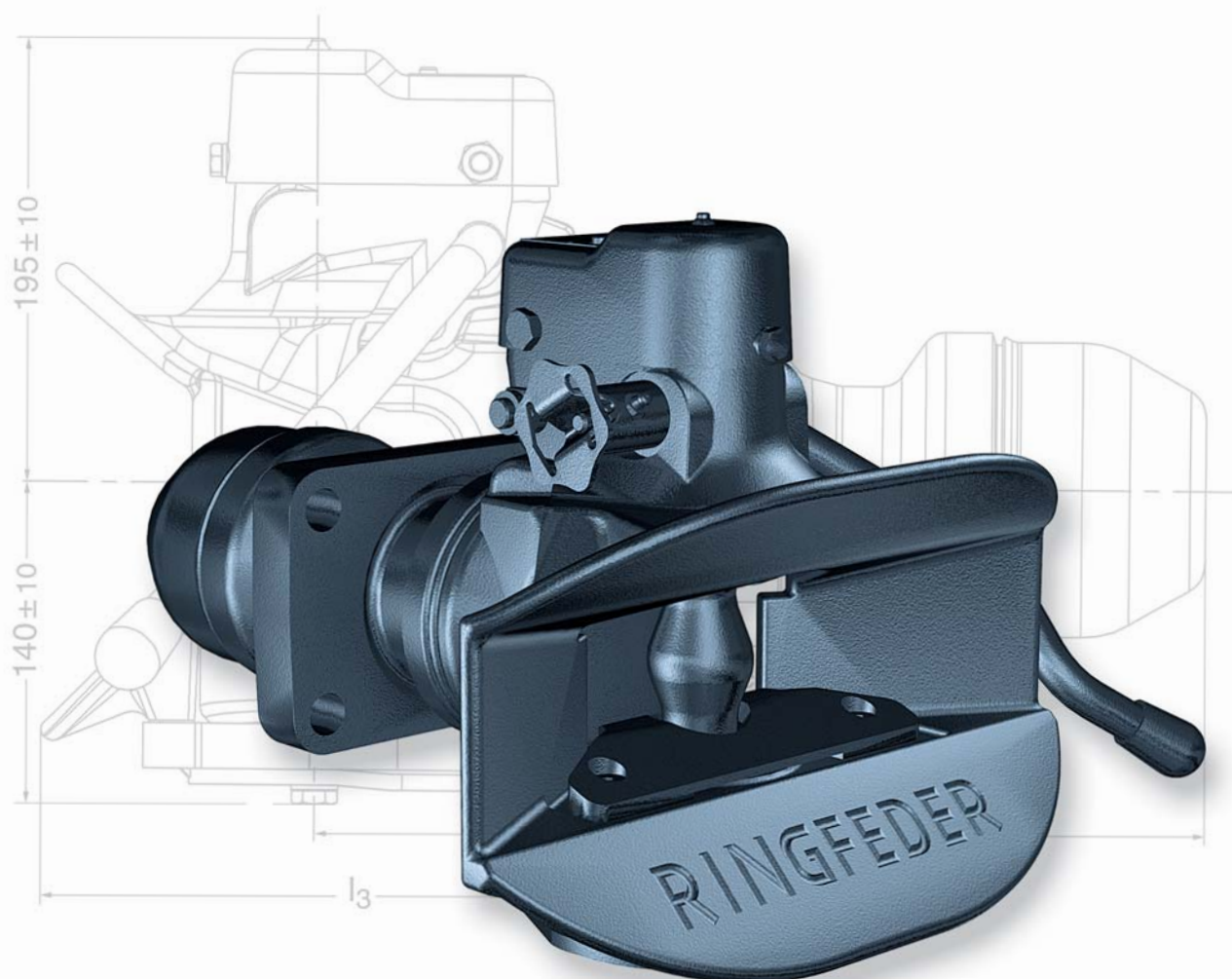


# RINGFEDER

## Automatic Trailer Coupling

for heavy duty transport with 50 mm drawbar eyes

**Type 96 AUS**



## Parts List for spare parts and maintenance

Type 96 AUS			
Item	Order No.	Description	Qty.
1		Drawbar incl. 2, 41, 42, 43	1
2	7 998 210	Top Guide Bush	1
3	13 997 950	Coupling Body incl. items 4, 5	1
4	13 998 035	Complete Safety Device incl. item 5	1
5		Tapered Grease Nipple AM 8 x 1 DIN 71412	1
6	7 998 252	Bottom Guide Bush	1
7	6 998 321	Plastic Plate, incl. 2 of items 8, 10	1
	9 996 770	Wear plate (cast iron) incl. 2 of items 8, 10	
8		Countersunk Screw M 8 x 40, DIN 7991	2
9		Washer 8,4 DIN 125	1
10		Hexagonal Nut M8, DIN 980	2
11	7 995 610	Return Spring	1
12	7 995 628	Tab Washer	1
13		Washer 10,5 DIN 125	2
14		Hexagonal Screw M 10 x 45 DIN 933 incl. item 13	2
16		Knob for Hand Lever	1
17	10 991 390	Bolt for Spring Arm	1
18	7 998 341	Spring Arm	2
19		Locking Lever	1
20		Distance Bush	1
22		Locking Nut VM 14, DIN 980	1
23	6 990 460	Coupling Bolt incl. item 24 and 2 of item 25	1
24	12 991 460	Locking Lever Pin	1
25	13 992 274	Locking Spring	2
26	6 991 645	End Cap incl. 2 of item 27, 28, 29	1
27		Spring Pin	2
28		Volute Spring	1
29		Buttonhead Rivet 6 x 12, DIN 660	1
30		Nameplate incl. 4 of item 31	1
31		Buttonhead Notched Nail 3 x 4 DIN 1476	4
32		Hexagonal Screw M 10 x 90 DIN 931 incl. item 33	1
33		Locking Nut VM 10, DIN 980	1
34		Hexagonal Screw M 8 x 12 DIN 933 incl. item 9	1
36	14 994 568	Rubber Spring	2
37	14 994 472	Thrust Washer	1
38	14 994 463	Bar Guide incl. 2 of item 39	1
