

# JOST

## Produktbereich Straßenverkehr

- Ⓜ Products for commercial vehicles
- Ⓧ Produits pour véhicules commerciaux
- Ⓜ Produzione per ambito stradale
- Ⓧ Gama de productos para uso en carretera










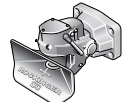




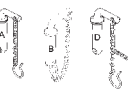

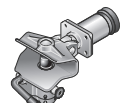

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- D** Für alle aufgeführten Produkte sind **technische Änderungen vorbehalten.**
- GB** We reserve the right to make **changes to the technical specifications** of all the products depicted in this catalogue.
- F** Tous les produits sont présentés sous réserve de **modifications techniques.**
- I** Per tutti i prodotti illustrati ci **riserviamo il diritto di apportare modifiche tecniche.**
- E** Respecto a todos los productos indicados se **reservan modificaciones técnicas.**







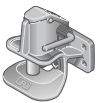




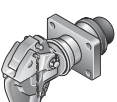
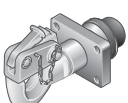

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## Anhängerkupplungen • Towing hitches • Crochets d'attelage • Ganci di Traino • Enganches para remolque





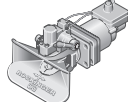
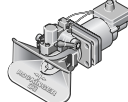


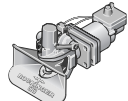




| <b>D</b> Serie<br><b>GB</b> Series<br><b>F</b> Série<br><b>I</b> Serie<br><b>E</b> Serie                               | <b>G</b> enehmigung<br><b>H</b> omologation<br><b>O</b> mologation<br><b>O</b> mologazione<br><b>H</b> omologación | <b>B</b> eschreibung Anhängerkupplung<br><b>D</b> escription towing hitch<br><b>D</b> escription crochet d'attelage<br><b>D</b> escrizione ganci di traino<br><b>D</b> escripción enganche para remolque | <b>f</b> ür Zugösen<br><b>f</b> or towing eyes<br><b>p</b> our anneaux<br><b>p</b> er occhioni di traino<br><b>p</b> ara puntas de lanza | <br><b>T</b> | <br><b>R</b> | <br><b>C</b> | <b>S</b> eite<br><b>P</b> age<br><b>P</b> age<br><b>P</b> ágina<br><b>P</b> ágina |
|--|--|--|--|---|---|---|---|
| <b>RO*42</b><br>                      | ABG  | Vertikalgelenk, Off-Road<br>Vertical articulating, Off-Road<br>Articulation verticale, Off-Road<br>Campana snodata, Off-Road<br>Articulación vertical, Off-Road  | ø 40 mm  |   | <b>x</b>  |   | 10  |
| <b>RO*50 flex</b><br>                 | 94/20/CE   | Schwerlast, Off-Road<br>Heavy duty, Off-Road<br>Lourdes charges, Off-Road<br>Traini eccezionali, Off-Road<br>Carga pesada, Off-Road  | ø 50 mm  |   | <b>x</b>  |   | 12  |
| <b>RO*56 / 561</b><br>                | 94/20/CE   | Schwerlast, Vertikalgelenk<br>Heavy duty, vertical articulating<br>Lourdes charges, articulation verticale<br>Traini eccezionali, campana snodata<br>Carga pesada, articulación vertical                 | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 14  |
| <b>RO*57</b><br>                     | 94/20/CE   | Standard<br>Standard<br>Standard<br>Standard<br>Estándar   | ø 57,5 mm  |   | <b>x</b>  | <b>x</b>  | 16  |
| <b>RO*57 flex</b><br>               | 94/20/CE   | Off-Road<br>Off-Road<br>Off-Road<br>Off-Road<br>Off-Road   | ø 57,5 mm  |   | <b>x</b>  |   | 18  |
| <b>RO*100</b><br>                   | 94/20/CE   | VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC  |  |   | <b>x</b>  | <b>x</b>  | 20  |
| <b>RO*200</b><br>                   | ABG  | Zugkugelkupplung<br>Hitch heads<br>Crochet à boule<br>Gancio per accoppiamento<br>Enganche esférico  |  |   |   |   | 23  |
| <b>RO*205 / 207 / 208 / 230</b><br> | EWG  | Abschleppkupplung<br>Manual towing hitch<br>Chapes de remorquage<br>Ganci di manovra<br>Enganches para remolcar  |  |   |   |   | 24  |
| <b>RO*225 / 227</b><br>             | 94/20/CE   | UNIMOG<br>UNIMOG<br>UNIMOG<br>UNIMOG<br>UNIMOG   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 27  |
| <b>RO*226</b><br>                   | 94/20/CE   | Off-Road, Vertikalgelenk<br>Off-Road, vertical articulating<br>Off-Road, articulation verticale<br>Off-Road, campana snodata<br>Off-Road, articulación vertical  | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 29  |
| <b>RO*231</b><br>                   |  | Hakenkupplung mit Flansch<br>Hook trailer hitch with flange<br>Accouplement à crochet avec bride<br>Gancio a uncino con flangia<br>Enganche de gancho con brida  | ø 40/76 mm   |   | <b>x</b>  | <b>x</b>  | 31  |

## Anhängerkupplungen • Towing hitches • Crochets d'attelage • Ganci di Traino • Enganches para remolque








| <b>D</b> Serie<br><b>GB</b> Series<br><b>F</b> Série<br><b>I</b> Serie<br><b>E</b> Serie          | <b>G</b> enehmigung<br><b>H</b> omologation<br><b>O</b> mologation<br><b>O</b> mologazione<br><b>H</b> omologación | <b>B</b> eschreibung Anhängerkupplung<br><b>D</b> escription towing hitch<br><b>D</b> escription crochet d'attelage<br><b>D</b> escrizione ganci di traino<br><b>D</b> escripción enganche para remolque | <b>f</b> ür Zugösen<br><b>f</b> or towing eyes<br><b>p</b> our anneaux<br><b>p</b> er occhioni di traino<br><b>p</b> ara puntas de lanza | <br><b>T</b> | <br><b>R</b> | <br><b>C</b> | <b>S</b> eite<br><b>P</b> age<br><b>P</b> age<br><b>P</b> agina<br><b>P</b> ágina |
|---|--|--|--|---|---|---|---|
|  <b>RO*232</b>   | 94/20/CE   | Hakenkupplung, gefedert<br>Hook trailer hitch with buffers<br>Accouplement à crochet à ressorts<br>Gancio a uncino molleggiato<br>Enganche de gancho con almohadillas                                    | ø 40/76 mm CH  |   | <b>x</b>  | <b>x</b>  | 33  |
|  <b>RO*240</b>   | 94/20/CE   | Drehbar, Transporter<br>Rotable, light trucks<br>Tournant, véhicules utilitaires<br>Girevole, motrici leggere<br>Giratorio, furgonetas   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 35  |
|  <b>RO*243</b>   | 94/20/CE   | Kompakt, Transporter<br>Compact, light trucks<br>Compact, véhicules utilitaires<br>Compatto, motrici leggere<br>Compacto, furgonetas   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 37  |
|  <b>RO*244</b>  | ABG  | Kompakt, Flurförderzeuge<br>Compact, industrial trucks<br>Compact, chariots de manutention<br>Compatto, dibiti a movimentazione<br>Compacto, vehículos industriales                                      | ø 35/40 mm   |   | <b>x</b>  |   | 39  |
|  <b>RO*245</b> |  | Kompakt, innerbetrieblicher Transport<br>Compact, internal transport<br>Compact, transport inter-usine<br>Compatto, movimentazione interne<br>Compacto, transporte interno                               | ø 35/40 mm   |   | <b>x</b>  | <b>x</b>  | 41  |
|  <b>RO*253</b> |  | Drehbar, Transporter<br>Rotable, light trucks<br>Tournant, véhicules utilitaires<br>Girevole, motrici leggere<br>Giratorio, furgonetas   | ø 40 mm CH   |   | <b>x</b>  | <b>x</b>  | 44  |
|  <b>RO*256</b> | 94/20/CE   | Transporter, gefedert<br>Light trucks with buffers<br>Véhicules utilitaires à ressorts<br>Motrici leggere molleggiato<br>Furgonetas con almohadillas   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 46  |
|  <b>RO*263</b> |  | Standard CH<br>Standard CH<br>Standard CH<br>Standard CH<br>Estándar CH  | ø 40 mm  |   | <b>x</b>  |   | 48  |
|  <b>RO*283</b> |  | Hakenkupplung, gefedert<br>Hook trailer hitch with buffers<br>Accouplement à crochet à ressorts<br>Gancio a uncino molleggiato<br>Enganche de gancho con almohadillas                                    | ø 76 mm  |   | <b>x</b>  | <b>x</b>  | 50  |
|  <b>RO*285</b> |  | Hakenkupplung, gefedert<br>Hook trailer hitch with buffers<br>Accouplement à crochet à ressorts<br>Gancio a uncino molleggiato<br>Enganche de gancho con almohadillas                                    | ø 76 mm  |   | <b>x</b>  | <b>x</b>  | 52  |
|  <b>RO*290</b> |  | Schienegebundene Arbeitsmaschinen<br>Rail vehicles<br>Machines-outils sur rails<br>Macchine di lavoro su rotaia<br>Máquinas de trabajo sobre carriles  | ø 40 mm  |   | <b>x</b>  |   | 54  |





## Anhängerkupplungen • Towing hitches • Crochets d'attelage • Ganci di Traino • Enganches para remolque

| <b>D</b> Serie<br><b>GB</b> Series<br><b>F</b> Série<br><b>I</b> Serie<br><b>E</b> Serie                   | Genehmigung<br>Homologation<br>Omologation<br>Omologazione<br>Homologación | Beschreibung Anhängerkupplung<br>Description towing hitch<br>Description crochet d'attelage<br>Descrizione ganci di traino<br>Descripción enganche para remolque | für Zugösen<br>for towing eyes<br>pour anneaux<br>per occhioni di traino<br>para puntas de lanza | <br><b>T</b> | <br><b>R</b> | <br><b>C</b> | Seite<br>Page<br>Page<br>Página<br>Página |
|--|--|--|--|---|---|---|---|
| <b>RO*400</b><br>         | 94/20/CE   | Standard<br>Standard<br>Standard<br>Standard<br>Estándar   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 56  |
| <b>RO*430</b><br>         | 94/20/CE   | Comfort, spielfrei<br>Comfort, slack-free<br>Confort, sans jeu<br>Confort, senza gioco<br>Confort, exento de juego   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 58  |
| <b>RO*433</b><br>         | 94/20/CE   | Comfort, spielfrei<br>Comfort, slack-free<br>Confort, sans jeu<br>Confort, senza gioco<br>Confort, exento de juego   | ø 40 mm CH   |   | <b>x</b>  | <b>x</b>  | 60  |
| <b>RO*500</b><br>        | 94/20/CE   | Standard<br>Standard<br>Standard<br>Standard<br>Estándar   | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 62  |
| <b>RO*500 G 65</b><br>  | 94/20/CE   | Schwere Starrdeichseln<br>Heavy rigid trailer<br>Timons rigides lourdes<br>Timoni rigidi pesanti<br>Lanzas rígidas pesadas                                       | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 64  |
| <b>RO*530</b><br>       | 94/20/CE   | Comfort, spielfrei<br>Comfort, slack-free<br>Confort, sans jeu<br>Confort, senza gioco<br>Confort, exento de juego   | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 66  |
| <b>RO*560</b><br>       | 94/20/CE   | mit Flansch<br>with flange<br>avec bride<br>con flangia<br>con brida   | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 68  |
| <b>RO*700</b><br>       | 94/20/CE   | Standard<br>Standard<br>Standard<br>Standard<br>Estándar   | ø 50 mm  |   | <b>x</b>  | <b>x</b>  | 70  |
| <b>RO*841 (460)</b><br> | 94/20/CE   | mit Flansch<br>with flange<br>avec bride<br>con flangia<br>con brida   | ø 40 mm  |   | <b>x</b>  | <b>x</b>  | 73  |
| <b>RO*KU 80</b><br>     | 94/20/CE   | Kugelkupplungssystem<br>Ball Coupling System<br>Système d'attelage à boule<br>Sistema gancio a sfera<br>Sistema de enganches esféricos                           | ø 80 mm  |   | <b>x</b>  | <b>x</b>  | 75  |

Zubehör Anhängerkupplungen • Accessories Towing hitches • Accessoires Crochets d'attelages • Accessori Ganci di Traino • Accesorios Enganches para remolque

| <b>D</b> Serie<br><b>GB</b> Series<br><b>F</b> Série<br><b>I</b> Serie<br><b>E</b> Serie                | Genehmigung<br>Homologation<br>Omologation<br>Omologazione<br>Homologación | Beschreibung<br>Description<br>Description<br>Descrizione<br>Descripción  | für Zugösen<br>for towing eyes<br>pour anneaux<br>per occhioni di traino<br>para puntas de lanza | <br><b>T</b> | <br><b>R</b> | <br><b>C</b> | Seite<br>Page<br>Page<br>Pagina<br>Página |
|---|--|---|--|---|---|---|---|
|  RO*480 /<br>483 / 580 | 94/20/CE   | Adapterkupplungen, selbsttätig<br>Adapter hitches, automatic<br>Crochets d'adaptation, automatiques<br>Adattatori, automatici<br>Enganches adaptadores, automáticos | ø 40 / 50 mm   |   | <b>x</b>  |   | 76  |
|                        | 94/20/CE   | Zugösen<br>Towing eyes<br>Anneaux de remorquage<br>Occhioni di traino<br>Puntas de lanza  | ø 40 / 50 / 57,5 mm  |   | <b>x</b>  | <b>x</b>  | 78  |
|                        |  | Prüflöhren<br>Wear gauges<br>Calibres de contrôle<br>Calibri<br>Patrones de comprobación  |  |   |   |   | 81  |
|                       |  | Werkzeuge<br>Tools<br>Outils<br>Attrezzi<br>Herramientas  |  |   |   |   | 81  |

|   |   |   |  |  |  |  |          |
|---|---|---|--|--|--|--|----------|
|  | Ersatzteile<br>Spare parts<br>Pièces de rechange<br>Ricambi<br>Piezas de recambio | Fernanzeige, In-cab status indicator, Affichage à distance,<br>Teleindicación, Segnalatore; RO*260*; RO*372*; RO*715 A*;<br>RO*715 E*<br>*Auslaufmodell • Discontinued model • Modèle de fin de série •<br>Modello in via di esaurimento • Modelo de expiración |  |  |  |  | 82       |
|  | Zubehör<br>Accessories<br>Accessoires<br>Accessori<br>Accesorios                  | Aufrüstsätze • Upgrade kits • Kits d'adaptation •<br>Kit complementari • Juegos de equipamiento posterior<br>Schraubensätze • Screw sets • Kits de vis • Kit di viti •<br>Juegos de tornillos   |  |  |  |  | 87<br>89 |

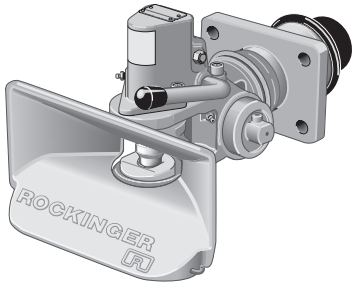
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|---|---|--|--|--|--|--|----|
|  | Berechnung<br>Calculation<br>Calcul<br>Calcolo<br>Cálculo |  |  |  |  |  | 90 |
|---|---|--|--|--|--|--|----|

Verwendete Piktogramme • Used pictographs • Pictogrammes utilisés • Pittogrammi utilizzati • Pictogramas empleados

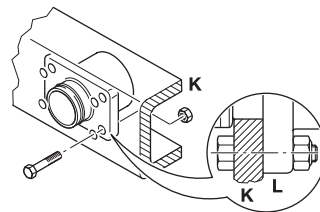
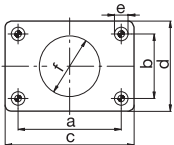
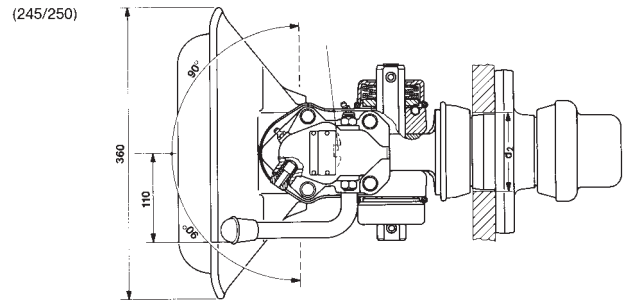
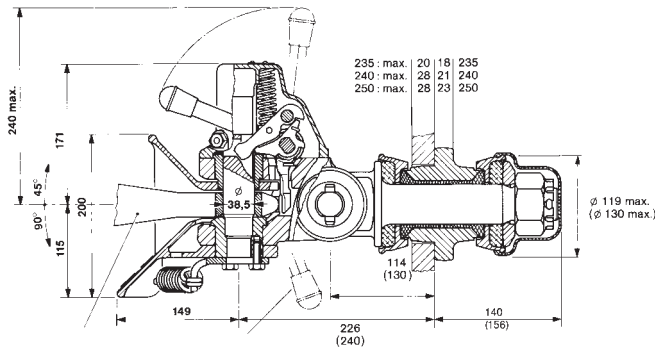
| D<br>GB<br>F<br>I<br>E | Icon<br>Series<br>Série<br>Serie<br>Serie | Beschreibung<br>Description<br>Description<br>Descrizione<br>Descripción  | D<br>GB<br>F<br>I<br>E | Icon<br>Series<br>Série<br>Serie<br>Serie | Beschreibung<br>Description<br>Description<br>Descrizione<br>Descripción   |
|------------------------|---|---|------------------------|---|--|
|                        |   | Handhebelposition<br>Hand lever position<br>Position du levier à main<br>Posizione della leva manuale<br>Posición de la palanca de mano     |                        |   | Klemmlänge: K<br>Grip: K<br>Longueur de serrage: K<br>Lunghezza di serraggio: K<br>Longitud de apriete: K  |
|                        |   | Kupplungsgröße<br>Hitch size<br>Dimension du crochet<br>Dimensioni del gancio<br>Tamaño del enganche  |                        |   | Zugfahrzeug, Schiene<br>Truck, rail<br>Poids du véhicule tracteur, rail<br>Motrice, guida<br>Vehículo tractor, carril                            |
|                        |   | Lochbild<br>Hole pattern<br>Schéma de perçage<br>Interassi dei fori di fissaggio<br>Disposición de agujeros                                 |                        |   | Befestigungslager<br>Attachment bearing<br>Palier de fixation<br>Cuscinetto di fissaggio<br>Cojinetes de sujeción                                |
|                        |   | D-Wert<br>D-value<br>Valeur D<br>Valore D<br>Valor D  |                        |   | VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC<br>VARIOBLOC  |
|                        |   | Dc-Wert<br>Dc-value<br>Valeur Dc<br>Valore Dc<br>Valor Dc   |                        |   | Kupplungskugel<br>Hitch ball<br>Boule d'attelage<br>Gancio a sfera<br>Enganche de bola   |
|                        |   | D-Wert VARIOBLOC<br>D-value VARIOBLOC<br>Valeur D VARIOBLOC<br>Valore D VARIOBLOC<br>Valor D VARIOBLOC                                      |                        |   | Kupplungsbolzen<br>Hitch pin<br>Boulon d'accouplement<br>Perno<br>Perno de acoplamiento  |
|                        |   | Dc-Wert VARIOBLOC<br>Dc-value VARIOBLOC<br>Valeur Dc VARIOBLOC<br>Valore Dc VARIOBLOC<br>Valor Dc VARIOBLOC                                 |                        |   | Steckbolzen<br>Insert hitch pin<br>Axe embrochable<br>Perno<br>Perno enchufable  |
|                        |   | V-Wert<br>V-value<br>Valeur V<br>Valore V<br>Valor V  |                        |   | Zugöse<br>Towing eye<br>Anneau de remorquage<br>Occhione di traino<br>Punta de lanza   |
|                        |   | Starrdeichselanhänger<br>Central-axle trailer<br>Remorque fixe<br>Rimorchio a timone rigido<br>Remorque de barra de tracción fija           |                        |   | Zugöse $\emptyset$<br>Towing eye $\emptyset$<br>Anneau de remorquage $\emptyset$<br>Occhione di traino $\emptyset$<br>Punta de lanza $\emptyset$ |
|                        |   | Gelenkdeichselanhänger<br>Drawbar trailer<br>Remorque articulée<br>Rimorchio con timone snodato<br>Remorque de barra de tracción articulada |                        |   | Anschraubplatte<br>Plate of bolting<br>Platine à boulonner<br>Piastra di fissaggio<br>Plancha roscable   |
|                        |   | Zugfahrzeug<br>Truck<br>Poids du véhicule tracteur<br>Motrice<br>Vehículo tractor   |                        |   | Gewicht<br>Weight<br>Poids<br>Peso<br>Peso   |
|                        |   | Langes Fangmaul<br>Long jaw<br>Pavillon long<br>Bocca di aggancio lunga<br>Boca de enganche larga   |                        |   | Seitenanschlag RO*57<br>Protection stop RO*57<br>Taquet latéral RO*57<br>Guida di appoggio RO*57<br>Tope lateral RO*57                           |

