

# JOST



## 3 Fifth wheel couplings and mounting plates

Fifth wheel couplings are fitted to a tractor unit to connect it to the trailer.

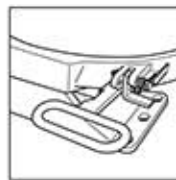
Fifth wheel couplings are vehicle attaching parts that are subject to mandatory design approval and on which the highest safety requirements are placed. We can supply a suitable fifth wheel coupling for all applications, thus always guaranteeing a safe and secure link between the tractor and trailer.

When mounting, using, converting or exchanging our fifth wheel couplings, the vehicle manufacturer's notes, JOST instructions for mounting and use, and the relevant national regulations must be observed. In Germany these are §§19, 20, 21, 27 of the "StVZO" Motor Vehicle Safety Standards.

Since the beginning of 2003, the JSK 42 has been available with a large selection of pedestals in all common heights and with all common hole patterns for plate and frame assembly. Depending on the model and height, it is possible to reduce the weight by 30 to 60 kg. This fifth-wheel coupling is also exceptionally easy to operate: the convenient handle enables you to release the lock and open the JSK 42 with one hand.

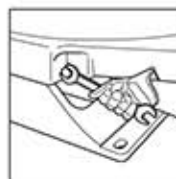
## Design/features

JOST fifth wheel couplings fulfil the most stringent requirements in terms of safety, simple operation and ease of servicing. This results in the following benefits:



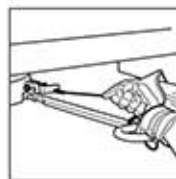
### Safety

- High level of operating reliability
- Can be used in complicated loading conditions
- Automatic latch arrangement
- Only a visual inspection is required to ensure proper engagement
- Protection against unauthorised opening is possible using a padlock



### Ease of servicing

- Infinite adjustment of the locking mechanism, thus resulting in lower wear
- Wearing ring is easy to replace
- Easily replaceable top plate liners
- Wearing parts can be replaced without having to remove the fifth wheel



### Simple operation

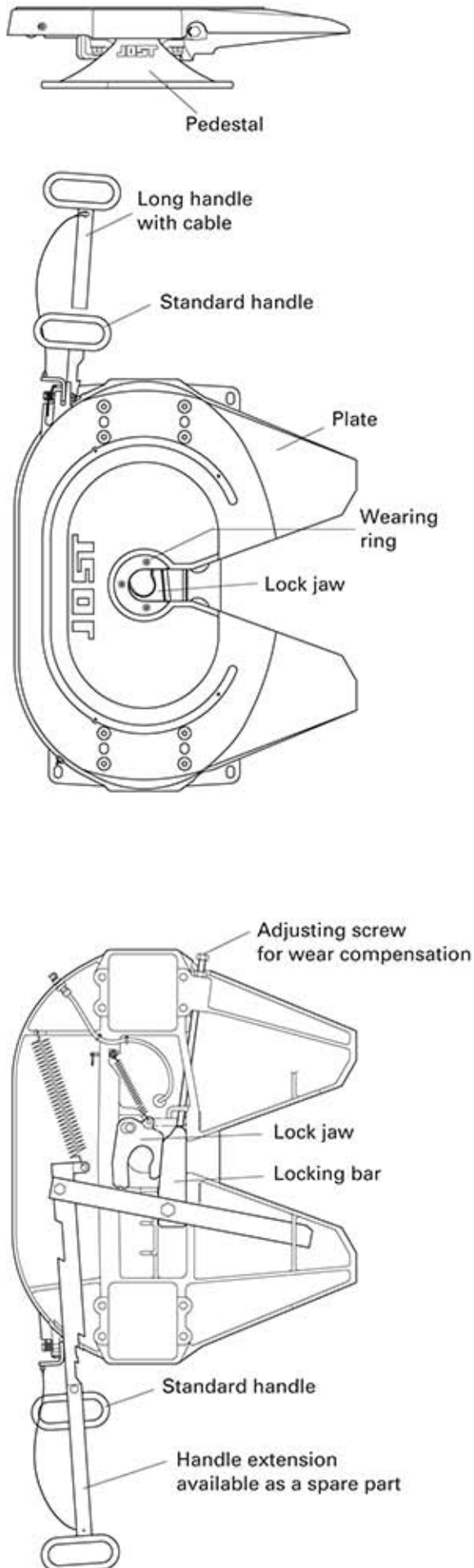
- Long, easy-reach handle
- The operator does not get dirty
- The latch is released using a cable
- JSK 42: Single hand operation without latch and cable

## Range of application

JOST fifth wheel couplings (except JSK 3-2) are approved for all trailer coupling systems. The following diagram gives an overview of the various models available with imposed loads from 5 t to 50 t.