39	14 994 876	Bearing Bush	2
40	14 994 496	Tension Washer	1
42	6 997 732	Castellated Nut M 45 x 3 incl. item 43	1
43	12 991 533	Cotter Pin 8 x 80, DIN 94	1
44	14 994 455	Protecting Cap	1
45	6 991 661	Hand Lever incl. item 16, 19, 20, 22 Design B	1

### Operation:

Pull out the button-type safety device (4) with a quarter turn to the left and allow it to engage in the locking device. You now have both hands free again in order to open the coupling. For that purpose the coupling jaw must be in the central position or it must be moved by hand to the lateral end positions. Only in one of the above-mentioned positions the coupling can be opened and locked. When inserting the drawbar eye, the mechanism releases by lifting the coupling bolt (23). In the lower position a second independent safety device (4) automatically locks the coupling bolt. For your own safety, check that the safety device (4) is fully engaged.

### Maintenance:

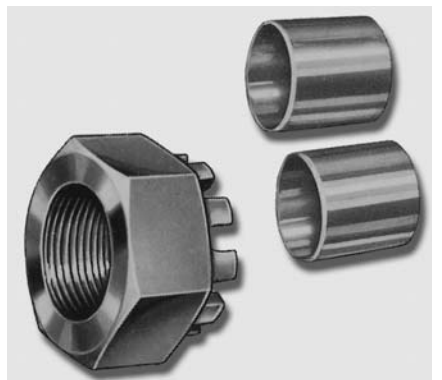
The safety device (4) is provided with a nipple (5) which permits lubrication of the entire coupling head. Please care for a regular lubrication. The coupling bolt and drawbar eye will be subjected to less wear if they are always kept clean and well lubricated.



The coupling jaw cannot only be easily locked in the central position, but also in the two lateral end positions; a great advantage when the tractor and trailer have to be coupled in extreme angular positions. The coupling jaw and the housing consist of high quality fracture-resistant casting.