# RO★42 - 40 mm

- D** Schlechtwegekupplung mit Vertikalgelenk
- GB** Off road hitch with vertical articulating hitch head
- F** Crochet d'attelage pour voies en mauvais état à articulation verticale
- I** Gancio per sollecitazioni gravose con campana snodata
- E** Enganche para carreteras en mal estado con articulación vertical



a = 40 mm  
DIN 74054  
94/20/CE



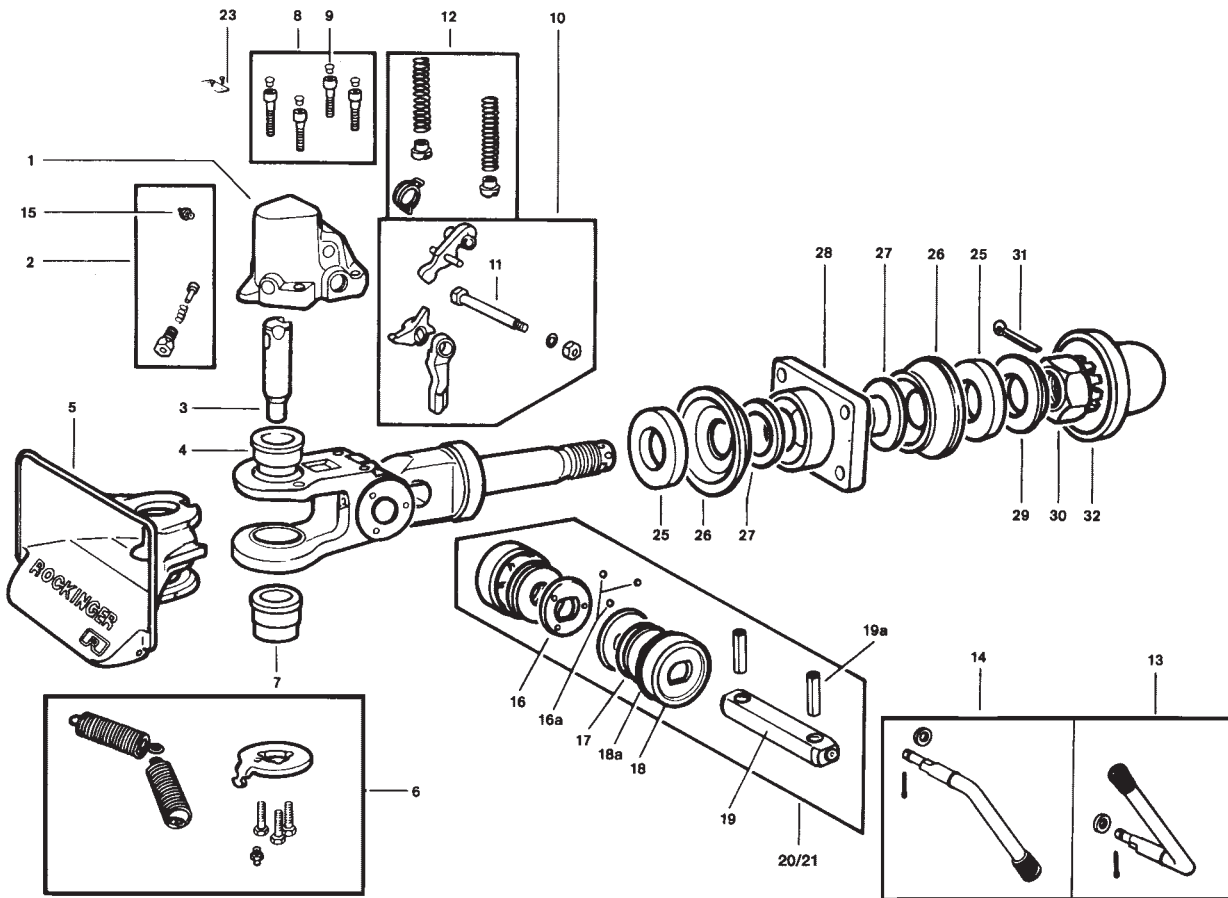
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 235 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 245 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 250 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |



|     | K (mm) | K (mm)  |
|-----|--------|---------|
| 235 | 20     | max. 20 |
| 245 | 28     | max. 28 |
| 250 | 28     | max. 28 |

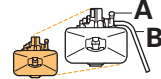

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|           |   |   |      |        |        |       |  |      | <b>ABG M</b> |
|-----------|---|---|------|--------|--------|-------|--|------|--------------|
|           | A | B | (mm) | D (kN) | S (kg) | C (t) |  | (kg) |              |
| RO42G235  | A |   | 235  | 70     | 50     | 1,3   |  | 31,5 | 4431         |
| RO42G235A | B |   | 235  | 70     | 50     | 1,3   |  | 31,5 | 4431         |
| RO42G240  | A |   | 245  | 100    | 50     | 1,3   |  | 35,5 | 4432         |
| RO42G250  | A |   | 250  | 120    | 50     | 1,3   |  | 37,5 | 4433         |
| RO42G250A | B |   | 250  | 120    | 50     | 1,3   |  | 37,5 | 4433         |





| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxAxxxx  | 70046 | 1   |
| 01   | ROxxxBxxxx  | 70047 | 1   |
| 02   |   | 67796 | 1   |
| 03   |   | 47059 | 1   |
| 04   |   | 53359 | 1   |
| 05   |   | 46080 | 1   |
| 06   |   | 67799 | 1   |
| 07   |   | 53378 | 1   |
| 08   |   | 57162 | 1   |
| 09   |   | 25151 | 4   |
| 10   |   | 70055 | 1   |
| 12   |   | 67798 | 1   |
| 13   | ROxxxAxxxx  | 50203 | 1   |
| 14   | ROxxxBxxxx  | 50184 | 1   |
| 15   |   | 65018 | 1   |
| 16   |   | 54932 | 2   |
| 16a  |   | 39158 | 6   |
| 17   |   | 39022 | 8   |

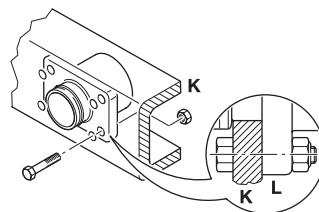
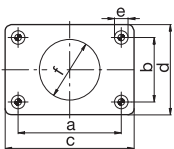
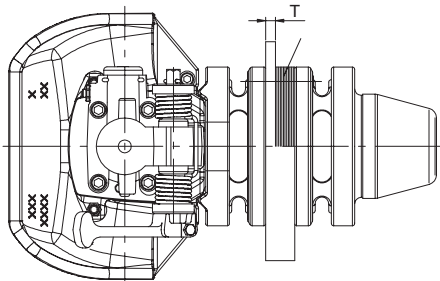
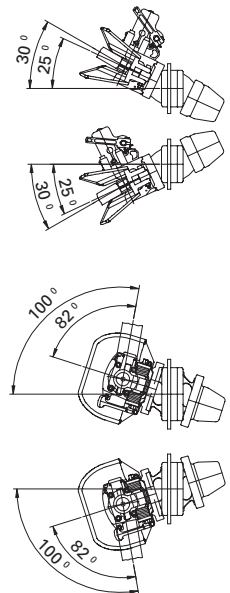
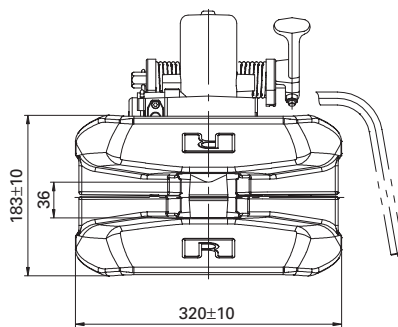
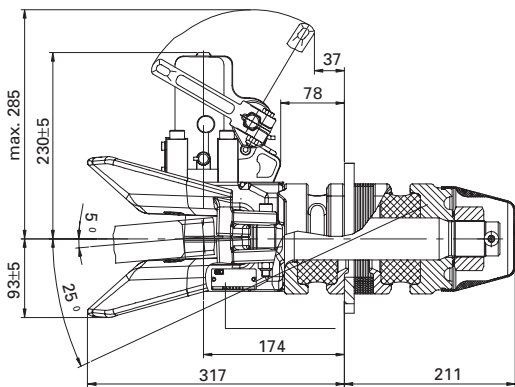
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 18   |  | 13228 | 2   |
| 19a  |  | 39160 | 2   |
| 20   |  | 70043 | 1   |
| 21   |  | 70625 | 1   |
| 26   | 235  | 44084 | 2   |
| 26   | 245, 250   | 44079 | 2   |
| 28   | 235  | 43242 | 1   |
| 28   | 245  | 43235 | 1   |
| 28   | 250  | 43236 | 1   |
| 29   | 235  | 54707 | 1   |
| 29   | 245, 250   | 54680 | 1   |
| 30   | 235  | 56051 | 1   |
| 30   | 245, 250   | 56049 | 1   |
| 32   | 235  | 25214 | 1   |
| 32   | 245, 250   | 25072 | 1   |
| Kit  | 25, 27, 31 (235)   | 67472 | 1   |
| Kit  | 25, 27, 31 (245, 250)  | 67471 | 1   |

# RO★50 flex - 50 mm

- D** Anhängerkupplung für hohe Beanspruchungen und im Off-Road-Einsatz
- GB** Towing hitch for rugged conditions and off road applications
- F** Crochet d'attelage pour sollicitations élevées et en utilisation off-road
- I** Gancio di traino per elevate sollecitazioni e fuoristrada
- E** Enganche para remolque para altas prestaciones fuera de la carretera



a = 50 mm  
 DIN 74053  
 94/20/CE  
 ISO 1102  
 ROE57005



|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

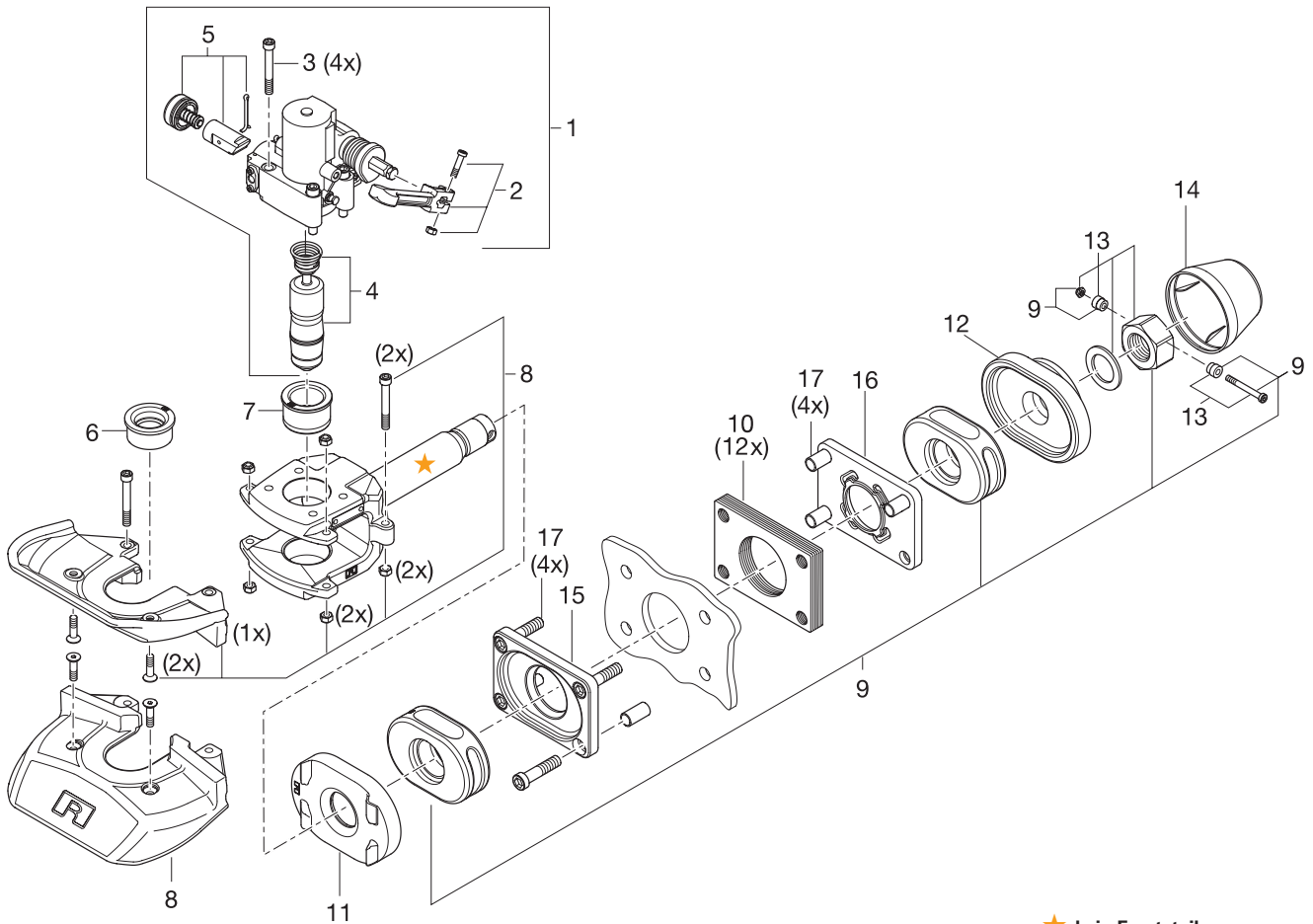
|   | K (mm) | K (mm)  |
|---|--------|---------|
| 6 | -      | max. 35 |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

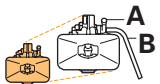

|             |   |           |        |        |       |      |         | e1 |   |  |
|-------------|---|-----------|--------|--------|-------|------|---------|----|---|--|
|             |   | (mm)      | D (kN) | S (kg) | C (t) | (kg) |         |    |   |  |
| RO506A61500 | 6 | 160 x 100 | 260    |        |       | 57   | 00-1360 |    |   |  |
| RO506B61500 | 6 | 160 x 100 | 260    |        |       | 57   | 00-1360 |    |   |  |
| RO506C61540 | 6 | 160 x 100 | 260    |        |       | 66   | 00-1360 | x  | x |  |
| RO506C61500 | 6 | 160 x 100 | 260    |        |       | 57   | 00-1360 |    |   |  |
| RO506D61500 | 6 | 160 x 100 | 260    |        |       | 57   | 00-1360 |    |   |  |

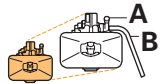

# RO★50 flex

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



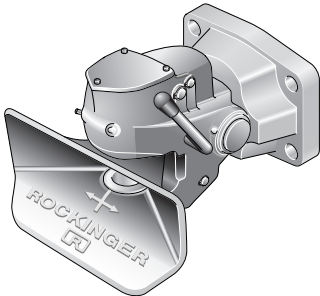
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxAxxx0 (2A, 3, 4, 5)  | 71200 | 1   |
| 01   | ROxxxBxxx0 (2B, 3, 4, 5)  | 71202 | 1   |
| 02   | ROxxxAxxxx  | 50256 | 1   |
| 02   | ROxxxBxxxx  | 50267 | 1   |
| 03   |   | 30229 | 4   |
| 04   | ROxxxxxx0   | 47123 | 1   |
| 05   |   | 71265 | 1   |
| 06   |   | 53551 | 1   |
| 07   | ROxxxxxx0   | 53576 | 1   |
| 08   |   | 46126 | 2   |

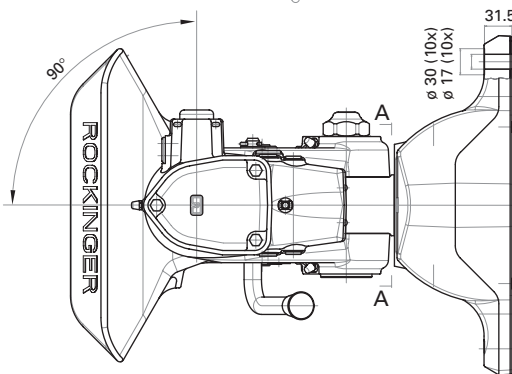
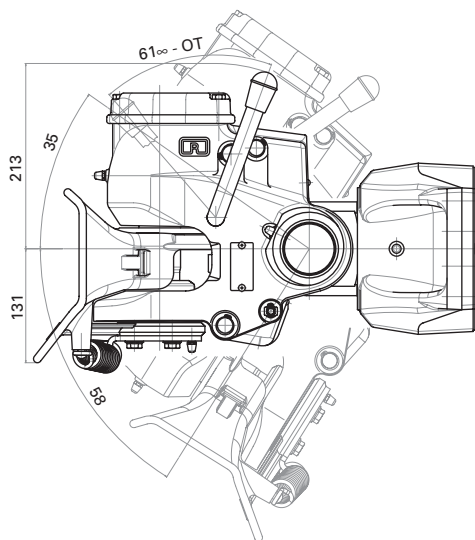
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 09   |  | 71266 | 1   |
| 10   |  | 15690 | 1   |
| 11   |  | 12615 | 1   |
| 12   |  | 43480 | 1   |
| 13   |  | 56122 | 1   |
| 14   |  | 25347 | 1   |
| 15   |  | 43478 | 1   |
| 16   |  | 43479 | 1   |
| 17   |  | 30399 | 4   |

# RO\*56 E / 561 - 50 mm (e1-Version)

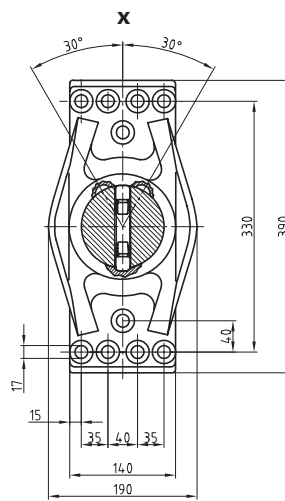
- D** Schwerlastkupplung mit Vertikalgelenk
- GB** Heavy duty hitch with vertical articulating hitch head
- F** Crochet d'attelage pour lourdes charges à articulation verticale
- I** Gancio per traini eccezionali con campana snodata
- E** Enganche de carga pesada con articulación vertical