Series	Imposed load (t)
JSK 3-2	5
JSK 37 ME140	15
JSK 42 MK26	20
JSK 36 D	20
JSK 37	20
JSK 42	20
JSK 38-2"	28
JSK 38-3 1/2"	36
JSK 50	50

## Fitting and component parts



Fifth wheel couplings are connection devices for use on tractor units. An automatically closing and locking hitch connects the fifth wheel king pin of the semitrailer when coupling it up with the tractor unit.

The automatic latch arrangement locks the handle in place and indicates that the tractor and trailer are correctly attached.

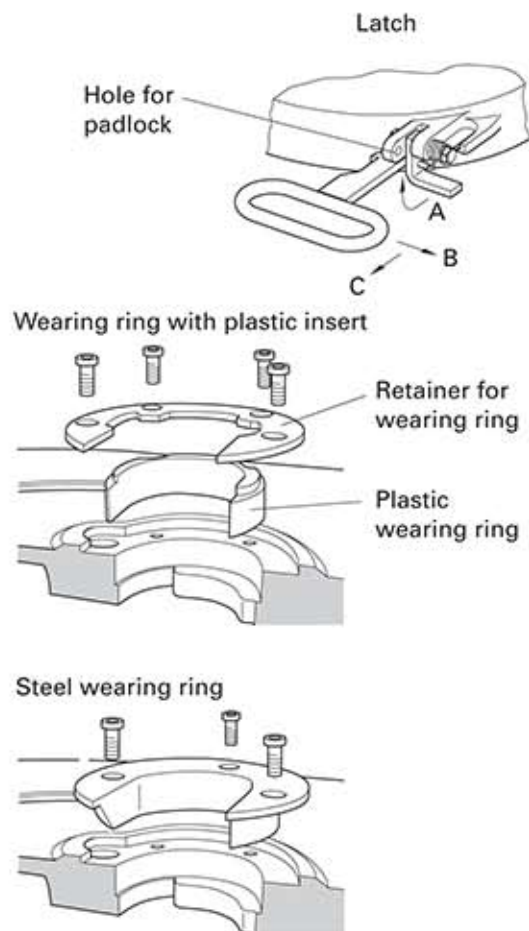
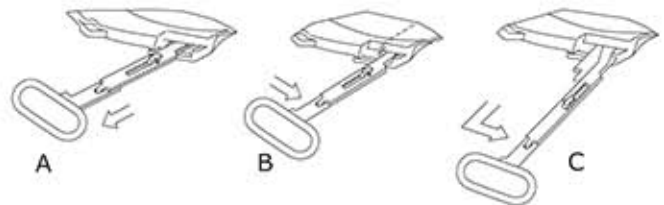
An additional lock is integrated into the handle of the JSK 42. This allows you to release the lock and open the handle with one hand (convenient handle).

**Wearing ring with plastic insert:** for the JSK 37 E, JSK 37 EW, JSK 37 CW and JSK 42 series.

**Steel wearing ring:** for the JSK 37 C, JSK 36 DV, JSK 38 and JSK 50 series.

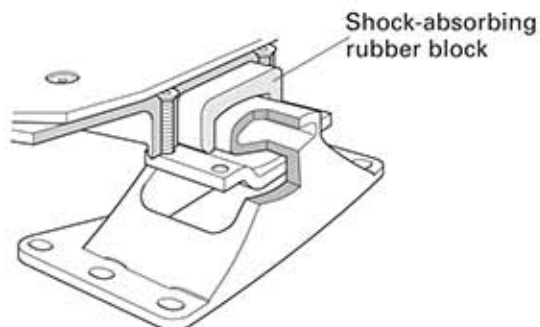
The illustrations shows the basic design of a JOST fifth wheel coupling.