Two independent coupling bolt interlocks guarantee maximum safety on the road. The wear plate in the coupling jaw can be replaced with effortless ease.

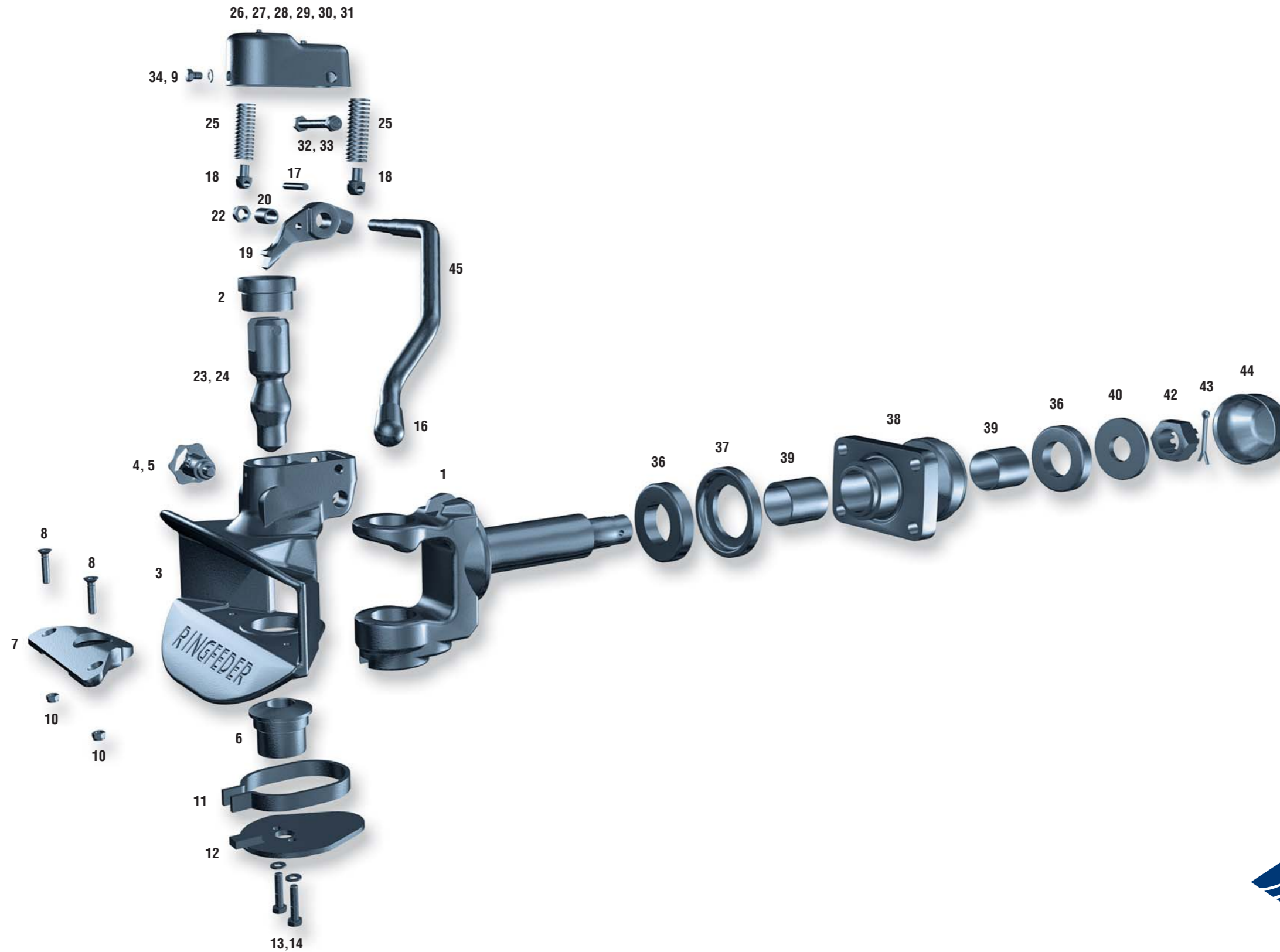


As a result of the provision of plastic bushes the bar guide and drawbar are no longer subject to wear and tear. Also with the bar guide mounted on them they can be replaced very easily. The castellated nut can always be released. We guarantee this.