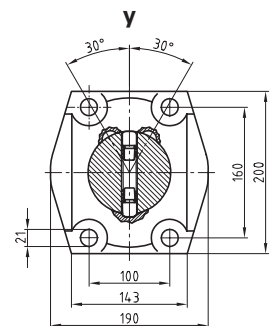
a = 50 mm  
 nur Schwerlastzugöse  
 only heavy duty towing eye  
 uniquement anneau de remorquage pour lourdes charges  
 solo occhione di traino eccezionali  
 sólo punta de lanza para cargas pesadas  
 ROE57005



RO\*56 E (561 E)



RO\*56 E



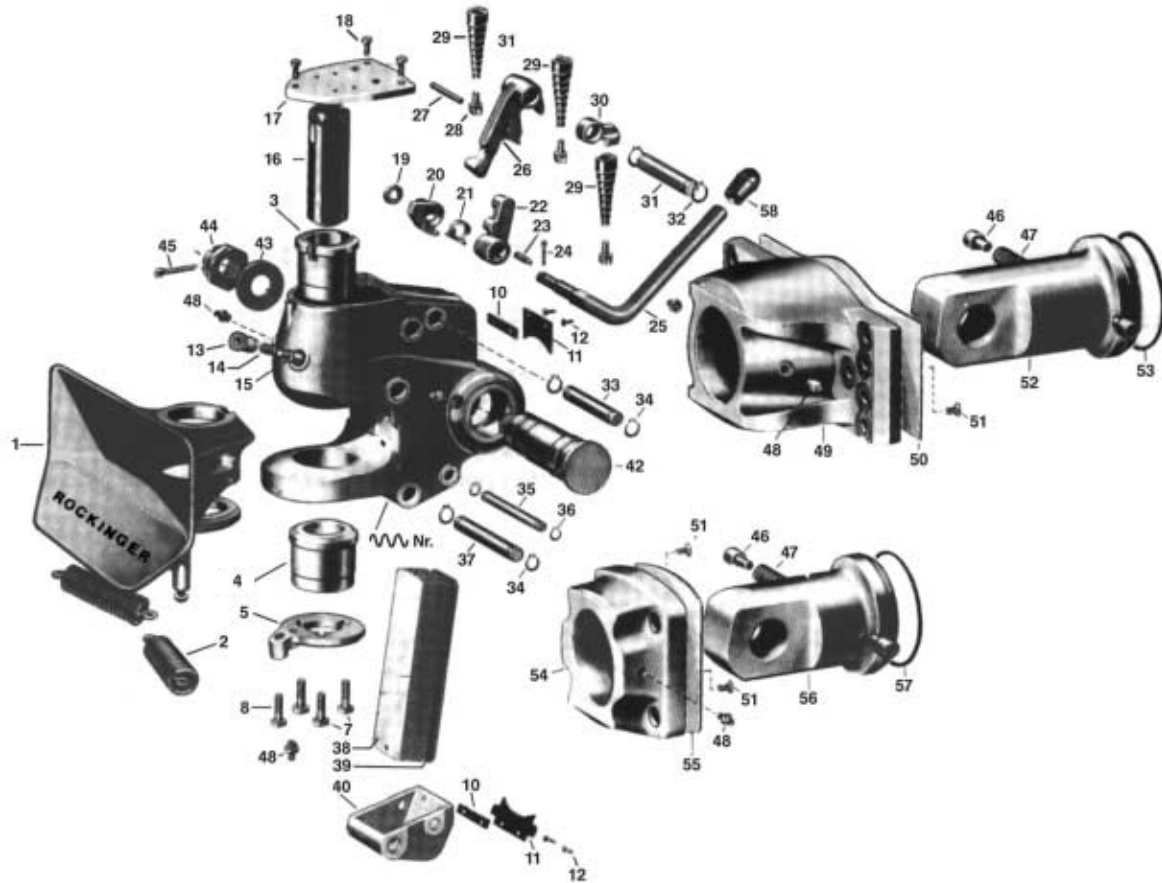
RO\*561 E



## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

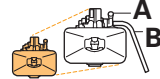

|             |   |   |      |        |        |      |         | <b>e1</b> |
|-------------|---|---|------|--------|--------|------|---------|-----------|
|             | A | 6 | (mm) | D (kN) | S (kg) | (kg) |         |           |
| RO 567A8000 | A |   | x    | 314    |        | 80   | 00-1630 |           |
| RO 567A6600 | A | 6 | y    | 200    |        | 60   | 00-1631 |           |

# RO\*56 / 561 (ABG-Version)

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 46020 | 1   |
| 01a  | (1 + 3)   | 70463 | 1   |
| 02   |   | 55005 | 2   |
| 03   | •   | 53019 | 1   |
| 04   | •   | 53244 | 1   |
| 05   |   | 65549 | 1   |
| 07   |   | 57236 | 1   |
| 08   |   | 56024 | 1   |
| 10   |   | 15008 | 2   |
| 11   |   | 25010 | 2   |
| 15   |   | 68000 |   |
| 16   | •   | 47041 | 1   |
| 17   |   | 65009 | 1   |
| 18   |   | 70249 | 1   |
| 19   |   | 33011 | 1   |
| 20   |   | 51012 |   |
| 22   |   | 51013 | 1   |
| 23   |   | 32007 | 1   |
| 25   |   | 50084 |   |
| 25   |   | 50092 | 1   |
| 25   |   | 50177 | 1   |
| 26   |   | 51036 | 1   |

| Pos.      |  | ROE   |  |
|-----------|--|-------|---|
| 28        |  | 13005 | 3   |
| 29        |  | 55024 | 3   |
| 30        |  | 65010 | 1   |
| 31        |  | 52002 | 1   |
| 33        |  | 52011 | 1   |
| 37        |  | 52009 | 1   |
| 38        |  | 55026 | 14  |
| 40        |  | 65066 | 1   |
| 43        |  | 33002 | 1   |
| 46        |  | 52014 | 2   |
| 47        |  | 55028 | 1   |
| 50        |  | 54274 | 1   |
| 52        |  | 42016 |   |
| 53        |  | 25062 | 1   |
| 55        |  | 54276 | 1   |
| 56        |  | 42014 | 1   |
| 57        |  | 25063 | 1   |
| 58        |  | 25104 | 1   |
| • Kit 561 |  | 66920 | 1   |
| • Kit 56  |  | 67252 | 1   |

Reparatursatz • Repair kit • Kit de réparation  
Kit riparazione • Juego de reperacion

Pos.

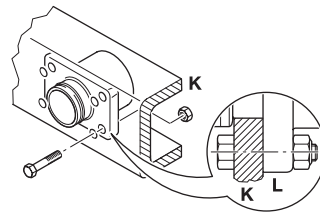
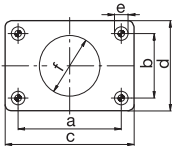
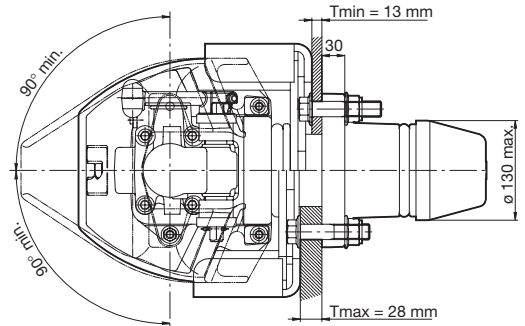
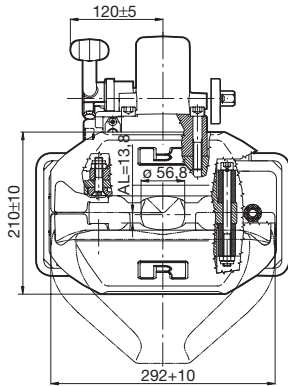
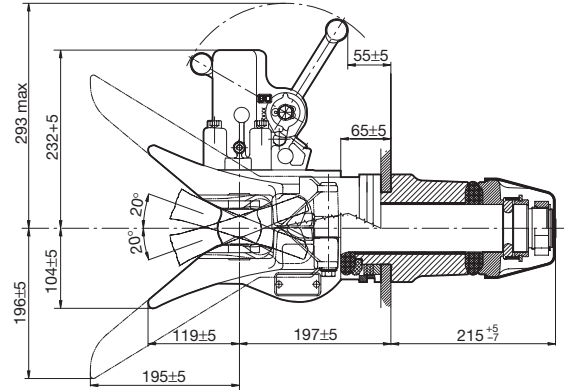
(• 03, • 04, • 16) 21, 24, 32, 34, 35, 36, 39, 42, 44, 45, 48, 49, 54

# RO★57 - 57 mm

- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



a = 57,5 mm  
 Schwedische Norm  
 Swedish standard  
 Norme suédoise  
 Normativa svedese  
 Norma sueca

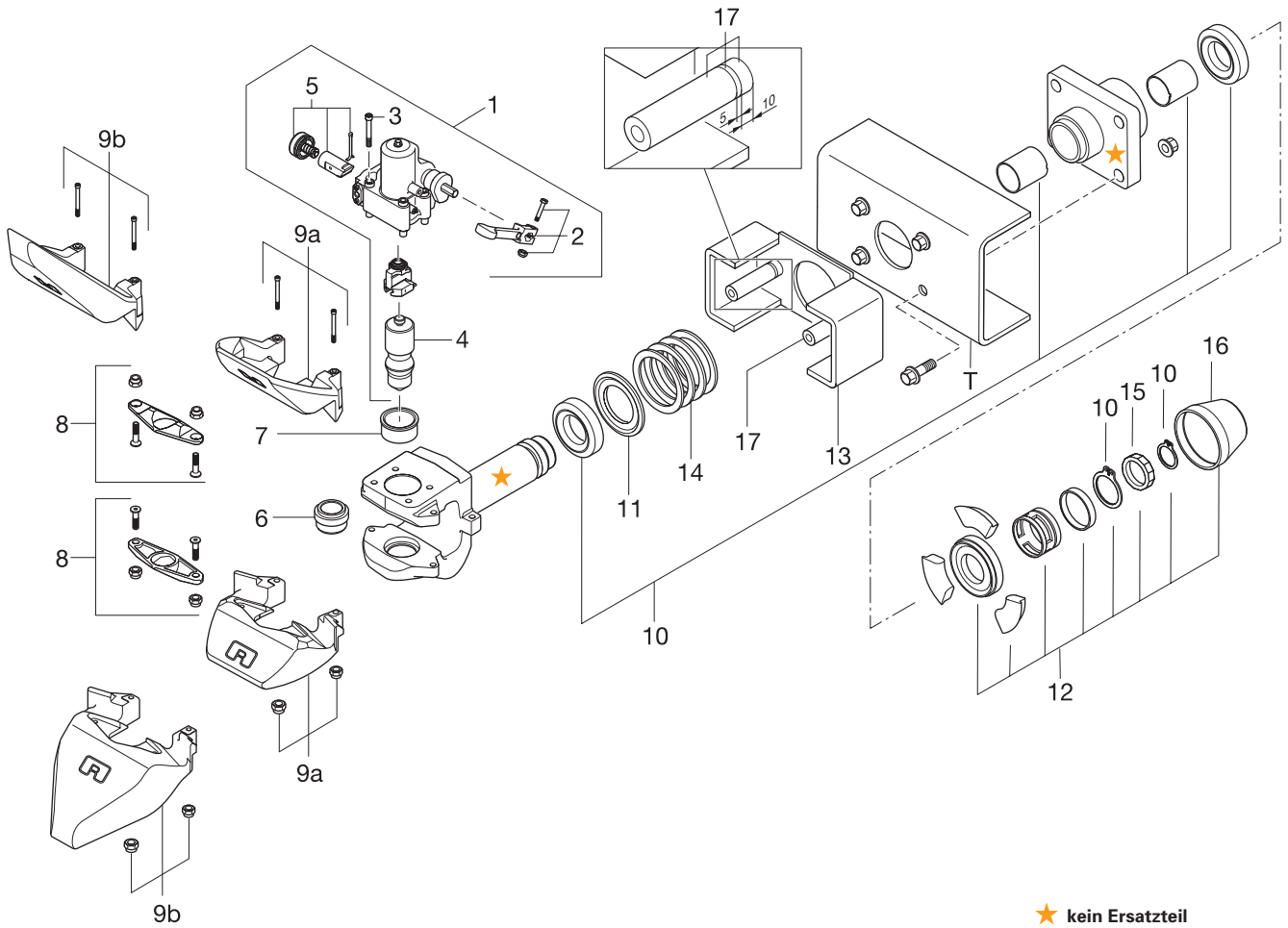


|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |



|   | K (mm) | K (mm)  |
|---|--------|---------|
| 6 | 13-28  | max. 28 |

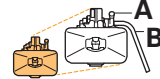

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

| C<br>D    | A<br>B | (mm)      | T      |         | S (kg) | V (kN) | Av | e1      | (kg) |   |   |  |  |   |
|-----------|--------|-----------|--------|---------|--------|--------|----|---------|------|---|---|--|--|---|
|           |        |           | R      | C       |        |        |    |         |      |   |   |  |  |   |
|           |        | (mm)      | D (kN) | Dc (kN) |        |        |    |         |      |   |   |  |  |   |
| 570C6100C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 69   |   |   |  |  | x |
| 570D6100C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 69   |   |   |  |  | x |
| 570C6120C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 69   | x |   |  |  | x |
| 570C6140C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 75   | x | x |  |  | x |
| 570C6150C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 66   | x | x |  |  |   |
| 570C6151C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 60   |   |   |  |  |   |
| 570C6154C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 63   |   |   |  |  | x |
| 570C6156C |        | 160 x 100 | 300    | 145     | 1000   | 95     | 18 | 00-1361 | 69   | x | x |  |  | x |



★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxx Cxxxx (2C, 3, 4, 5)   | 71192 | 1   |
| 01   | ROxxx Dxxxx (2D, 3, 4, 5)   | 71198 | 1   |
| 02   | ROxxx Cxxxx   | 50256 | 1   |
| 02   | ROxxx Dxxxx   | 50258 | 1   |
| 03   |   | 30329 | 1   |
| 04   |   | 47116 | 1   |
| 05   |   | 71153 | 1   |
| 06   |   | 53544 | 1   |
| 07   |   | 53543 | 1   |
| 08   |   | 71154 | 1   |

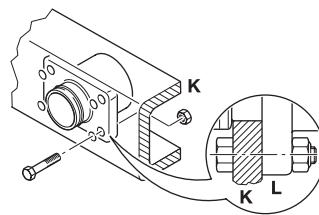
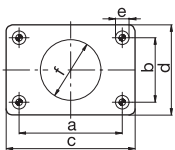
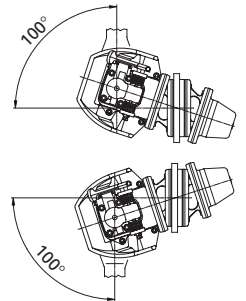
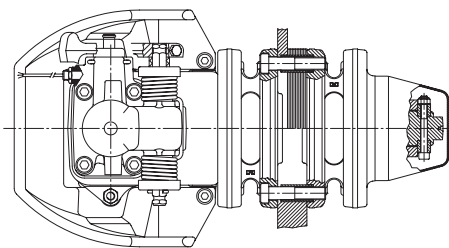
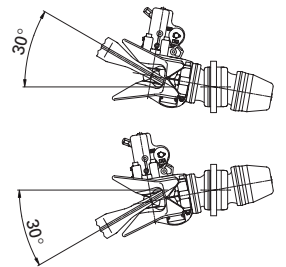
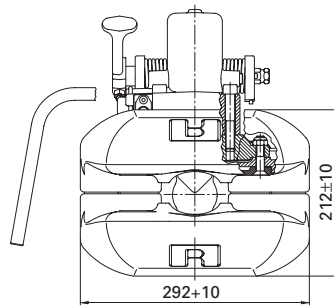
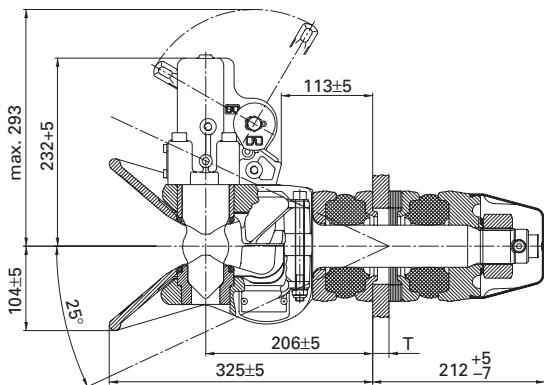
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 09a  |  | 71161 | 1   |
| 09b  |  | 71162 | 1   |
| 10   |  | 71155 | 1   |
| 11   |  | 44177 | 1   |
| 12   |  | 71156 | 1   |
| 13   |  | 71157 | 1   |
| 14   |  | 71158 | 1   |
| 15   |  | 56120 | 1   |
| 16   |  | 25347 | 1   |
| 17   |  | 71211 | 1   |

# RO★57 flex - 57 mm

- D** Anhängerkupplung für hohe Beanspruchungen und im Off-Road-Einsatz
- GB** Towing hitch for rugged conditions and off road applications
- F** Crochet d'attelage pour sollicitations élevées et en utilisation off-road
- I** Gancio di traino per elevate sollecitazioni e fuoristrada
- E** Enganche para remolque para altas prestaciones fuera de la carretera



a = 57,5 mm  
 Schwedische Norm  
 Swedish standard  
 Norme suédoise  
 Normativa svedese  
 Norma sueca



|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|   | K (mm) | K (mm)  |
|---|--------|---------|
| 6 | -      | max. 35 |

