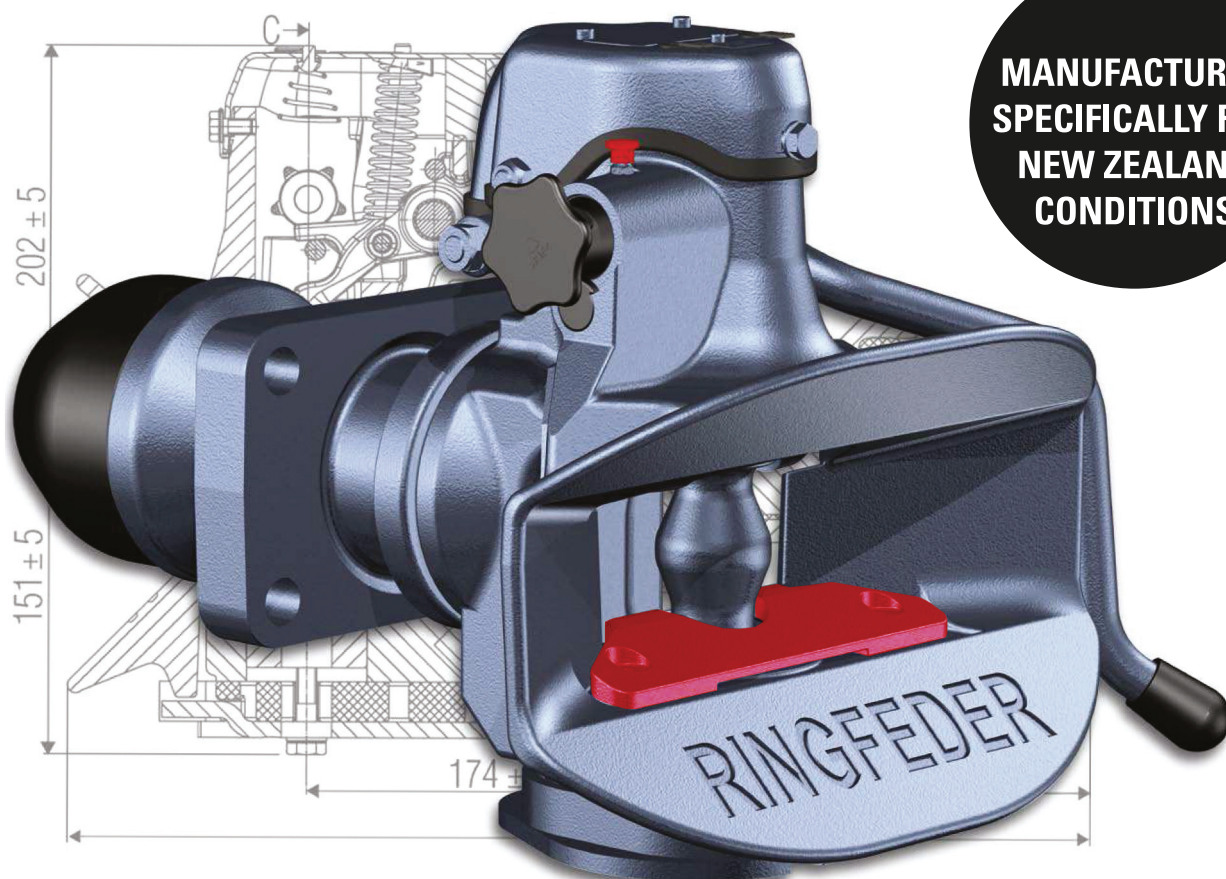




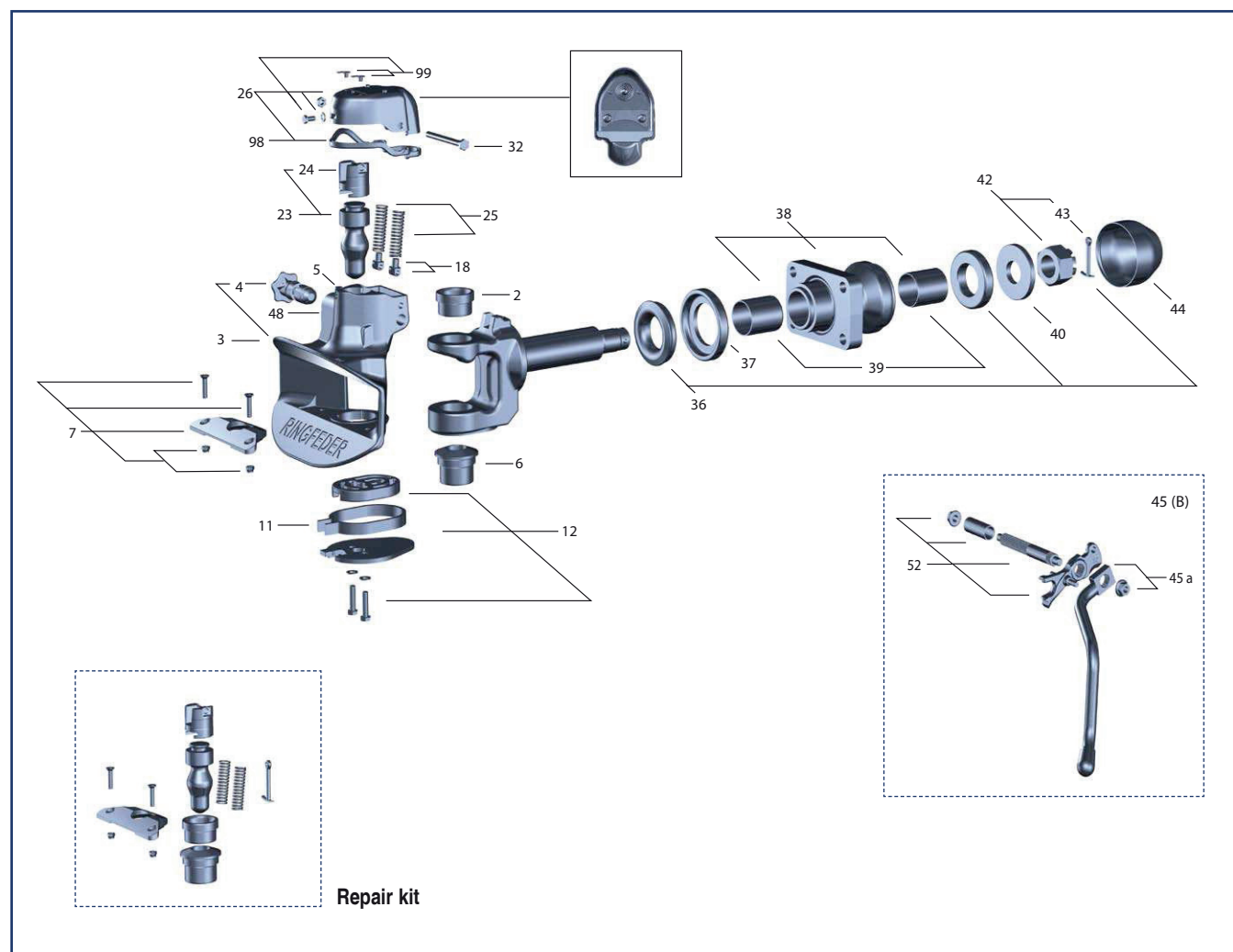
Automatic Trailer Coupling

RINGFEDER[®] Type 5050-B-NZ

for heavy duty transport with 50 mm drawbar eyes



Type 5050-B-NZ



Spare parts

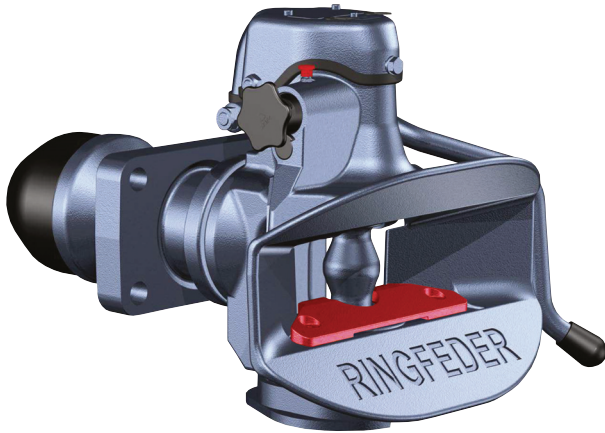
Type 5050-B-NZ		
Pos.	No.	Designation
2	14 991 384	Top guide bush
3	14 991 760	Coupling body
4	14 991 073	Manual safety device (14996434)
6	14 991 407	Bottom guide bush
7	6 998 321	Special plastic plate
7 a	9 996 770	Wearing plate (cast iron)
11	7 995 610	Return spring
12	14 991 399	Tab washer
18	7 998 341	Spring arm
23	14 991 375	Coupling bolt
25	14 991 273	Locking spring
26	14 991 367	End cap, cpl. (14 997 511)