## Handle function JSK 42



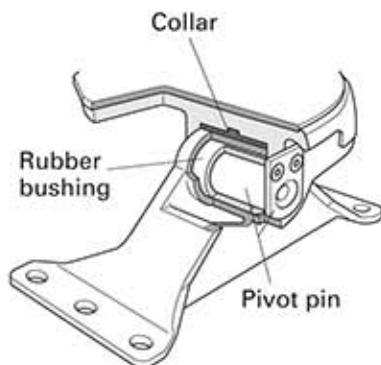
When choosing a fifth wheel coupling, you should especially take into consideration the requirements placed on bearing arrangements, mounting and maintenance. Basically, Jost fifth wheel couplings can be used universally.

### Rubber bearing - Model "C"



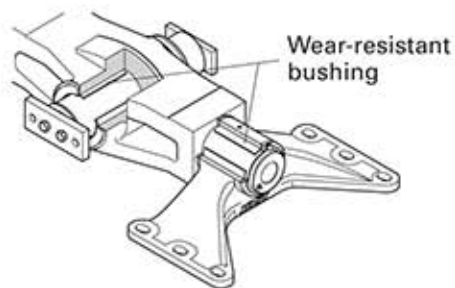
Fifth wheel couplings with rubber mountings are particularly suitable for poor quality road surfaces. The rubber cushions are shock-absorbent and maintenance-free.

### Pivot bearing - Model "E" and "K"



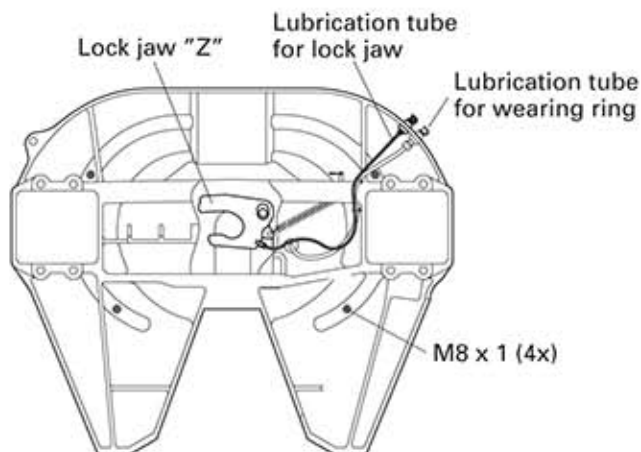
Pivot bearings facilitate the lowest possible mounting heights and are maintenance-free, (only version "E" and "K"). They are especially well suited to use in sliding and dual-height fifth wheel systems. Model "K": protects the chassis dues to its longitudinal elasticity (lateral movement).

### Cardan mounting - Model "G"



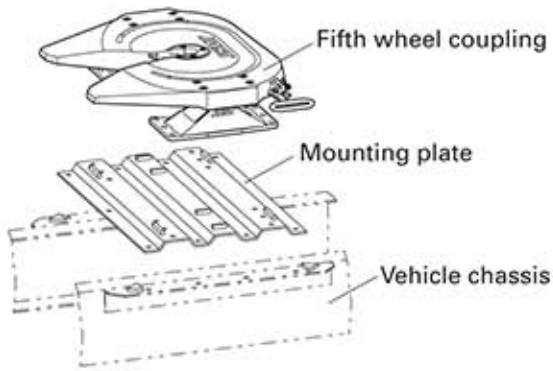
The cardanic bearing is designed to allow roll between tractor and semi-trailer under off-road conditions. The lateral suspension can be disabled for on-road use.

### Prepared for central lubrication systems Model "E" and all models with "Z" style



Fifth wheel couplings without a top plate liner must be lubricated (manual lubrication). Model "E" and all models with "Z" style fifth wheel couplings are prepared for connection to a central lubrication system on the tractor unit.

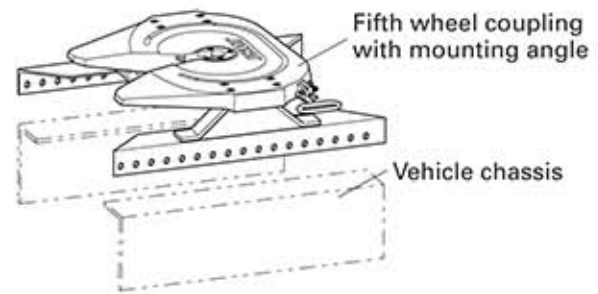
## Plate mounting



The fifth wheel coupling is fixed to the tractor chassis by means of a mounting plate. Various mounting plate and fifth wheel mounting heights are available to make an accurate match between the height of the fifth wheel and existing trailer systems possible.