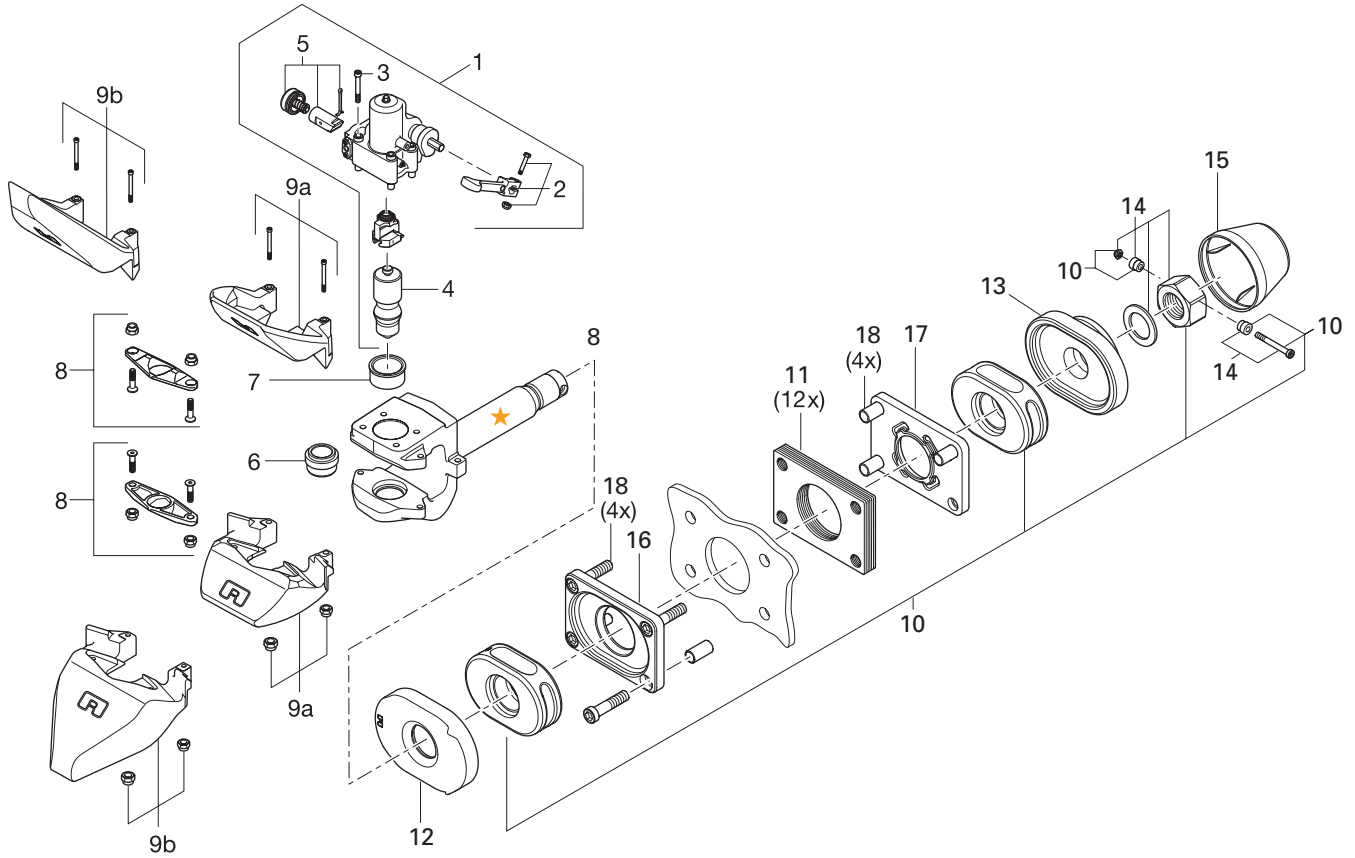
## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   |           | T      | R       | C      |        |      | e1      |   |   |
|-------------|---|-----------|--------|---------|--------|--------|------|---------|---|---|
|             |   | (mm)      | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |         |   |   |
| RO576C61000 | 6 | 160 x 100 | 260    |         |        |        | 57   | 00-4982 |   |   |
| RO576D61000 | 6 | 160 x 100 | 260    |         |        |        | 57   | 00-4982 |   |   |
| RO576C61400 | 6 | 160 x 100 | 260    |         |        |        | 63   | 00-4982 | x | x |

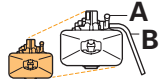



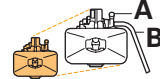

# RO★57 flex

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

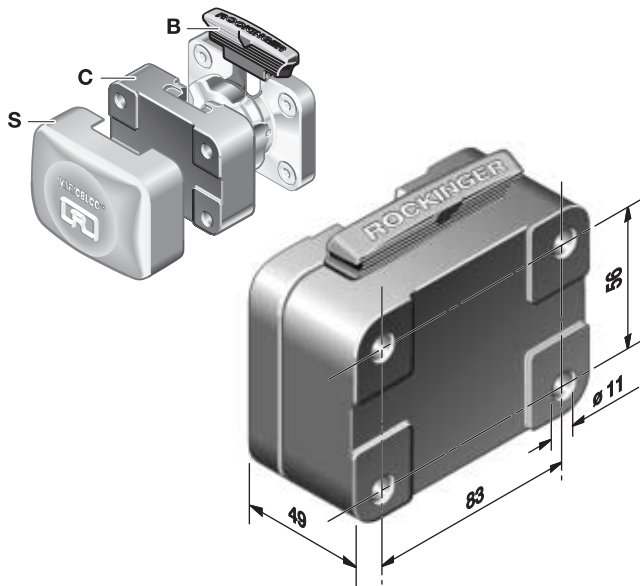


★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxCxxxx (2C, 3, 4, 5)  | 71192 | 1   |
| 01   | ROxxxDxxxx (2D, 3, 4, 5)  | 71198 | 1   |
| 02   | ROxxxCxxxx  | 50256 | 1   |
| 02   | ROxxxDxxxx  | 50258 | 1   |
| 03   |   | 30329 | 1   |
| 04   |   | 47116 | 1   |
| 05   |   | 71153 | 1   |
| 06   |   | 53544 | 1   |
| 07   |   | 53543 | 1   |
| 08   |   | 71154 | 1   |

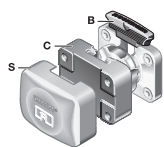
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 09a  |  | 71161 | 1   |
| 09b  |  | 71162 | 1   |
| 10   |  | 71266 | 1   |
| 11   |  | 15690 | 1   |
| 12   |  | 12615 | 1   |
| 13   |  | 43480 | 1   |
| 14   |  | 56122 | 1   |
| 15   |  | 25347 | 1   |
| 16   |  | 43478 | 1   |
| 17   |  | 43479 | 1   |
| 18   |  | 30399 | 4   |






# RO★100, VARIOBLOC

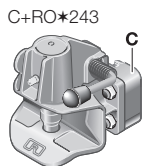







- D** Multifunktionales Wechselsystem für Transporter, Geländewagen, Busse in Verbindung mit Bolzen-, Hakenkuppelung, Kupplungskugel; geeignet für Hecktragesysteme und Arbeitsgeräte.
- GB** Multifunctional alternating system for transporter, cross-country vehicles and buses, in connection with pin hitch, hook trailer hitch, hitch ball, suitable for towbar bracket systems and work devices.
- F** Système mobile multifonction pour véhicules utilitaires, voitures tout terrain et bus liaison avec accouplement à boulon, à crochet ou boule d'attelage ; convient pour systèmes de portage arrière et outillage.
- I** Sistema intercambiabile multifunzione per furgoni, fuoristrada, bus in abbinamento a ganci a perno a uncino e ganci a sfera; adatto per sistemi di trasporto posteriori e attrezzi di lavoro.
- E** Sistema de cambio multifuncional para furgonetas, vehículos todo terreno, autobuses en combinación con enganches de bulón, enganches de gancho, enganches de bola; indicado para sistemas de soporte posterior y útiles de trabajo.

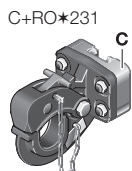
## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos



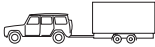




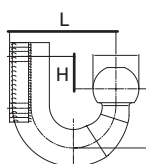
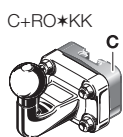
|              | <br>(mm) | <br>D (kN) | <br>Dc (kN) | <br>S (kg)   V (kN) |      | <br>(kg) | <b>e1</b> |
|--------------|---|---|--|--|------|---|-----------|
| ROE100A01001 | 83 x 56   | 30  | 30   | 250  | 12,0 | 2,7   | 00-0044   |
| ROE100A02001 | 85 x 45   | 30  | 18   | 200  | 9,6  | 2,7   | 00-0044   |







|              | <br>(mm) | <br>D (kN) | <br>Dc (kN) | <br>S (kg)   V (kN) |      | <br>(kg) | <b>e1</b> |
|--------------|---|---|--|--|------|---|-----------|
| ROE100C01511 | 83 x 56   | 30  | 18   | 250  | 12,0 | 4,1   | 00-0031   |
|              | 83 x 56   | 30  | 30   | 250  | 8,4  | 4,1   |           |

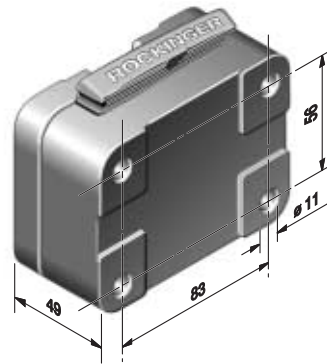
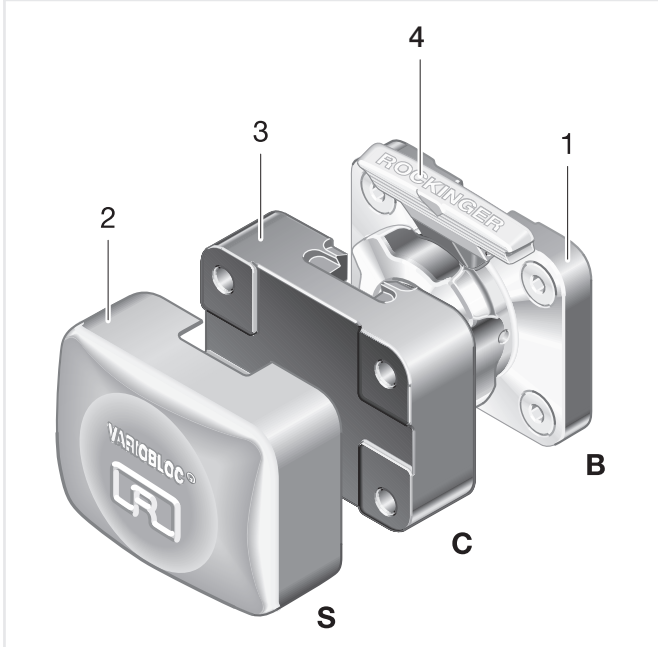


|              | <br>(mm) | <br>D (kN) | <br>Dc (kN) | <br>S (kg)   V (kN) |      | <br>(kg) | <b>e1</b> |
|--------------|---|---|--|--|------|---|-----------|
| ROE100C01521 | 83 x 56   | 25  | 22   | 250  | 12,0 | 3,3   |           |



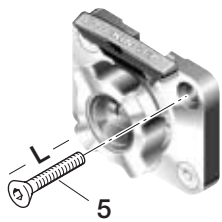
|              | <br>(mm) | <br>D (kN) | <br>S (kg) | H   | L   | <br>(kg) | <b>e1</b> |
|--------------|---|---|--|-----|-----|---|-----------|
| ROE100C01531 | 83 x 56   | 22,5  | 275  | -34 | 115 | 3,9   | 00-2462   |
| ROE100C01541 | 83 x 56   | 24,3  | 300  | 20  | 104 | 3,9   | 00-2358   |
| ROE100C01551 | 83 x 56   | 22,1  | 270  | -90 | 114 | 4,2   | 00-2124   |
| ROE100C01561 | 83 x 56   | 19,0  | 200  | -34 | 133 | 4,1   | 00-2462   |

## Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



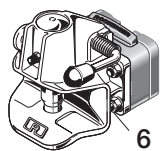
| Pos. |                | ROE       |   |
|------|----------------|-----------|---|
| 01   | 83,0 x 56,0 mm | 100B01000 | 1 |
| 01   | 85,0 x 45,0 mm | 100B02000 | 1 |
| 02   |                | 25344     | 1 |
| 03   | 83,0 x 56,0 mm | 100C01000 | 1 |
| 03   | 85,0 x 45,0 mm | 100C02000 | 1 |
| 04   |                | 70761     | 1 |

## Befestigungssätze • Screw sets • Kits de fixation • Kit di fissaggio • Juego de elementos de sujeción



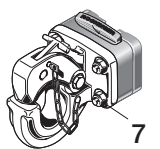
| Pos. | L            | ROE   |   |
|------|--------------|-------|---|
| 05   | 40 mm        | 70759 | 1 |
| 05   | 50 mm, 30 mm | 70756 | 1 |
| 05   | 55 mm        | 70570 | 1 |
| 05   | 60 mm        | 70558 | 1 |
| 05   | 110 mm       | 70754 | 1 |
| 05   | 130 mm       | 70805 | 1 |

Basisplatte • Base plate on the vehicle  
Plaque de base • Piastra base • Placa base



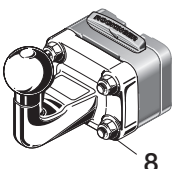
| Pos. | L     | ROE   |   |
|------|-------|-------|---|
| 06   | 50 mm | 70755 | 1 |

Bolzenkupplung 243 auf Wechselplatte • Pin hitch 243 on the quick-change plate • Accouplement à boulon 243 sur plaque mobile • Gancio a perno 243 su piastra intercambiabile • Enganche de bulón 243 en placa intermedia



| Pos. | L     | ROE   |   |
|------|-------|-------|---|
| 07   | 50 mm | 70755 | 1 |

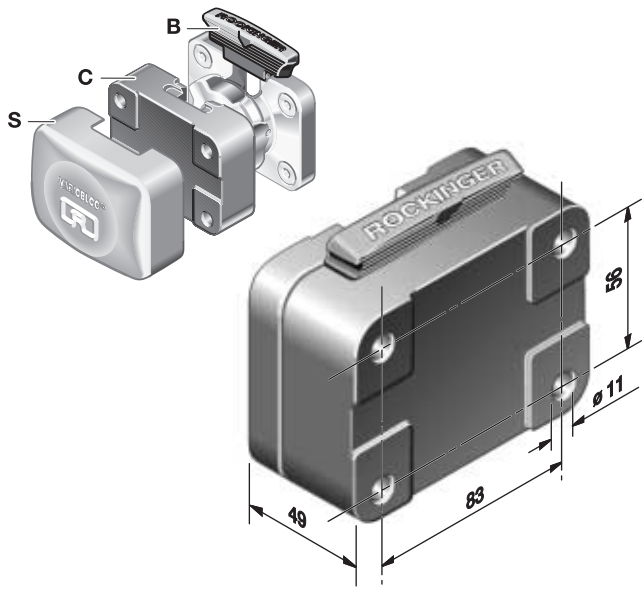
Hakenkupplung 231 auf Wechselplatte • Hook trailer hitch 231 on the quick-change plate • Accouplement à crochet 231 sur plaque mobile • Gancio a uncino 243 su piastra intercambiabile • Enganche de gancho 243 en placa intermedia



| Pos. | L     | ROE   |   |
|------|-------|-------|---|
| 08   | 50 mm | 70755 | 1 |
| 08   | 60 mm | 70757 | 1 |
| 08   | 65 mm | 70758 | 1 |

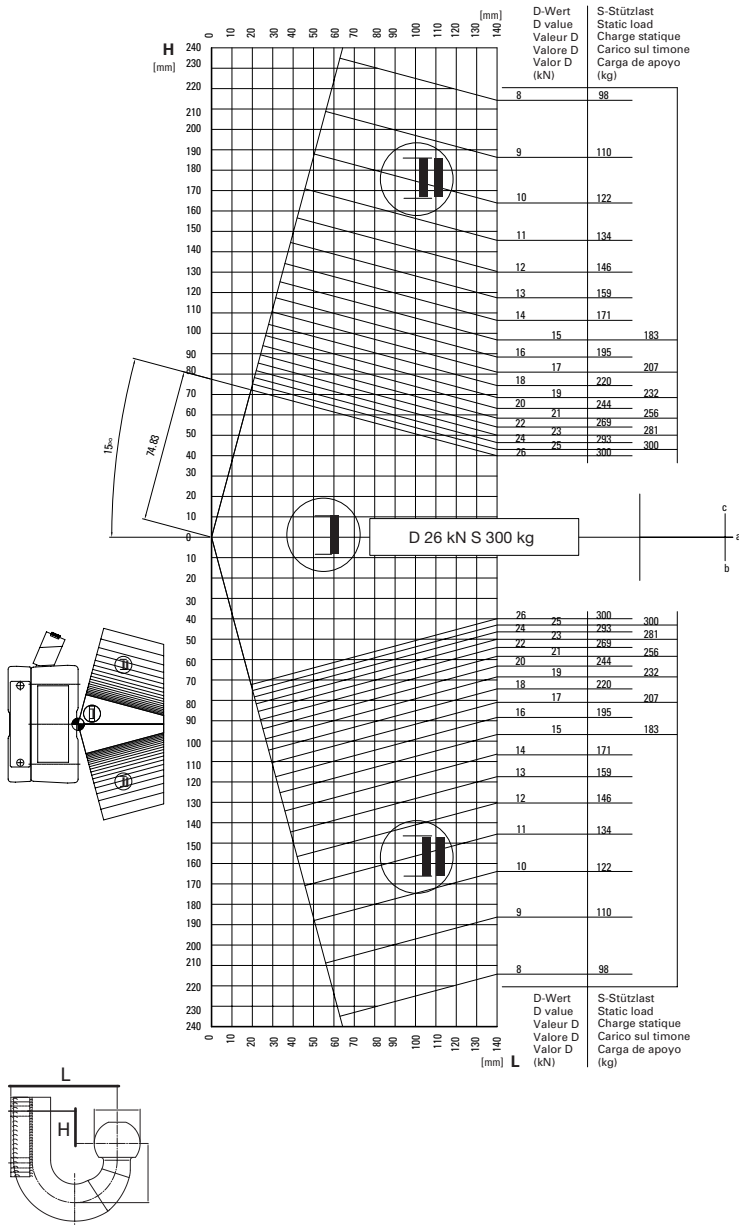
Kupplungskugel auf Wechselplatte • Hitch ball on the quick-change plate • Boule d'attelage sur plaque mobile • Gancio a sfera su piastra intercambiabile • Enganche de bola en placa intermedia

# RO★100, VARIOBLOC

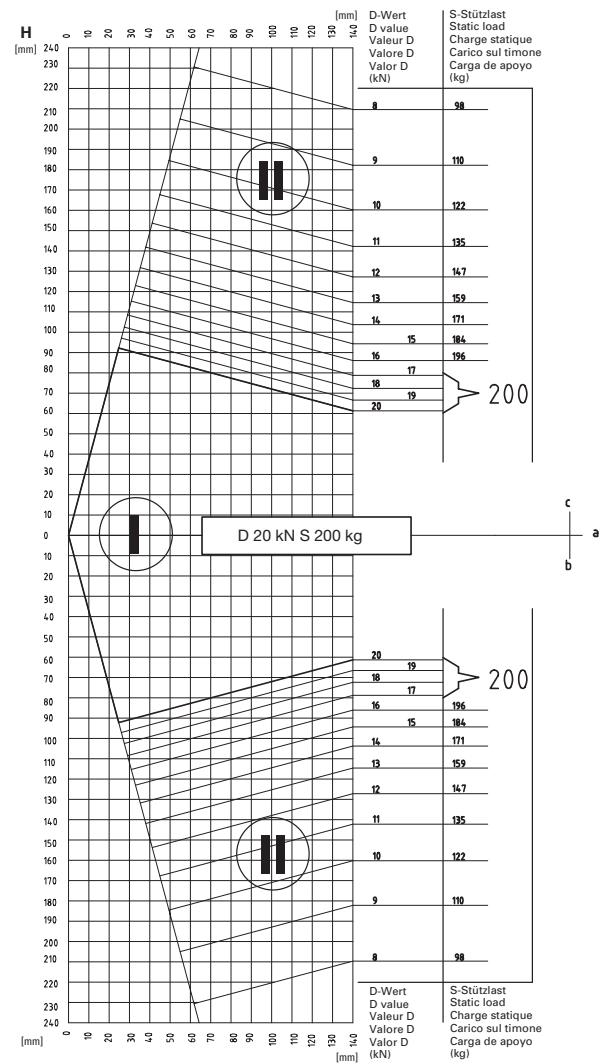


- D** In Verbindung mit Kugelhaken von Fremdherstellern
- GB** In combination with ball hitches from other manufacturers
- F** Pour les crochets à boule d'autres fabricants
- I** Assieme a ganci a sfere di altre case produttrici
- E** En combinación con enganches esféricos de fabricantes ajenos