32	14 991 359	Hexagon screw M10 x 115, 10.9
36	14 994 568	Rubber spring
37	14 994 472	Thrust washer
38	14 994 463	Bar guide

Type 5050-B-NZ		
Pos.	No.	Designation
39	14 994 876	Bearing bush
40	14 994 496	Tension washer
42	6 997 732	Castellated nut M45 x 3
43	12 991 533	Cotter pin 8 X 80
44	14 994 455	Protecting cap
45	14 996 858	Hand-/locking lever combination design B
45 a	14 997 190	Hand lever bended, design B
48	9 122 900	Plug for sensor hole (10 pieces)
52	14 996 842	Axle with locking lever
98	9 177 600	Sealing incl. grease plugs
99	9 177 500	Grease plug (10 pieces)
14 991 632 Repair kit (Pos. 2 + 6 + 7 + 23 + 43)		

Technical data

Design	Class	EEC type approval 94/20 EG	D-Value kN	Dc-Value kN	V-Value kN	Admiss supporting load kg	Weight kg	Order number
B - NZ - msd	C 50-X	e11 00-6289	200	135	75/63/50	1000/2000/2500	50	14 991 608

Type 5050-B-NZ



Operation

Trailer coupling coupled

The trailer coupling is closed and secured, respectively coupled, that is to say the towing eye is inserted, the coupling bolt in its lower position, the safety device is engaged: the safety bar/bolt locates over the coupling bolt, the security knob is in the internal engaged position.

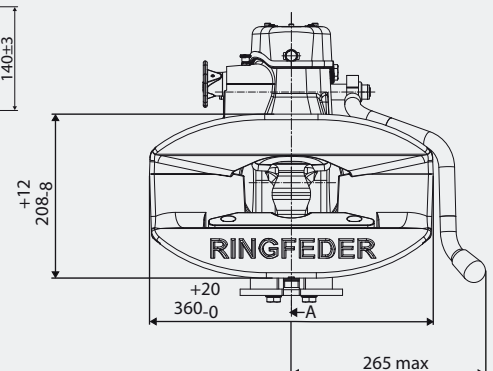
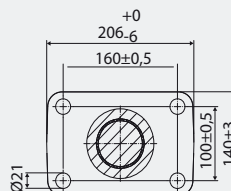
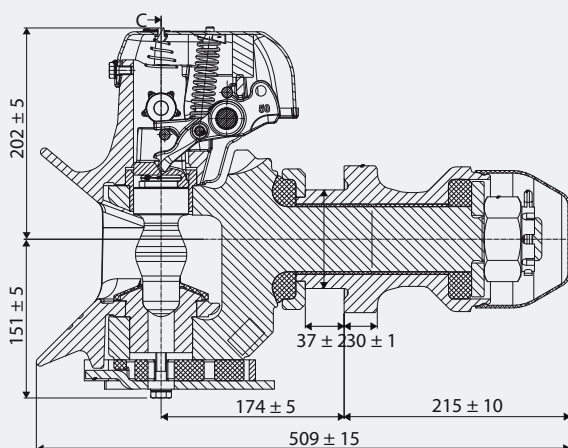
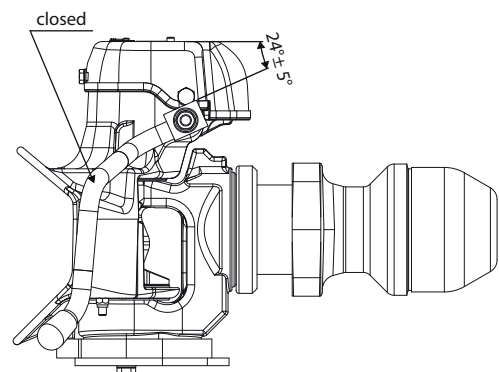
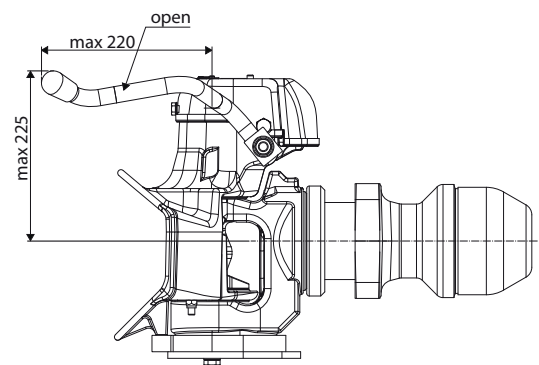
Opening the trailer coupling