# Automatic Trailer Coupling

## Type 96 AUS

for heavy duty transport with 50 mm drawbar eyes



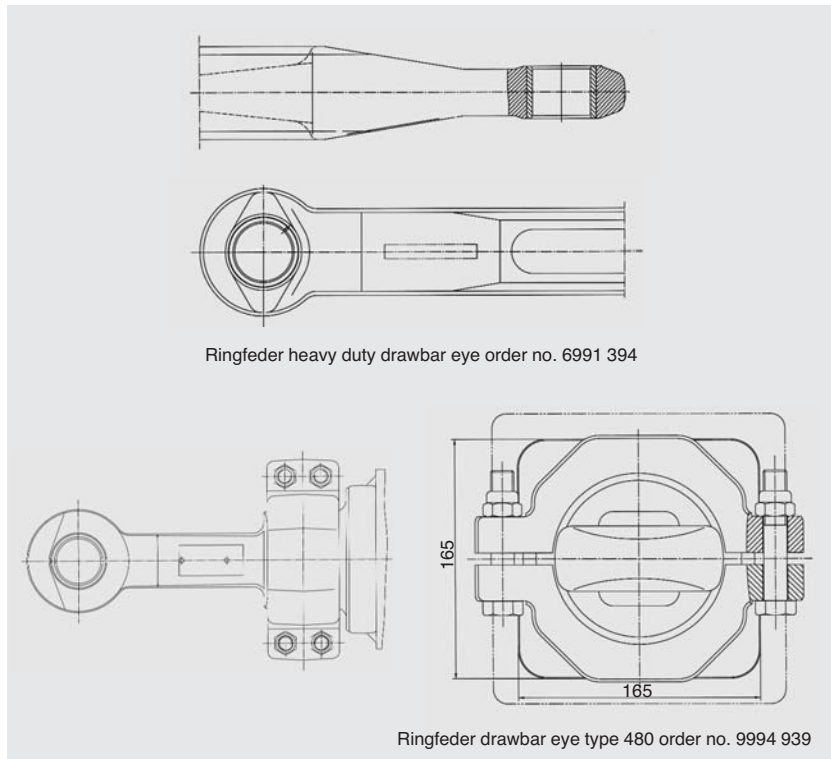
# Type 96 AUS trailer coupling to combine with class D50 drawbar eyes in accordance with EC regulation 94/20 or ISO 1102 or to combine with 50 mm DIN 74053 drawbar eyes and heavy duty drawbar eyes.

Type 96 AUS trailer couplings are approved up to a D-value of 260 kN. In vehicle combinations up to a D-value of 120 kN (130 kN) these trailer couplings may be operated in combination with 50 mm drawbar eyes, design A or B in accordance with DIN 74053 and D 50-A or B in compliance with EC regulation 94/20. In addition, they may exclusively be employed up to a D-value of 260 kN in combination with a heavy duty drawbar eye as shown on the representation below, or with drawbar eyes according to class D 50 in compliance with EC regulation 94/20 having a correspondingly high D-value (e.g. type 480 Ringfeder).

## Type 480 Ringfeder Drawbar Eye

Type 480 Ringfeder Drawbar Eye according to class D 50-X in compliance with EC 94/20 EEC type approval e1 00-0166.