ISO 83 x 56

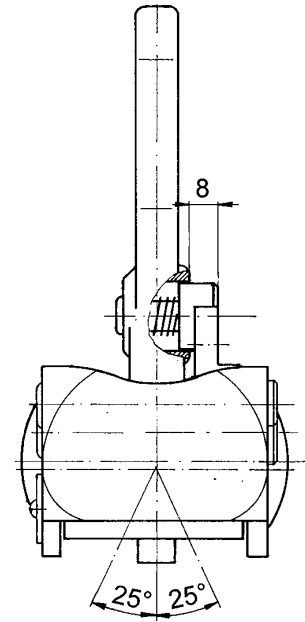
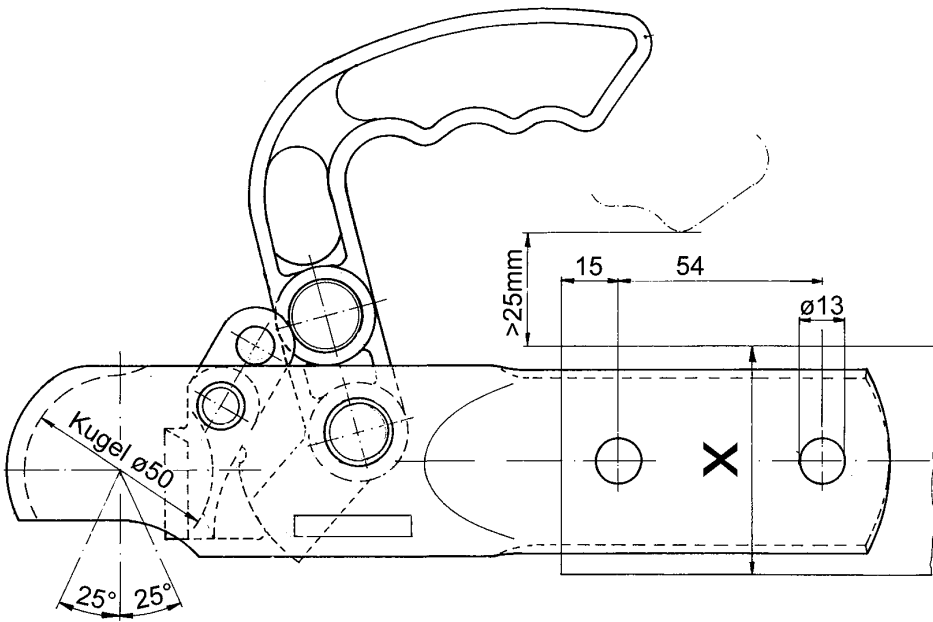
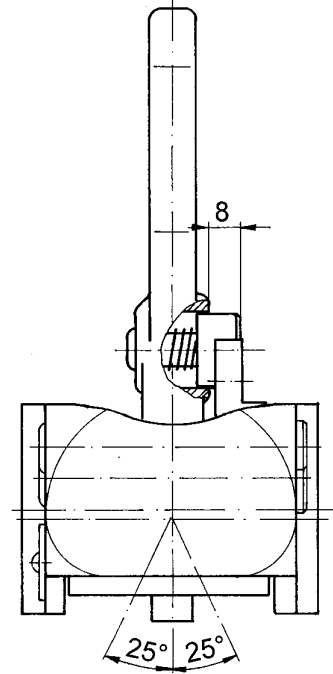
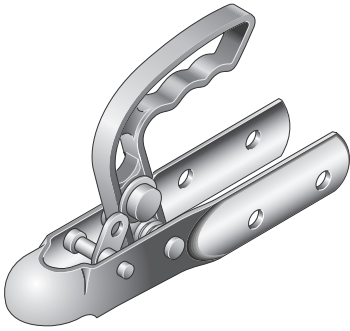


ISO 85 x 45






# RO★200

- D** Zugkugelkupplung zur Verbindung mit Kupplungskugel 50 mm
- GB** Hitch heads for connection with hitch ball 50 mm
- F** Crochet à boule combinée avec boule d'attelage de 50 mm
- I** Gancio per accoppiamento con sfera da 50 mm
- E** Enganche esférico para la unión con enganche de bola de 50 mm



## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             | X (mm) | S (kg) |  C (kg) |  ø (mm) |  (kg) | ABG<br>KTA |
|-------------|--------|--------|--|---|--|------------|
| RO200A00500 | ø 70   | 120    | 1600   | 50  | 1,4  | 1708       |
| RO200B00500 | ø 60   | 120    | 1600   | 50  | 1,4  | 1708       |
| RO200F00500 | □ 60   | 120    | 1600   | 50  | 1,4  | 1708       |

## RO★205 / 207 / 208 / 230

- D** Abschleppkupplungen
- GB** Manual towing hitches
- F** Chapes de remorquage
- I** Ganci di manovra
- E** Enganches para remolcar



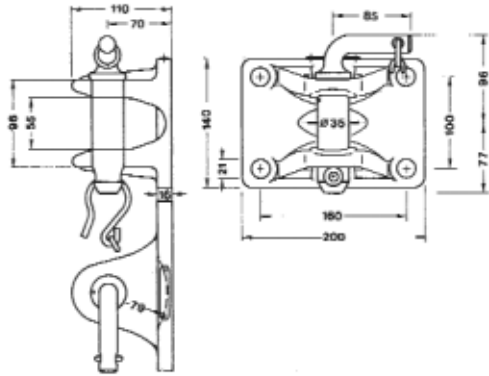
a = 40 mm DIN 74054, 94/20/CE  
a = 50 mm DIN 74053, CE-KI. D  
a = 76 mm VG 74059 NATO

- D Amtlicher Hinweis:** Abschleppkupplungen sind nicht bauartgenehmigungspflichtig. Der Verwendungszweck ist auf das Abschleppen von betriebsunfähigen Fahrzeugen und in Ausnahmefällen auf Rangierzwecke beschränkt. Die Verwendung für den **Anhängerbetrieb ist nicht gestattet.**
- GB Official advice:** Manual towing hitches are not obliged to be homologated. The purpose is restricted on the towing of non-usable vehicles and in exceptional cases on **purposes of switching rails.**
- F Remarque administrative :** Les chapes de remorquage ne nécessitent pas d'homologation de type. L'affectation se limite au remorquage de véhicules hors d'état de rouler et, dans des cas exceptionnels, à des fins de manœuvres. L'utilisation en mode **remorque n'est pas autorisé.**
- I Avviso ufficiale:** I ganci di manovra non sono soggetti ad omologazione. Vengono impiegati limitatamente allo scopo di trainare veicoli non funzionanti e in casi eccezionali anche a scopo di manovra. Non è ammesso il loro impiego per la **marcia con rimorchio.**
- E Nota oficial:** Los enganches para remolcar no requieren homologación. El uso previsto está restringido a remolcar vehículos incapaces de funcionar y está limitado en casos excepcionales a fines de maniobra. El uso para el servicio con **remolque no está permitido.**

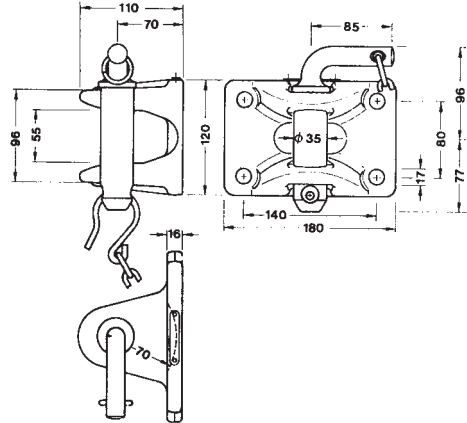
# RO★205 / 207 / 208 / 230

- D** Abschleppkupplungen
- GB** Manual towing hitches
- F** Chapes de remorquage
- I** Ganci di manovra
- E** Enganches para remolcar

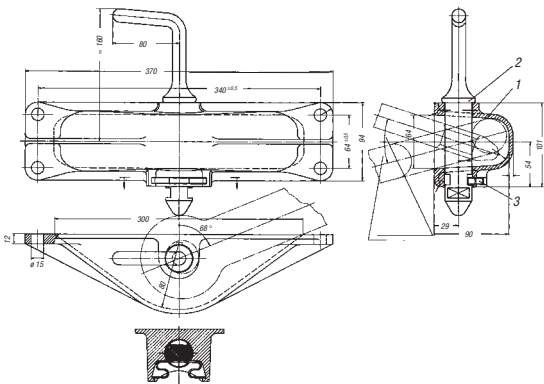
**RO★205**



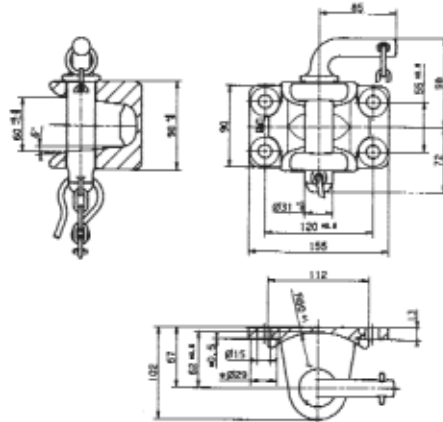
**RO★207**








**RO★208**



**RO★230**

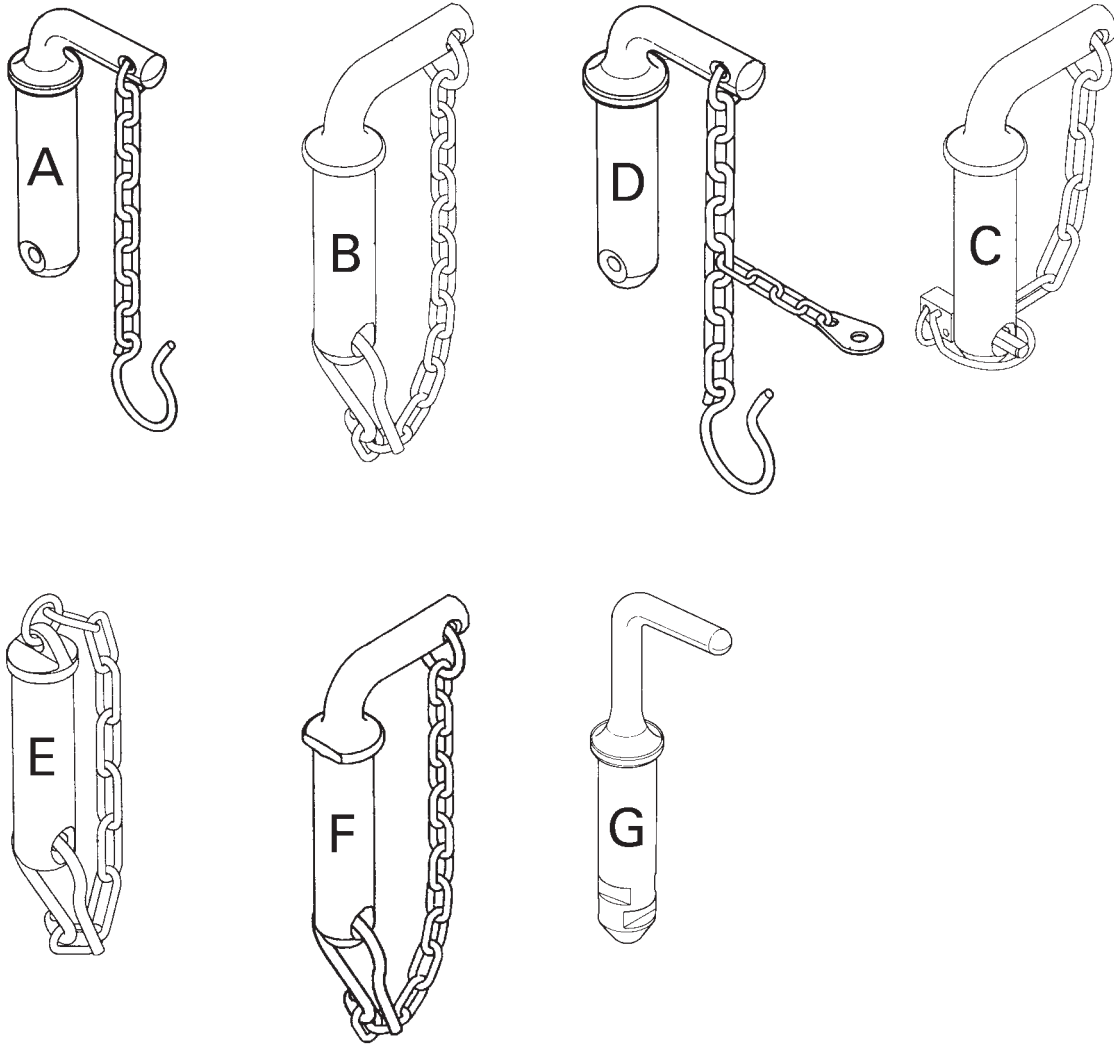


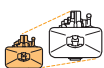

**Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos**

|             | <br>(mm) | <br>Pos. | σ (mm) | <br>(t) | <br>(t) | EWG    |        | <br>(kg) |
|-------------|---|---|--------|--|---|--------|--------|---|
|             |   |   |        |  |   | 77/389 | 79/533 |   |
| RO205A50000 | 160 x 100   | A   | 35     | 25,0   | 100,0   |        |        | 6,7   |
| RO205A51000 | 160 x 100   | A   | 35     | 50,0   | 120,0   | x      |        | 6,7   |
| RO207A45000 | 140 x 80  | A   | 35     | 25,0   |   |        |        | 6,0   |
| RO208M08000 | 340 x 64  | G   | 32     | 25,0   |   |        |        | 6,0   |
| RO230B35000 | 120 x 55  | B   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |
| RO230C35000 | 120 x 55  | C   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |
| RO230D35000 | 120 x 55  | D   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |
| RO230E35000 | 120 x 55  | E   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |
| RO230B35090 | 120 x 55  | B   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |
| RO230F35000 | 120 x 55  | F   | 32     | 25,0   | 50,0  | x      | x      | 4,0   |

# RO★205 / 207 / 208 / 230

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

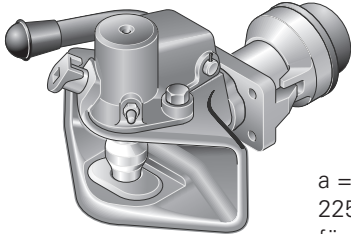


|  |  | ROE   | Pos. |
|---|---|-------|------|
| RO205A50000   | 58097   | 66167 | A    |
| RO205A51000   | 58097   | 66212 | A    |
| RO207A45000   | 58096   | 66167 | A    |
| RO208M08000   | 58094   | 48049 | G    |
| RO230B35000   | 58094   | 70323 | B    |
| RO230C35000   | 58094   | 70357 | C    |
| RO230D35000   | 58094   | 66192 | D    |
| RO230E35000   | 58094   | 66714 | E    |
| RO230B35090   | 58094   | 70848 | B    |
| RO230F35000   | 58094   | 67029 | F    |



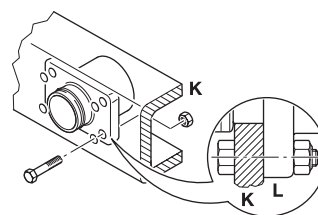
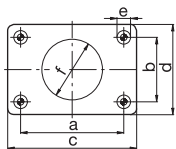
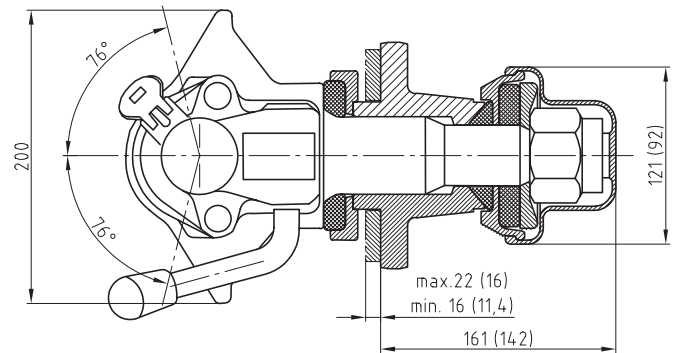
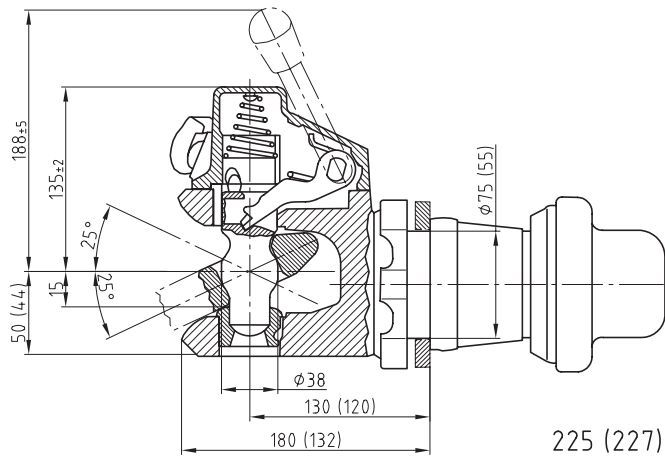
# RO★225 / 227 - 40 mm

- D** Sonderkupplungen
- GB** Special hitch
- F** Crochets d'attelage spéciaux
- I** Ganci speciali
- E** Enganches especiales



a = 40 mm, DIN 74054 94/20/CE  
 225G110A, 227G110Q  
 für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhione di traino CH  
 para punta de lanza CH

- D** Für Kraftfahrzeuge DIN 74051, Fußnote 3 / StVZO § 43 Abs. 4.  
 Auch zum Anbau an Anhänger zugelassen  
 Fangmaulgröße 100 mm x 200 mm
- GB** Admissible for mounting to the trailer  
 Funnel size 100 mm x 200 mm
- F** Agréé également pour installation sur une remorque  
 Dimension du pavillon 100 mm x 200 mm
- I** Omologato anche per l'applicazione su rimorchi  
 Dimensioni testa campana 100 mm x 200 mm
- E** También autorizado para el montaje en el remolque  
 Tamaño de boca de enganche 100 mm x 200 mm

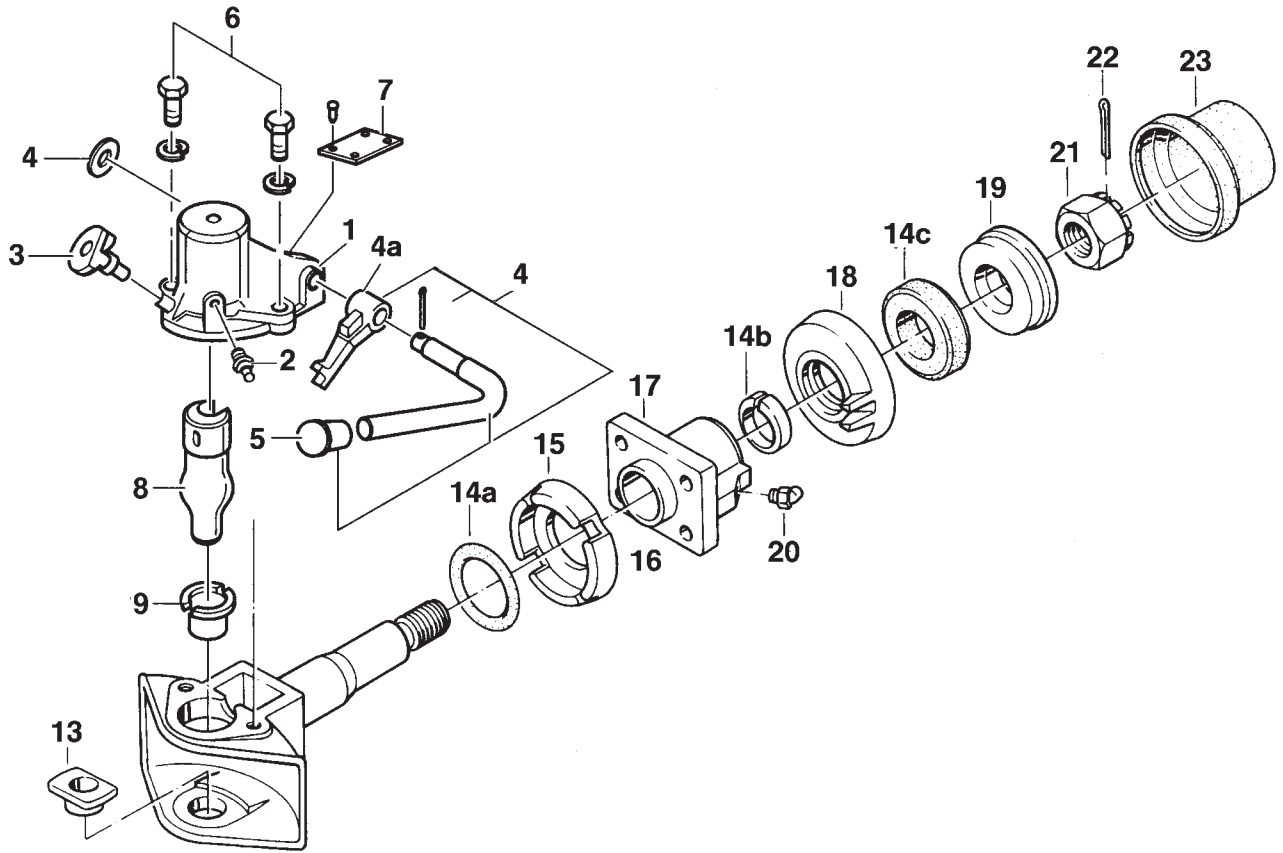


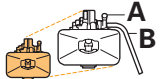

|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 225 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 75,0   |
| 227 | 83,0   | 56,0   | 110,0  | 85,0   | 10,5   | 55,0   |