The trailer coupling can only be opened if the coupling jaw is in the central position or in the lateral end positions. To release the trailer coupling the securing knob is to be pulled out and turned ahead until it has reached its external engaged position. The trailer coupling now is released. To open the trailer coupling the handle is moved to its upper end position and then released. (The handle engages in the upper end position.) This will cause the coupling bolt to lift up and the towing eye may be extended. Due to the extension of the towing eye the coupling mechanism is again released and thus the coupling repeatedly closed and secured.

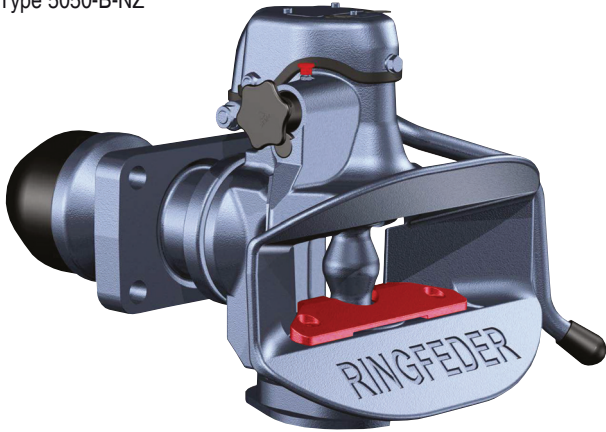
Opening the trailer coupling to couple the towing eye

To open the trailer coupling proceed as described above. The coupling lever is engaged in its upper end position, the coupling is set ready for its next engagement. When inserting the towing eye the coupling mechanism is released by lifting the coupling bolt. The coupling closes automatically which means that the coupling bolt is inserted in its lower position through the towing eye bush in the lower guide bush. The safety device is engaged that is to say the safety bar / bolt locates over the coupling bolt, the securing knob is in its engaged position, the coupling is closed and secured, the towing eye is engaged.

Check that after each coupling process the safety device is fully engaged. If the securing knob is not in its internal engaged position, the trailer coupling is unsecured and the whole coupling procedure must be repeated.



Type 5050-B-NZ



- Modular system
- Rotating coupling bolt
- Low weight
- Minimized wear
- Compatible and safe handling
- Easy to service

Technical Data

D-value for towing vehicle and full-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/s²

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

Dc-value for towing vehicle and centre axle trailer:

(only applicable in connection with the V-value)

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

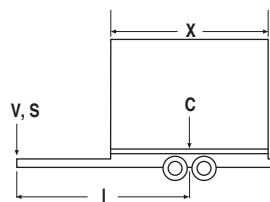
The calculated Dc-value may be **less or equal to** the Dc-value of the coupling.

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/s²

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/s²

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

EEC Type Approval: The mounting of the trailer coupling has to be checked in accordance with the regulations contained in appendix I, no. 5.10 and in compliance with the requirements laid down in appendix VII of the EC regulation 94/20.



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