated; middle is galvanised

Order References

TF Mechanical steering system

Code	Description
0701	TF steering system 1 axle steering
0702	TF steering system 2 axles steering
0703	TF steering system 3 axles steering
0761	TF-D steering system 1 axle steering

TF options

Code	Description
0720	20 tons fifth wheel unit
0721	26.5 tons fifth wheel unit
0723	Fifth wheel unit for step neck chassis

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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