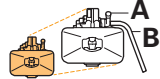

|     | K (mm)  | K (mm)  |
|-----|---------|---------|
| 225 | max. 22 | max. 22 |
| 227 | 11-16   | 11-16   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|            |   |   |      |        |         |       |       |       |      | e1      |
|------------|---|---|------|--------|---------|-------|-------|-------|------|---------|
|            | A | C | (mm) | D (kN) | Dc (kg) | S (t) | V (t) | C (t) | (kg) |         |
| RO225G110  | A |   | 112  | 85     | 68,4    | 1500  | 24,0  |       | 17,4 | 00-0050 |
| RO225G110A | A |   | 112  | 85     | 68,4    | 1500  |       | 10    | 17,4 |         |
| RO227G110J | C |   | 111  | 66     | 66,0    | 1250  | 14,0  |       | 12,4 | 00-0049 |
| RO227G110Q | C |   | 111  | 66     | 66,0    | 1250  |       | 5     | 12,4 |         |



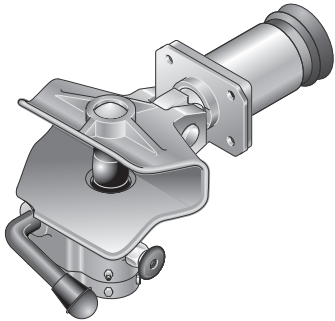
| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | 227 (110 J)   | 66392 | 1   |
| 01   | 225 (110)   | 67101 | 1   |
| 01   | 227 (110 JB)  | 67622 | 1   |
| 01   | 225 (110 A), 227 (110 Q)  | 66466 | 1   |
| 02   | 227   | 65018 | 1   |
| 02   | 225   | 65018 | 1   |
| 03   |   | 66242 | 1   |
| 04   |   | 70723 | 1   |
| 04   |   | 50102 | 1   |
| 04   | 227 (110 JB)  | 50156 | 1   |
| 05   |   | 25105 | 1   |
| 06   |   | 70173 | 1   |
| 08   | 225 (110), 227 (110 J)  | 47013 | 1   |
| 08   | 225 (110 A), 227 (110 Q)  | 47031 | 1   |
| 09   |   | 53029 | 1   |
| 13   |   | 53030 | 1   |
| 14   | 227   | 70172 | 1   |
| 14   | 225   | 67056 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 15   | 227 (110)  | 54420 | 1   |
| 15   | 225 (110)  | 54472 | 1   |
| 16   |  | 39124 | 1   |
| 17   | 225  | 43238 | 1   |
| 17   | 227  | 43237 | 1   |
| 18   | 225 (110)  | 44073 | 1   |
| 18   | 227 (110)  | 44075 | 1   |
| 19   | 225 (110)  | 54372 | 1   |
| 19   | 227 (110)  | 54471 | 1   |
| 20   | 225  | 65018 | 1   |
| 20   | 227  | 65019 | 1   |
| 21   | 225  | 56028 | 1   |
| 21   | 227  | 56118 | 1   |
| 22   | 225  | 35031 | 1   |
| 22   | 227  | 35008 | 1   |
| 23   | 225  | 25076 | 1   |
| 23   | 227  | 25093 | 1   |

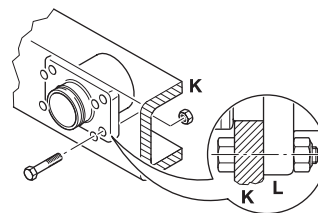
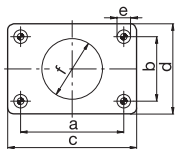
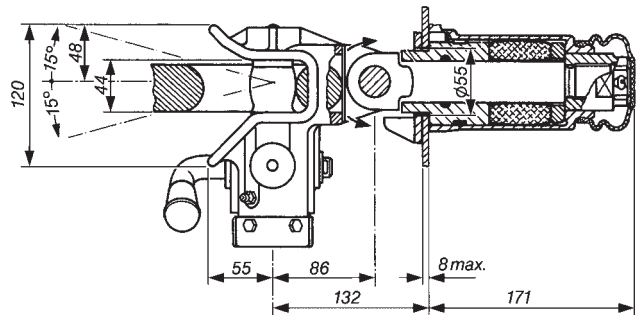
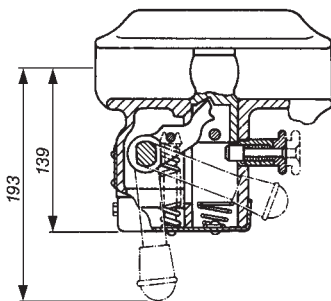
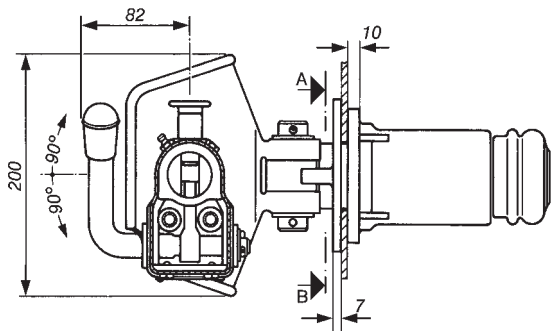
# RO\*226 - 40 mm / 76 mm

- D** Schlechtweggekuppung
- GB** Off road hitch
- F** Crochet d'attelage pour voies en mauvais état
- I** Gancio per sollecitazioni gravose
- E** Enganche para carreteras en mal estado

- D** für Fahrzeuge mit Spezialaufbau, z. B. Feuerwehrfahrzeuge, geländegängig, mit Vertikalgelenk
- GB** for vehicles with special body construction, e. g. fire-engines, for cross-country operation, vertical articulating hitch head
- F** pour véhicules à carrosserie spéciale, par ex. véhicules de pompiers, tout terrain, à articulation verticale
- I** per veicoli con allestimenti speciali, per esempio veicoli antincendio, veicoli per fuoristrada, con campana snodata
- E** para vehículos con construcción especial, p. ej., vehículos de bomberos, todo terreno, con articulación vertical



a = 40 mm DIN 74054  
 94/20/CE  
 für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhione di traino CH  
 para punta de lanza CH  
 a = 76 mm  
 VG 74059 NATO

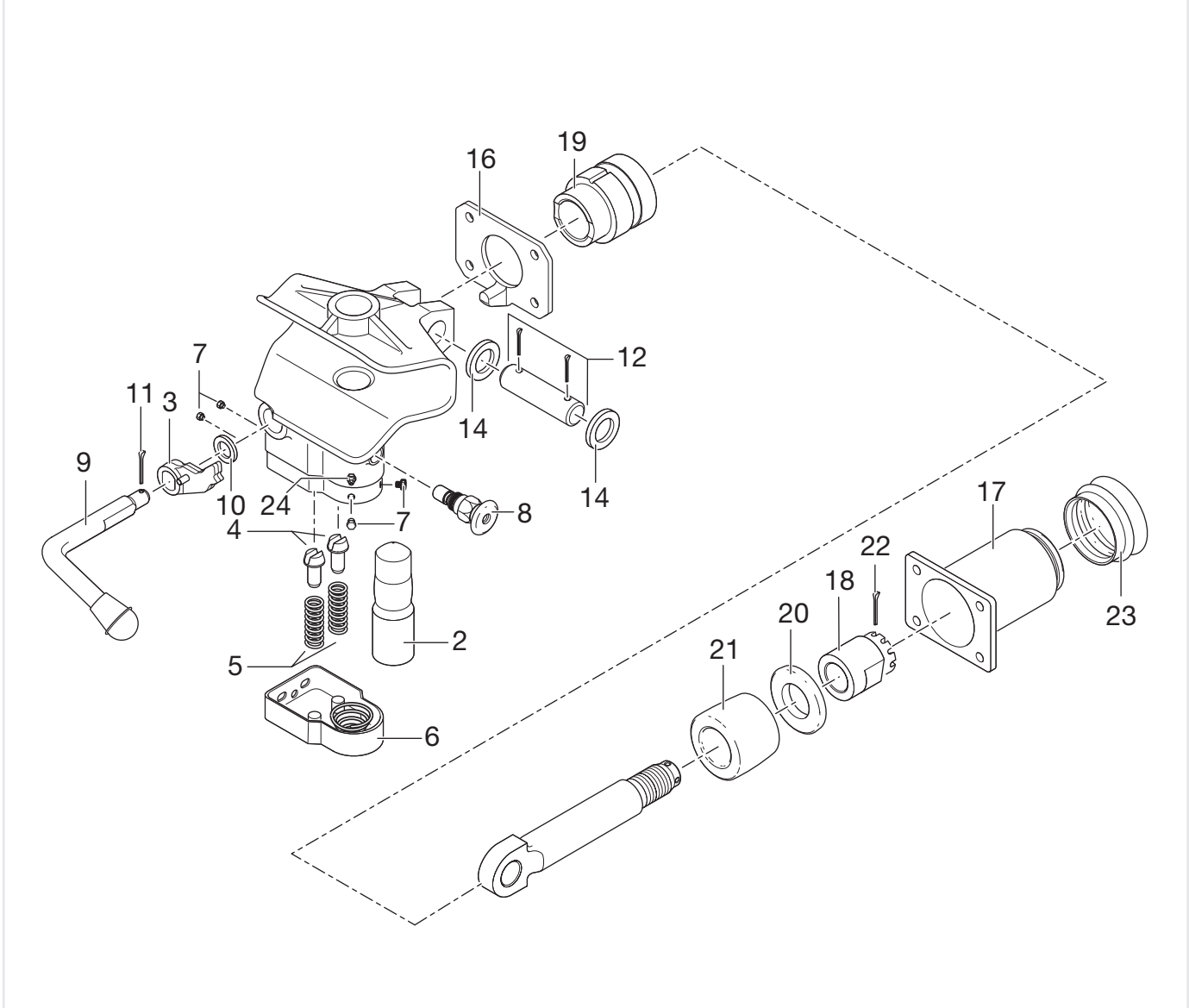


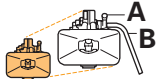

|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 210 | 83,0   | 56,0   | 125,0  | 83,0   | 10,5   | 55,0   |

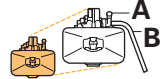

|     | K (mm) | K (mm) |
|-----|--------|--------|
| 210 | 7      | 7      |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|            | C | A | B   | R      | C       | S    | V    |      | e1 |         |
|------------|---|---|-----|--------|---------|------|------|------|----|---------|
|            | D |   |     | D (kN) | Dc (kN) | (kg) | (kN) | (kg) |    |         |
| RO226G210A | B |   | 210 | 66     | 18,5    | 50   | 5,0  | 13,0 |    | 00-0799 |

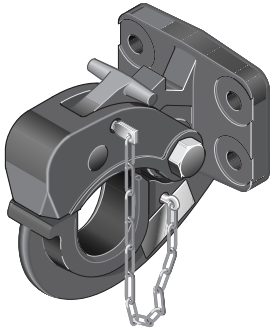


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 02   |   | 47006 | 1   |
| 03   |   | 51017 | 1   |
| 04   |   | 13001 | 2   |
| 05   |   | 55029 | 2   |
| 06   |   | 65005 | 1   |
| 07   |   | 70331 | 1   |
| 08   |   | 66017 | 1   |
| 09   |   | 50083 | 1   |
| 10   |   | 33011 | 1   |
| 11   |   | 35013 | 1   |
| 12   |   | 65090 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 14   |  | 54001 | 2   |
| 16   |  | 54002 | 1   |
| 17   |  | 44021 | 1   |
| 18   |  | 56009 | 1   |
| 19   |  | 53027 | 1   |
| 20   |  | 54072 | 1   |
| 21   |  | 25012 | 1   |
| 22   |  | 35002 | 1   |
| 23   |  | 25008 | 1   |
| 24   |  | 65018 | 1   |

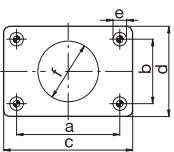
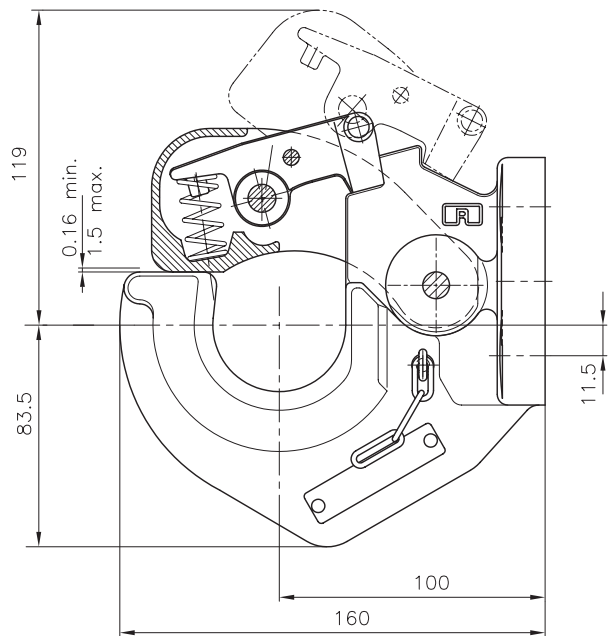
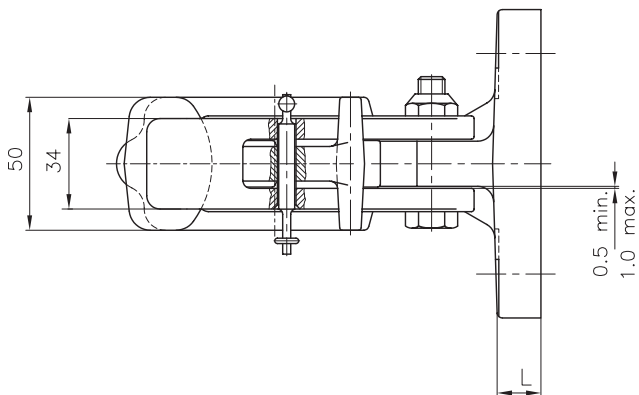
# RO\*231 - 76 mm / 40 mm

- D** Hakenkupplung mit Sicherungsstecker im Verschlussbügel
- GB** Hook trailer hitch with safety lock
- F** Accouplement à crochet avec fiche de sécurité dans l'étrier de verrouillage
- I** Gancio a uncino con spinotto di sicurezza nella staffa di chiusura
- E** Enganche de gancho con dispositivo de seguridad en el estribo de cierre



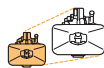






a = 76 mm, VG 74059 NATO

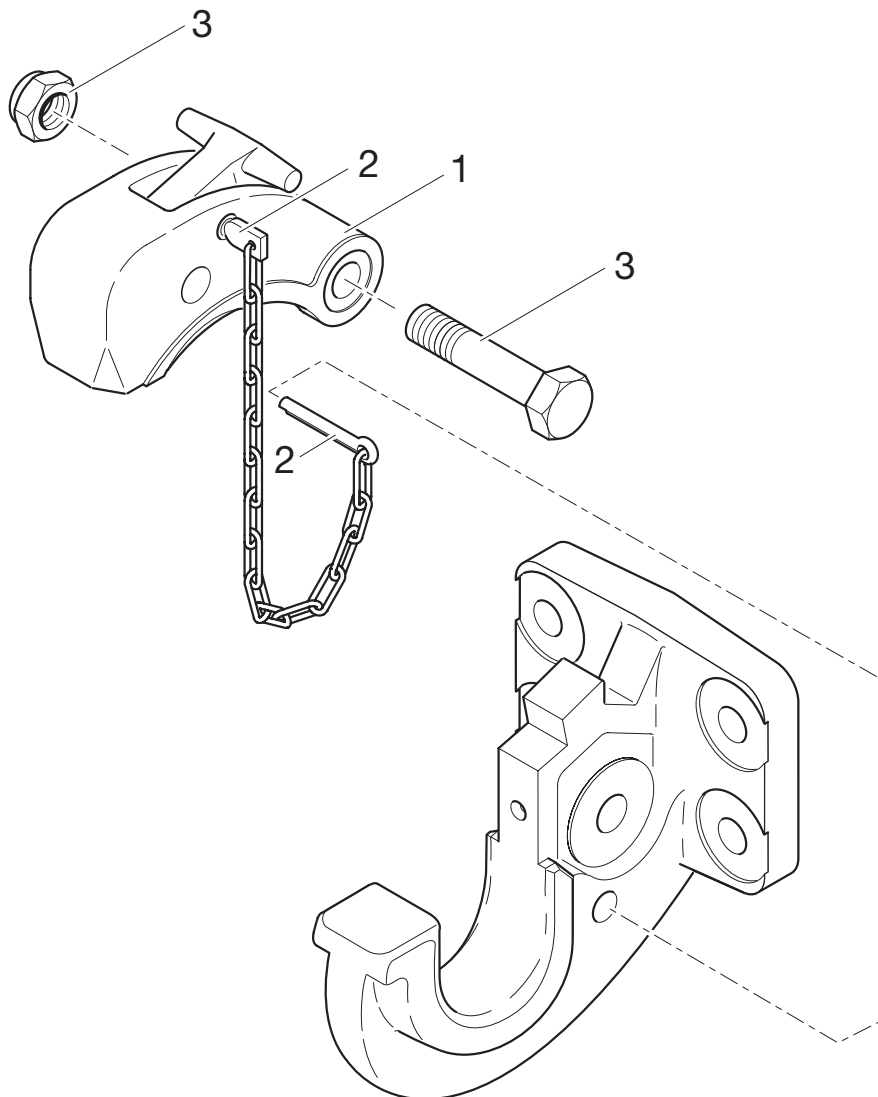
231xx53  
 a = 40 mm, DIN 74054, 94/20/CE,  
 für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhione di traino CH  
 para punta de lanza CH



|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | L (mm) |
|----|--------|--------|--------|--------|--------|--------|
| 05 | 86,0   | 45,0   | 116,0  | 85,0   | 13,0   | 16     |
| 11 | 83,0   | 56,0   | 116,0  | 85,0   | 10,5   | 16     |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |  | <br>(mm) |            |  |  | <br>(kg) |        |
|-------------|---|---|---|--|---|---|--------|
|             |   |   | <br>D (kN) | <br>Dc (kN) |   |   | S (kg) |
| RO231A05000 | 05  | 86 x 45   | 25  | 22   | 250   | 14,4  | 5,0    |
| RO231A05090 | 05  | 86 x 45   | 25  | 22   | 250   | 14,4  | 5,0    |
| RO231A05530 | 05  | 86 x 45   | 20  | 18   | 150   | 9,6   | 3,6    |
| RO231A11000 | 11  | 83 x 56   | 25  | 22   | 250   | 14,4  | 5,0    |
| RO231A11530 | 11  | 83 x 56   | 20  | 18   | 150   | 9,6   | 3,6    |



| Pos. |  | ROE   |   |
|------|--|-------|---|
| 01   |  | 70862 | 1 |
| 02   |  | 65112 | 1 |

| Pos. |  | ROE   |   |
|------|--|-------|---|
| 03   |  | 70863 | 1 |

**Befestigungsätze • Mounting kits • Kits de fixation • Kit di fissaggio • Conjuntos de fijación**

| Pos. |           | ROE   |   |
|------|-----------|-------|---|
| •    | 231A05000 | 70941 | 1 |
| •    | 231A05530 | 70949 | 1 |
| •    | 231A11000 | 70942 | 1 |
| •    | 231A11530 | 70923 | 1 |