D 50-X	D	260 kN
e1	Dc	135 kN
	S	1000 kg
00-0166	V	75 kN
order No.:		9994939



## Technical Data:

### D-value for towing vehicle and semi-trailer:

$$D \text{ (kN)} = g \cdot \frac{T \cdot R}{T + R}$$

The calculated D-Value may be **less or equal to the** D-value of the coupling

T: max. mass in tonnes of the towing vehicle  
R: max. mass in tonnes of the semi-trailer  
g: acceleration due to gravity 9.81 m/s<sup>2</sup>

### Dc-value for towing vehicle and centre axle trailer: (only applicable in connection with the V-value)

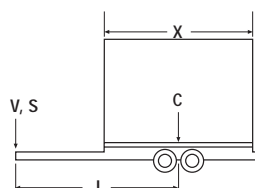
$$Dc \text{ (kN)} = g \cdot \frac{T \cdot C}{T + C}$$

The calculated Dc-value may be **less or equal to the** Dc-value of the coupling.

T: max. mass in tonnes of the towing vehicle  
C: sum of the axle loads of the centre axle trailer carrying maximum permissible load, in tonnes  
g: acceleration due to gravity 9.81 m/s<sup>2</sup>

### V-value for the centre axle trailer (only applicable in connection with the Dc-value)

$$V \text{ (kN)} = a \cdot \frac{X^2}{l^2} \cdot C$$



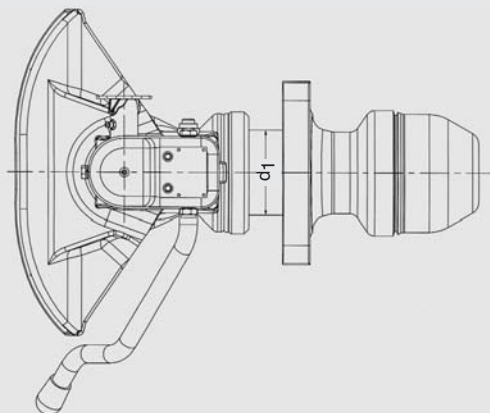
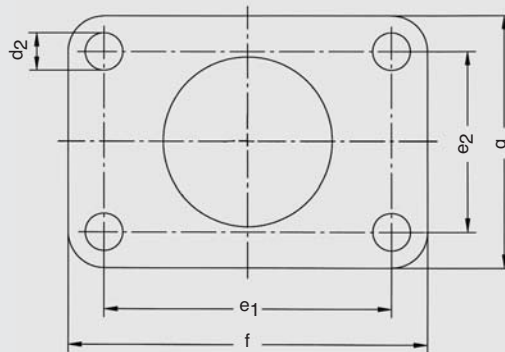
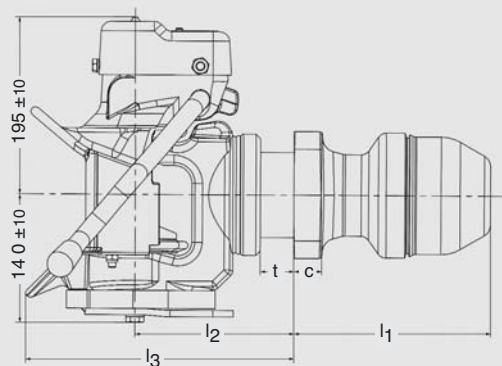
The calculated V-value may be **less or equal to the** V-value of the coupling.

a: equivalent vertical acceleration in the coupling point in m/s<sup>2</sup>

a = 1.8 for vehicles with air suspension  
a = 2,4 for vehicles with other suspension

l: theoretical drawbar length in metres  
X: length of the loading area of the trailer in metres  
 $X^2/l^2$  **at least 1.0** (for the calculation)  
C: sum of the axle loads of the centre axle-trailer carrying maximum permissible load, in tonnes

**Important Instruction:** When fitting (or replacing) the trailer coupling the relevant legal regulations and the instructions from the car manufacturers have to be observed.



**Articulation of drawbar eyes D 50**

horizontally  $\pm 110^\circ$   
 vertically  $\pm 20^\circ$

**Technical Data:**

Model Type	Order-No.	D-Value kN	c	d <sub>1</sub>	d <sub>2</sub>	e <sub>1</sub> x e <sub>2</sub>	f	g	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	t	Weight kg
96 AUS	14 995 500	260	30	ø94	ø21	160 x 100	200	140	220	175	300	35	50



A certified company in accordance with DIN EN ISO 9001 and VDA 6.1

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