JOST mounting plates for fifth wheel couplings satisfy the requirements of Directive 94/20/EC – Class J and are approved for the steering forces of steered semi-trailers. We also offer a selection of mounting kits for connecting mounting plates and fifth wheels to the tractor unit.

## Chassis mounting



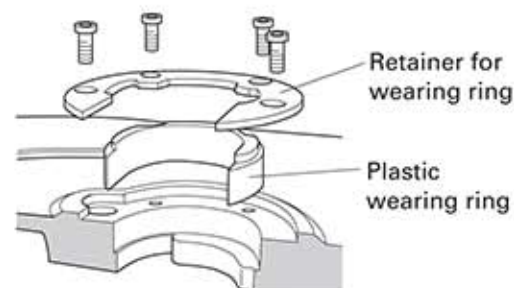
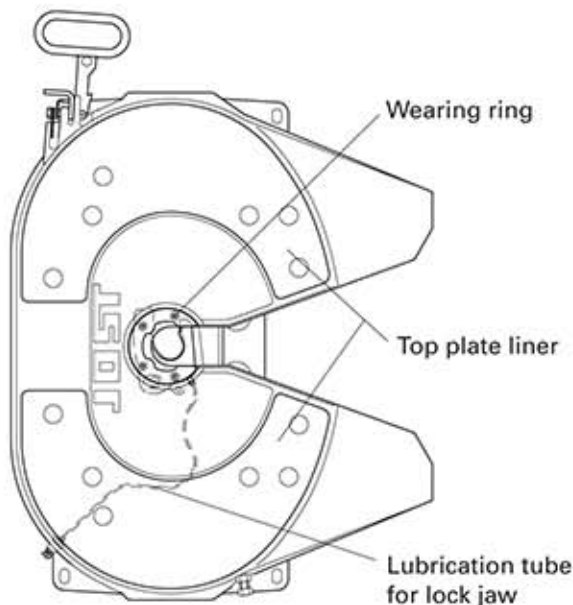
The fifth wheel coupling is built onto either the chassis or sub-frame of the tractor.

The JOST mounting instructions for fifth wheel couplings and mounting plates, as well as the respective mounting instructions supplied by the vehicle manufacturer must be observed when mounting or converting equipment.

## Low-maintenance JOST fifth wheel coupling – “W” Style

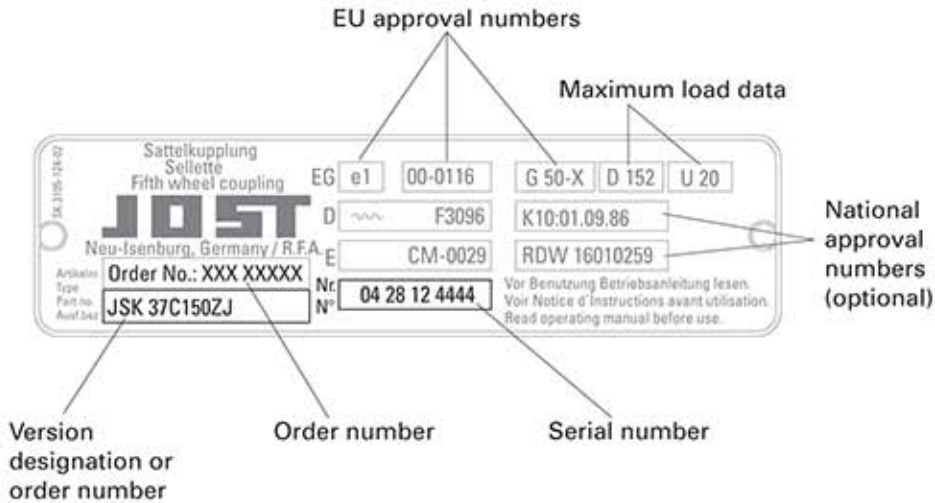
The series JSK 37 CW/EW fifth wheel couplings and all the series 4 fifth wheel couplings in version “W” are equipped with a top plate liner on the mounting surface and a wearing ring with plastic insert in the locking mechanism. In conjunction with the maintenance-free rubber or pivot bearing, only

one greasing point on the lock jaw needs local lubrication. All wearing parts can be replaced quickly and easily. Low-maintenance fifth wheel couplings therefore save both time and money, as well as conserving resources.