# RO★232 - 76 mm / 40 mm

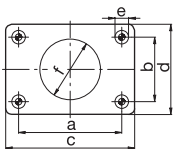
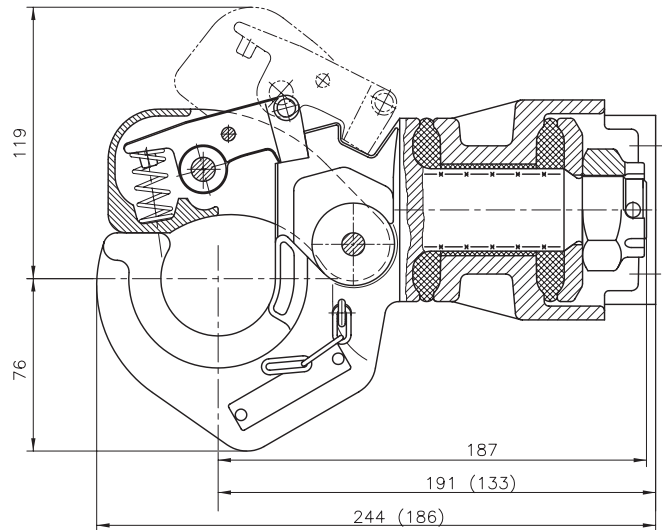
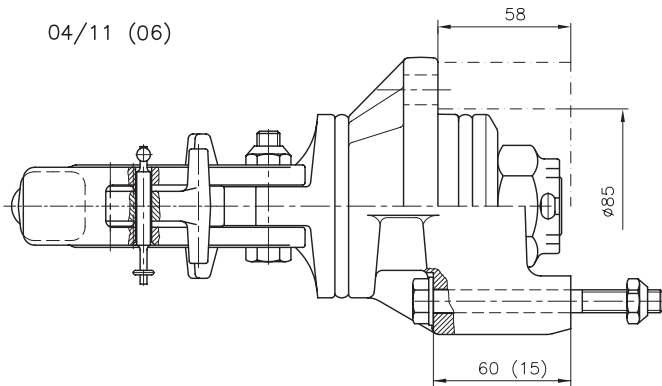
- D** Drehbare Hakenkupplung
- GB** Rotable hook trailer hitch
- F** Accouplement à crochet tournant
- I** Gancio a uncino per motrici leggere
- E** Enganche de gancho para furgonetas



a = 76 mm, VG 74059 NATO  
 a = 40 mm, DIN 74054, 94/20/CE  
 für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhio di traino CH  
 para punta de lanza CH









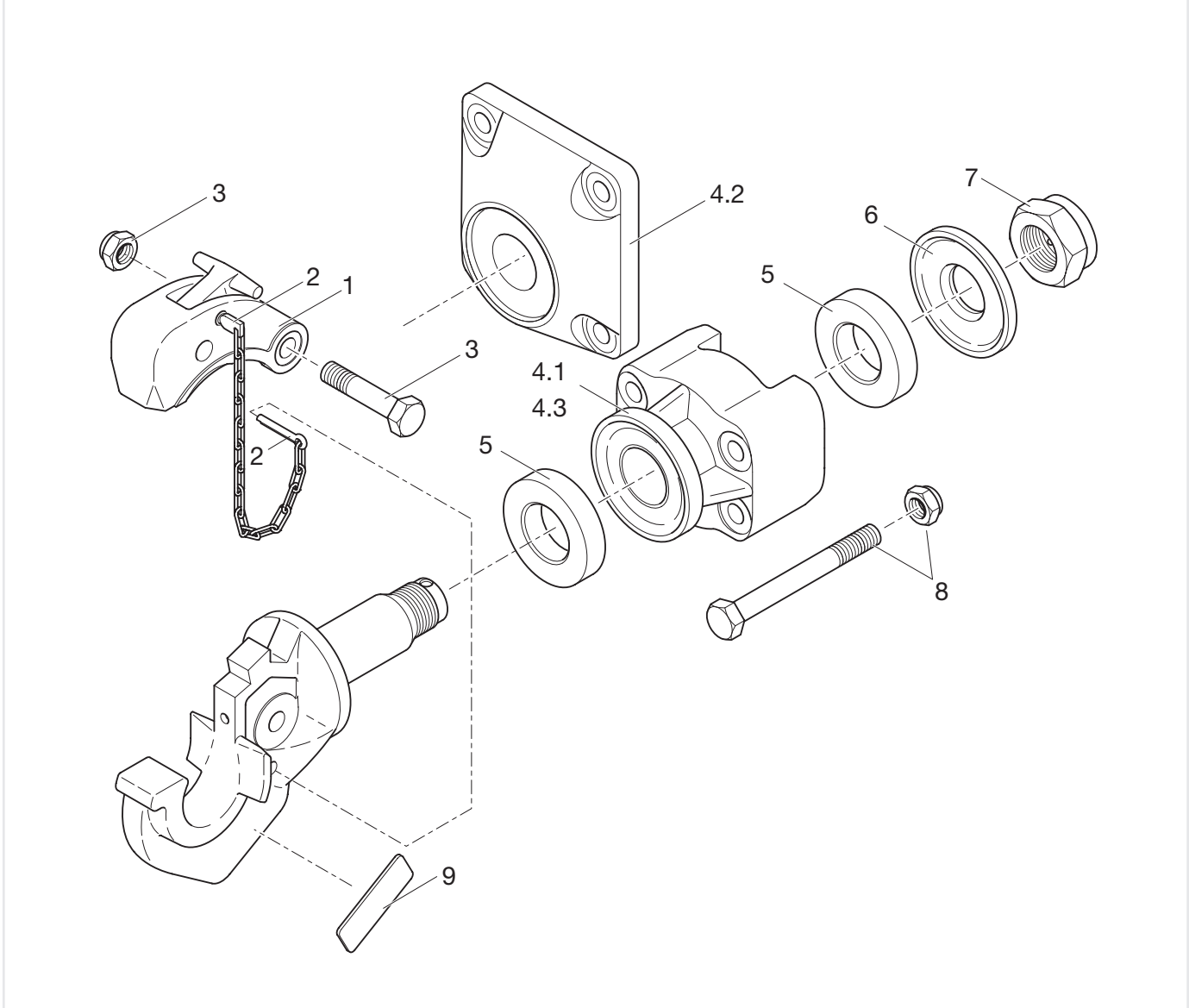
04/11 (06)

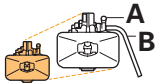



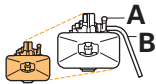

|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|----|--------|--------|--------|--------|--------|
| 04 | 85,0   | 45,0   | 112,0  | 96,0   | 13,0   |
| 11 | 83,0   | 56,0   | 112,0  | 96,0   | 10,5   |
| 06 | 101,6  | 101,6  | 130,0  | 130,0  | 13,0   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |    | <br>(mm) | <br>T           |   | <br>S (kg)   V (kN) |      | C (t) | <br>(kg) | e1      |
|-------------|----|---|--|---|--|------|-------|---|---------|
|             |    |   | <br>R<br>D (kN) | <br>C<br>Dc (kN) |  |      |       |   |         |
| RO232A04001 | 04 | 85,0 x 45,0   | 40   | 22  | 300  | 14,2 |       | 7,0   |         |
| RO232A04531 | 04 | 85,0 x 45,0   | 40   | 22  | 300  | 14,2 |       | 7,0   |         |
| RO232A04501 | 04 | 85,0 x 45,0   | 31   | 31  | 300  |      | 3,2   | 7,0   | 00-1350 |
| RO232A06001 | 06 | 101,6 x 101,6   | 40   | 22  | 300  | 14,2 |       | 6,7   |         |
| RO232A06001 | 06 | 101,6 x 101,6   | 40   | 25  | 300  | 9,6  |       | 6,7   |         |
| RO232A06531 | 06 | 101,6 x 101,6   | 40   | 22  | 300  | 14,2 |       | 6,7   |         |
| RO232A11001 | 11 | 83,0 x 56,0   | 35   | 22  | 300  | 14,2 |       | 7,2   |         |
| RO232A11531 | 11 | 83,0 x 56,0   | 35   | 20  | 250  | 12,0 |       | 7,2   |         |
| RO232A11501 | 11 | 83,0 x 56,0   | 31   | 31  | 300  |      | 3,2   | 7,2   | 00-1353 |



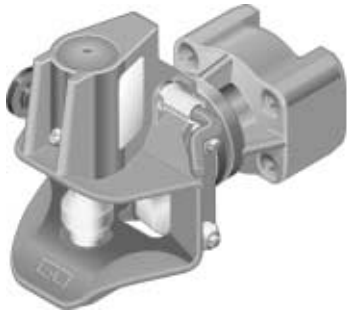
| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70862 | 1   |
| 02   |   | 65112 | 1   |
| 03   |   | 70863 | 1   |
| 04.1 | RO232A04  | 70869 | 1   |
| 04.2 | RO232A06  | 70870 | 1   |
| 04.3 | RO232A11  | 70871 | 1   |
| 05   |   | 70864 | 1   |
| 06   |   | 59262 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 07   |  | 56124 | 1   |
| 08   | 232A0400x  | 70879 | 1   |
| 08   | 232A0453x  | 70873 | 1   |
| 08   | 232A0600x  | 70880 | 1   |
| 08   | 232A0653x  | 70874 | 1   |
| 08   | 232A1100x  | 70878 | 1   |
| 08   | 232A1153x  | 70875 | 1   |

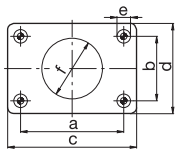
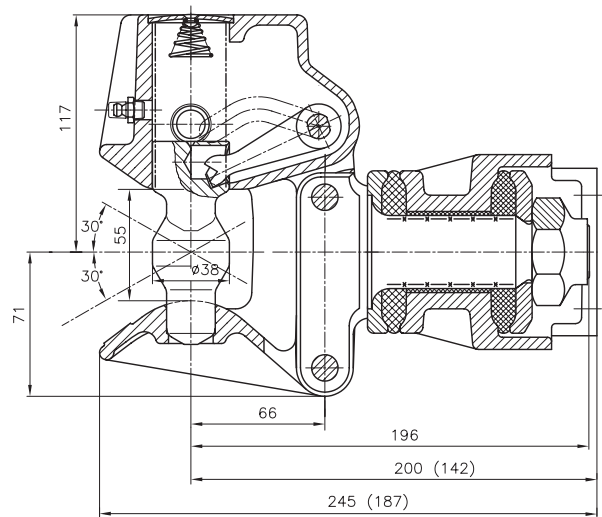
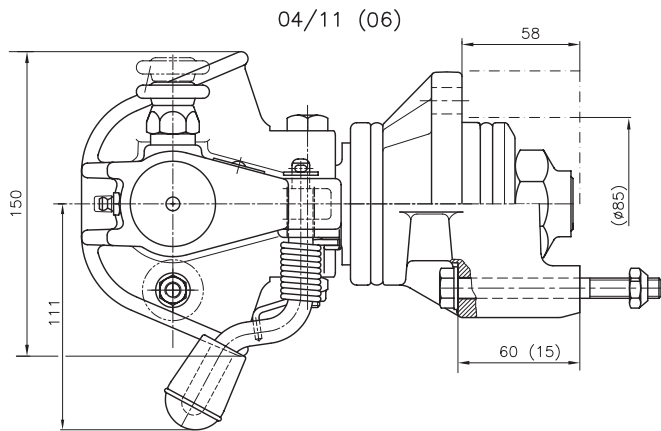


# RO★240 - 40 mm

- D** Drehbare Kupplung für Transporter
- GB** Rotable hitch for light trucks
- F** Crochet d'attelage tournant pour véhicules utilitaires
- I** Gancio girevole per motrici leggere
- E** Enganche giratorio para furgonetas



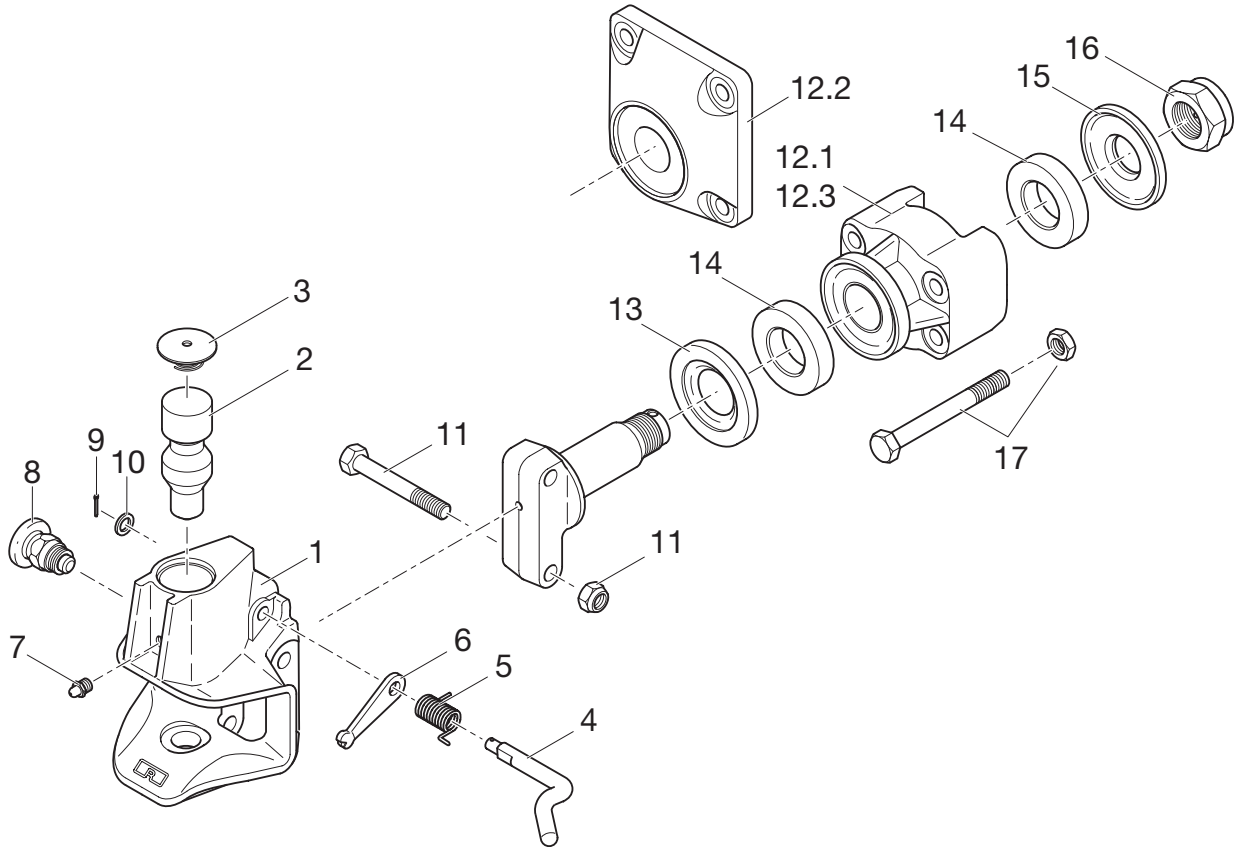
a = 40 mm  
DIN 74054  
94/20/CE

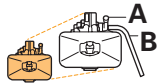



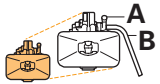

|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|----|--------|--------|--------|--------|--------|
| 04 | 85,0   | 45,0   | 112,0  | 96,0   | 13,0   |
| 06 | 101,6  | 101,6  | 130,0  | 130,0  | 13,0   |
| 11 | 83,0   | 56,0   | 112,0  | 96,0   | 10,5   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   |    |               |        |         |        |        |      | e1      |
|-------------|---|----|---------------|--------|---------|--------|--------|------|---------|
|             |   |    | (mm)          | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |         |
| RO240B04001 | B | 04 | 85,0 x 45,0   | 40     | 40      | 300    | 14,2   | 9,5  |         |
| RO240B04531 | B | 04 | 85,0 x 45,0   | 40     | 22      | 300    | 14,2   | 9,5  |         |
| RO240B06001 | B | 06 | 101,6 x 101,6 | 40     | 40      | 300    | 14,2   | 9,6  |         |
| RO240B06531 | B | 06 | 101,6 x 101,6 | 40     | 22      | 300    | 14,2   | 9,6  |         |
| RO240B11001 | B | 11 | 83,0 x 56,0   | 35     | 35      | 250    | 12,0   | 9,4  | 00-0415 |
| RO240B11531 | B | 11 | 83,0 x 56,0   | 35     | 20      | 250    | 12,0   | 9,4  | 00-0415 |

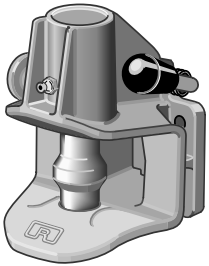


| Pos. |  | ROE       |  |
|------|---|-----------|---|
| 01   | xxB04xx   | 240B04501 | 1   |
| 01   | xxB04530  | 240B04511 | 1   |
| 01   | xxB06x  | 240B06501 | 1   |
| 01   | xxB06530  | 240B06511 | 1   |
| 01   | xxB11xx   | 240B11501 | 1   |
| 01   | xxB11530x   | 240B11511 | 1   |
| 02   |   | 47026     | 1   |
| 03   |   | 67411     | 1   |
| 04   |   | 70867     | 1   |
| 06   | Kit (04, 05, 06, 09, 10)  | 70927     | 1   |
| 07   |   | 65018     | 1   |
| 08   |   | 70618     | 1   |
| 11   |   | 70868     | 1   |