## Type designation

The fifth wheel type plate is secured on the side of the coupling plate. When ordering spare parts, please quote the model designation and the serial number.



## Definition D value

The construction of the fifth wheel coupling in connection with the vehicle is carried out by the vehicle manufacturer (construction according to Directive 94/20/EC, Appendix VII).

It is calculated according to the following formula:

$$D = g \times \frac{0,6 \times T \times R}{T + R - U} \quad (\text{kN})$$

Calculation example:

$$D = 9,81 \times \frac{0,6 \times 17 \times 33}{17 + 33 - 10,5} = 83,6 \quad (\text{kN})$$

Given: T = 17t  
R = 33t  
U = 10,5t

The permissible load data for JOST fifth wheel couplings can be found on the type plate or from the JOST product catalogue. These apply to correct use in line with Directive 94/20/EC.

Alongside the imposed load on the tractor, the D value is a criterion for the load-bearing capacity of the fifth wheel couplings and mounting plates.

Key:

- T = permissible total weight of the tractor unit in t (including U)
- R = permissible total weight of the semi-trailer in t
- U = permissible imposed load on tractor in t
- g = 9,81m/sec<sup>2</sup>

If additional dynamic demands are to be placed on the coupling, e.g. by use on uneven road surfaces or building sites, the imposed load and D value should not be fully used or a stronger fifth wheel coupling should be fitted, and/or you should ask JOST for advice.

## Product overview

JOST fifth wheel couplings comply with the requirements of Directive 94/20/EC and are suitable for use with mounting plates of class J (plate mounting) and king pins of class H50 or S.

The table below shows the standard versions dependent on load, bearing and maintenance.

Other models are available on request.

Series	Lock	D value (kN)	Imposed load U (t)	Rubber bearing	Slide bearing	Cardan bearing	Maintenance
JSK 3-2	2"	38.0	5		X		M
JSK 36 DA	2"	152.0	20		X		M
JSK 36 DV	2"	152.0	20		X		M
JSK 37 C	2"	152.0	20	X			M
JSK 37 CW	2"	152.0	20	X			W
JSK 37 CZ	2"	152.0	20	X			Z
JSK 37 E	2"	152.0	20		X		Z
JSK 37 EW	2"	152.0	20		X		W
JSK 37 EA	2"	152.0	20		X		Z
JSK 37 EAW	2"	152.0	20		X		W
JSK 37 ER*	2"	152.0	20		X		Z
JSK 37 ERW	2"	152.0	20		X		W
JSK 37 ME140	2"	126.0	15		X		Z
JSK 37 ME140W	2"	126.0	15		X		W
JSK 42 K0 <sup>a</sup>	2"	152.0	20		X		Z, W
JSK 42 K2-K6*	2"	152.0	20		X		Z, W
JSK 42 K7*	2"	152.0	20		X		Z, W
JSK 42 K8*	2"	152.0	20		X		Z, W
JSK 42 MK	2"	152.0	20		X		Z, W
JSK 38 C-1	3 1/2"	260.0	36	X			M, Z
JSK 38 C-1 2"	2"	170.0	28	X			M, Z
JSK 38 G-1	3 1/2"	260.0	36			X	M, Z
JSK 38 G-1 2"	2"	170.0	28			X	M, Z
JSK 38 MC	3 1/2"	260.0	36	X			M, Z
JSK 50	3 1/2"	300.0	50		X		M

### Explanations:

X = Bearing design

M = Manual lubrication

Z = Prepared for connection to the central lubrication system on the tractor unit

M, Z = Available either for manual lubrication or prepared for central lubrication

W = Low-maintenance, lubrication only required on the lock jaw

\* = Chassis mounting

Before you use this fifth wheel coupling you must obtain approval from the tractor unit manufacturer

<sup>a</sup> = Plate mounting