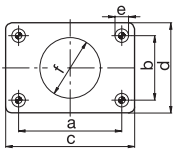
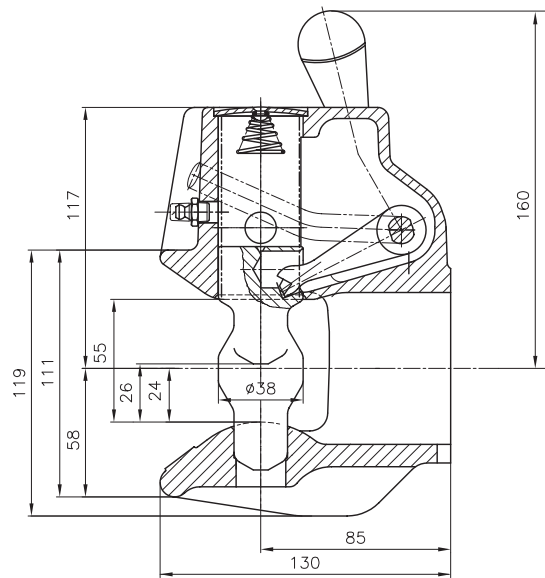
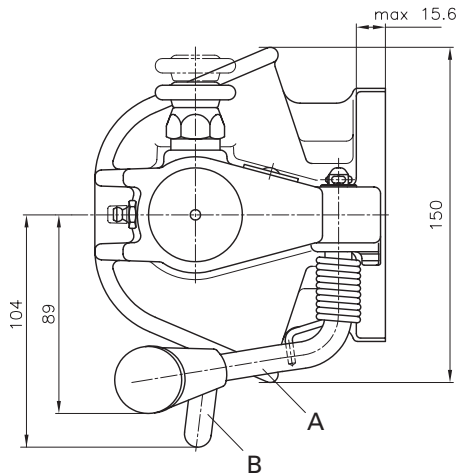
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 12.1 | 85,0 x 45,0 mm   | 70869 | 1   |
| 12.2 | 101,6 x 101,6 mm   | 70870 | 1   |
| 12.3 | 83,0 x 56,0 mm   | 70871 | 1   |
| 13   |  | 45131 | 1   |
| 14   |  | 70872 | 1   |
| 15   |  | 59262 | 1   |
| 16   |  | 56124 | 1   |
| 17   | 240B04000  | 70879 | 1   |
| 17   | 240B04530  | 70873 | 1   |
| 17   | 240B06000  | 70880 | 1   |
| 17   | 240B06530  | 70874 | 1   |
| 17   | 240B11000  | 70878 | 1   |
| 17   | 240B11530  | 70875 | 1   |

# RO★243 - 40 mm

- D** Kompaktkupplung für Transporter, Lieferwagen, Geländewagen  
Fangmaulgröße 100 mm x 150 mm
- GB** Compact hitch for light trucks, delivery vans, cross country vehicles  
Funnel size 100 mm x 150 mm
- F** Crochet d'attelage compact pour véhicules utilitaires, voitures de livraison, voitures tout terrain  
Dimension du pavillon 100 mm x 150 mm
- I** Gancio compatto per motrici leggere, furgoni, fuoristrada  
Dimensioni testa campana 100 mm x 150 mm
- E** Enganche compacto para furgonetas, camionetas, vehículos todo terreno  
Tamaño de boca de enganche 100 mm x 150 mm



a = 40 mm  
DIN 74054  
94/20/CE



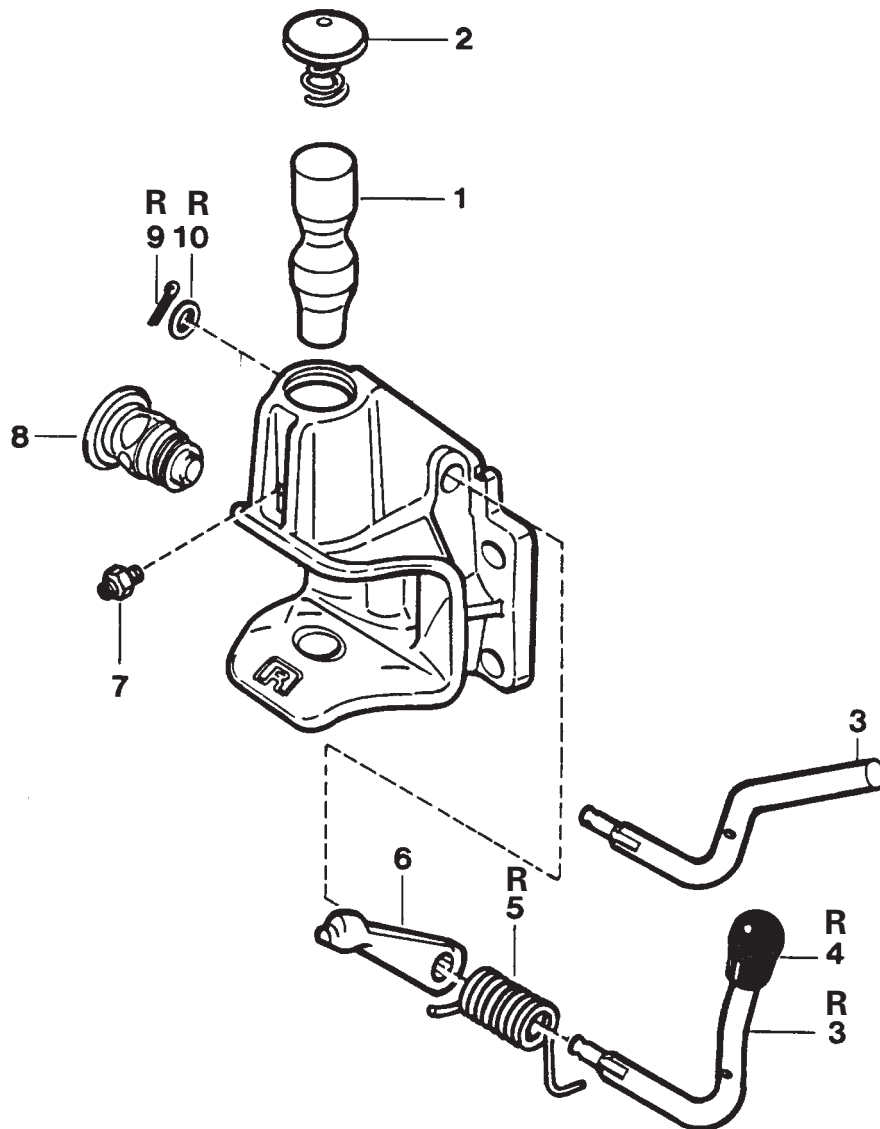
|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|----|--------|--------|--------|--------|--------|
| 11 | 83,0   | 56,0   | 110,0  | 85,0   | 10,5   |
| 12 | 85,0   | 45,0   | 110,0  | 85,0   | 10,5   |
| 35 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   |

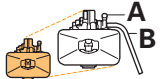

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

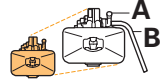

|             |   |     |          |        |         |        |        |      |         | e1 |
|-------------|---|-----|----------|--------|---------|--------|--------|------|---------|----|
|             |   |     | (mm)     | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |         |    |
| RO243A11000 | A | 115 | 83 x 56  | 30     | 18      | 250    | 12,0   | 4,1  | 00-0031 |    |
| RO243A11000 | A | 115 | 83 x 56  | 30     | 30      | 250    | 8,4    | 4,1  | 00-0031 |    |
| RO243B11000 | B | 115 | 83 x 56  | 30     | 18      | 250    | 12,0   | 4,1  | 00-0031 |    |
| RO243B11000 | B | 115 | 83 x 56  | 30     | 30      | 250    | 8,4    | 4,1  | 00-0031 |    |
| RO243A12000 | A | 115 | 85 x 45  | 18     | 18      | 200    | 9,6    | 4,1  | 00-0031 |    |
| RO243B12000 | B | 115 | 85 x 45  | 18     | 18      | 200    | 9,6    | 4,1  | 00-0031 |    |
| RO243A35000 | A | 135 | 120 x 55 | 30     | 30      | 350    | 12,0   | 4,4  | 00-0051 |    |

# RO★243

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

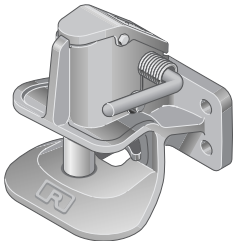


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 47026 | 1   |
| 02   |   | 67411 | 1   |
| 03   | ROxxxBxxxx  | 70354 | 1   |
| 03   | ROxxxAxxxx  | 70355 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 04   |  | 25106 | 1   |
| 06   | Kit (03, 04, 05, 09, 10)   | 70927 | 1   |
| 07   |  | 65018 | 1   |
| 08   |  | 70618 | 1   |

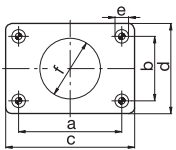
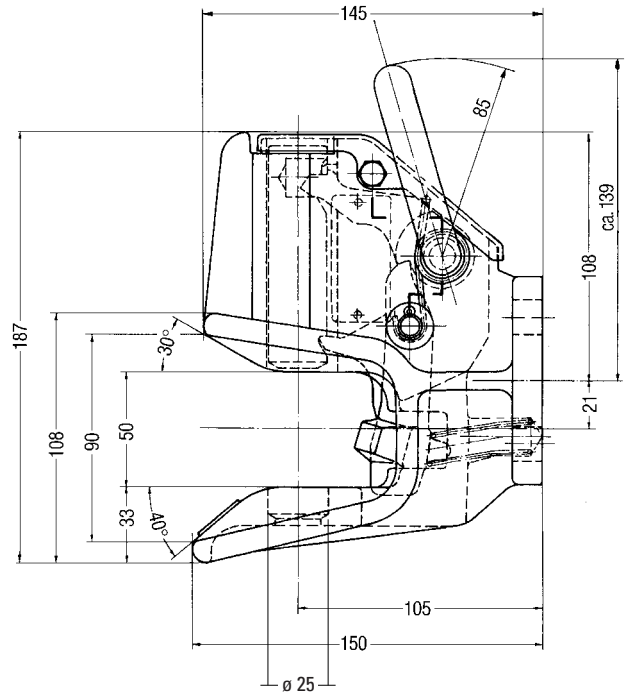
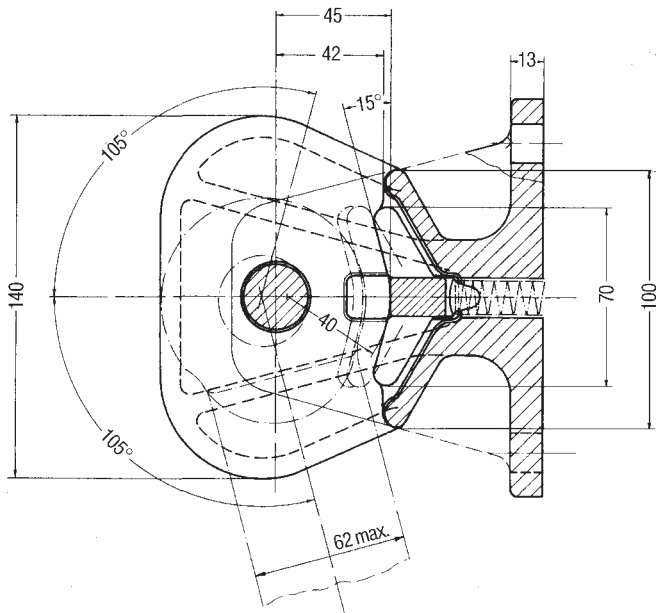
# RO★244 - 25 mm

- D** Kompaktkupplung für Flurförderzeuge und deren Anhänger
- GB** Compact hitch for industrial trucks and trailers
- F** Crochet d'attelage compact pour chariots de maintenance et leurs remorques
- I** Gancio compatto per adibiti a movimentazione interna con relativi rimorchi
- E** Enganche compacto para vehículos industriales y sus remolques



a = 35 mm DIN 8454

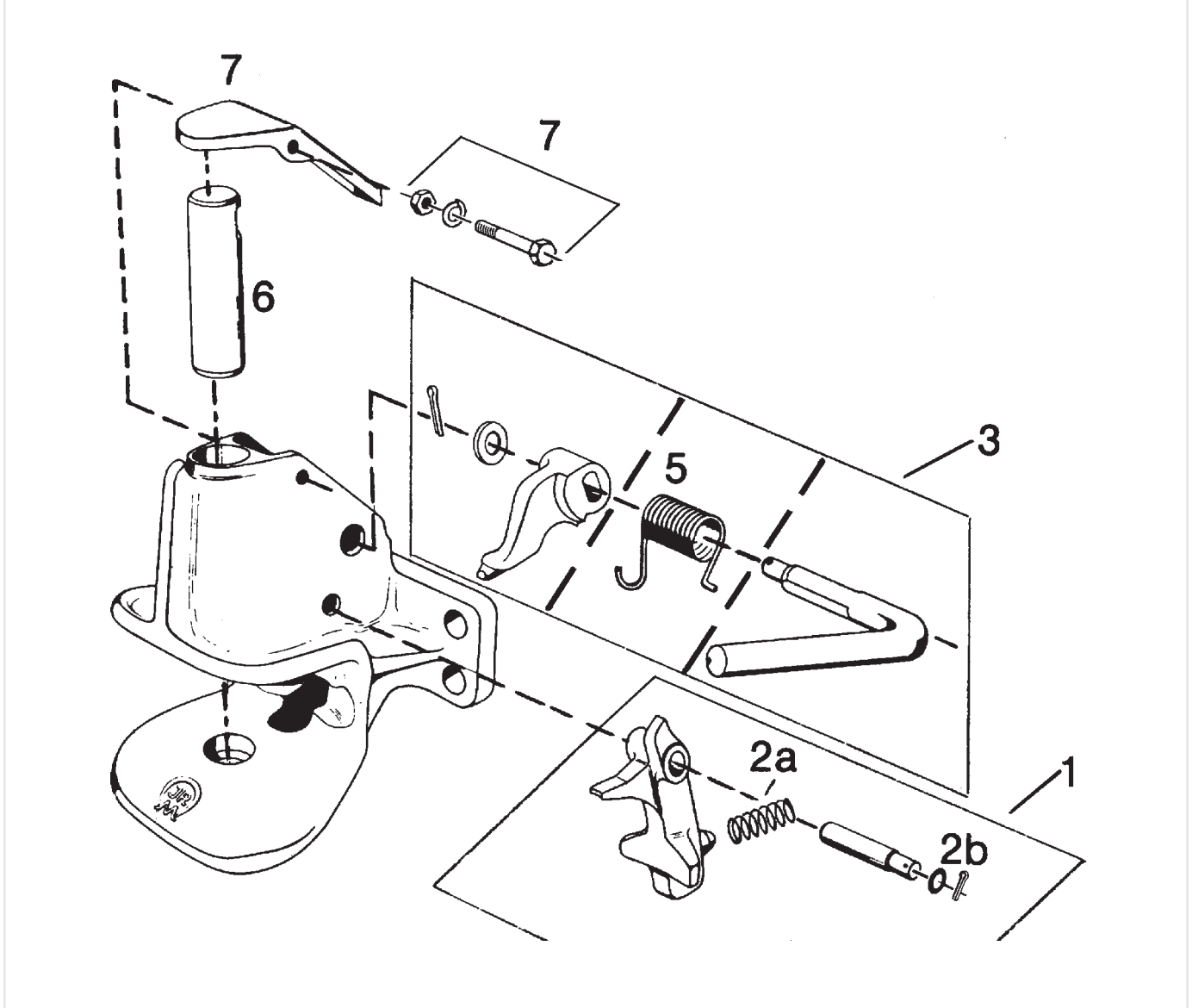
244A35511, A 07  
 a = 40 mm DIN 74054  
 A 35 zum Rangieren  
 for shunting  
 pour manœuvres  
 para maniobrar  
 per manovre

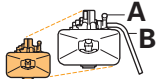

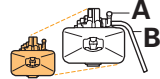



|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|----|--------|--------|--------|--------|--------|
| 07 | 130,0  | 30,0   | 160,0  | 60,0   | 14,0   |
| 35 | 120,0  | 55,0   | 155,0  | 80,0   | 15,0   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   |     |          |         |     |      | <b>ABG<br/>M</b> |
|-------------|---|-----|----------|---------|-----|------|------------------|
|             |   |     | (mm)     | (t)     | (t) | (kg) |                  |
| RO244A07001 | A | 07  | 130 x 30 | 2 (2x2) | 4,5 | 6,0  | 3184             |
| RO244A35001 | A | 135 | 120 x 55 | 4 (5x4) | 5,0 | 6,0  | 3914             |
| RO244A35511 | A | 135 | 120 x 55 | 4 (5x4) | 5,0 | 6,0  | 3914             |



| Pos. |  | ROE   |  | Pos. |  | ROE   |  |
|------|---|-------|---|------|--|-------|---|
| 01   | Kit¹ RO244xxx0  | 70237 | 1   | 03   | Kit  | 70238 | 1   |
| 01   | Kit¹ RO244xxx1  | 70858 | 1   | 05   | RO244xxx0  | 55205 | 1   |
| 01   | Kit¹ RO244A35511  | 70922 | 1   | 05   | RO244xxx1  | 55252 | 1   |
| 02   | ¹RO244Axx0  | 55204 | 1   | 06   |  | 47014 | 1   |
| 02   | ¹RO244Axx1  | 55252 | 1   | 07   |  | 70240 | 1   |

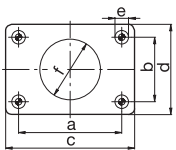
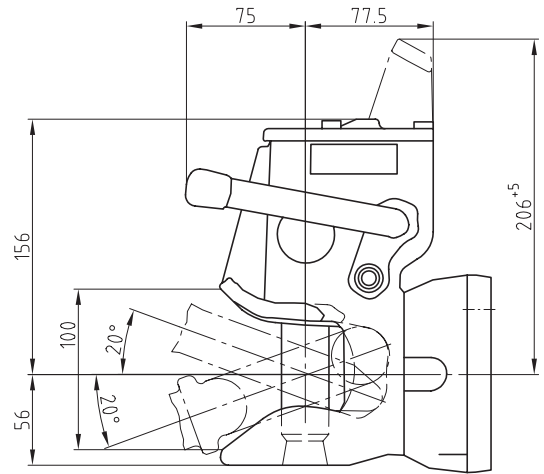
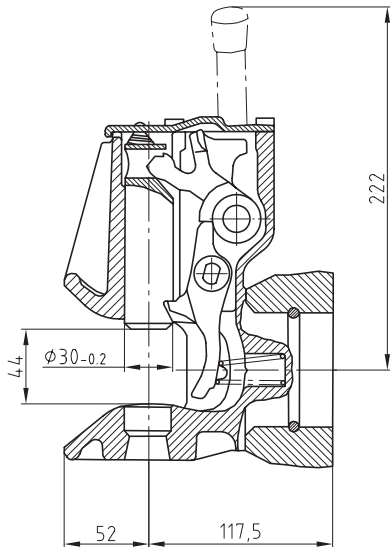
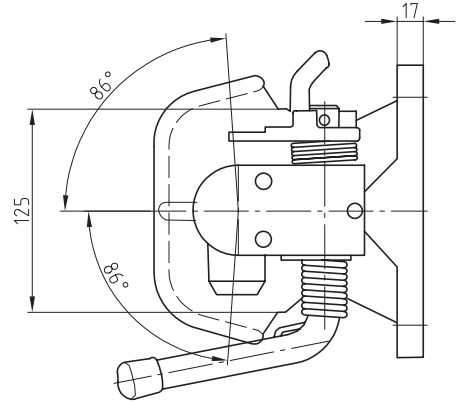
¹ s. Typenschild, s. type plate, v. plaque d'identification, s. targhetta di identificazione, v. placa de identificación

# RO★245 - 30 mm

- D** Kompaktkupplung für innerbetrieblichen Transport
- GB** Compact hitch for internal transport
- F** Crochet d'attelage compact pour le transport inter-usine ou sur parc
- I** Gancio compatto per movimentazione interne
- E** Enganche compacto para el transporte interno de la empresa



a = 40 mm DIN 74054  
 a = 35 mm DIN 8454  
 für Ringzugösen, for ring towing eye, pour anneau de remorquage, per occhione di traino, para punta de lanza anular:  
 a = 40 mm ø 21 mm  
 a = 56 mm ø 36 mm



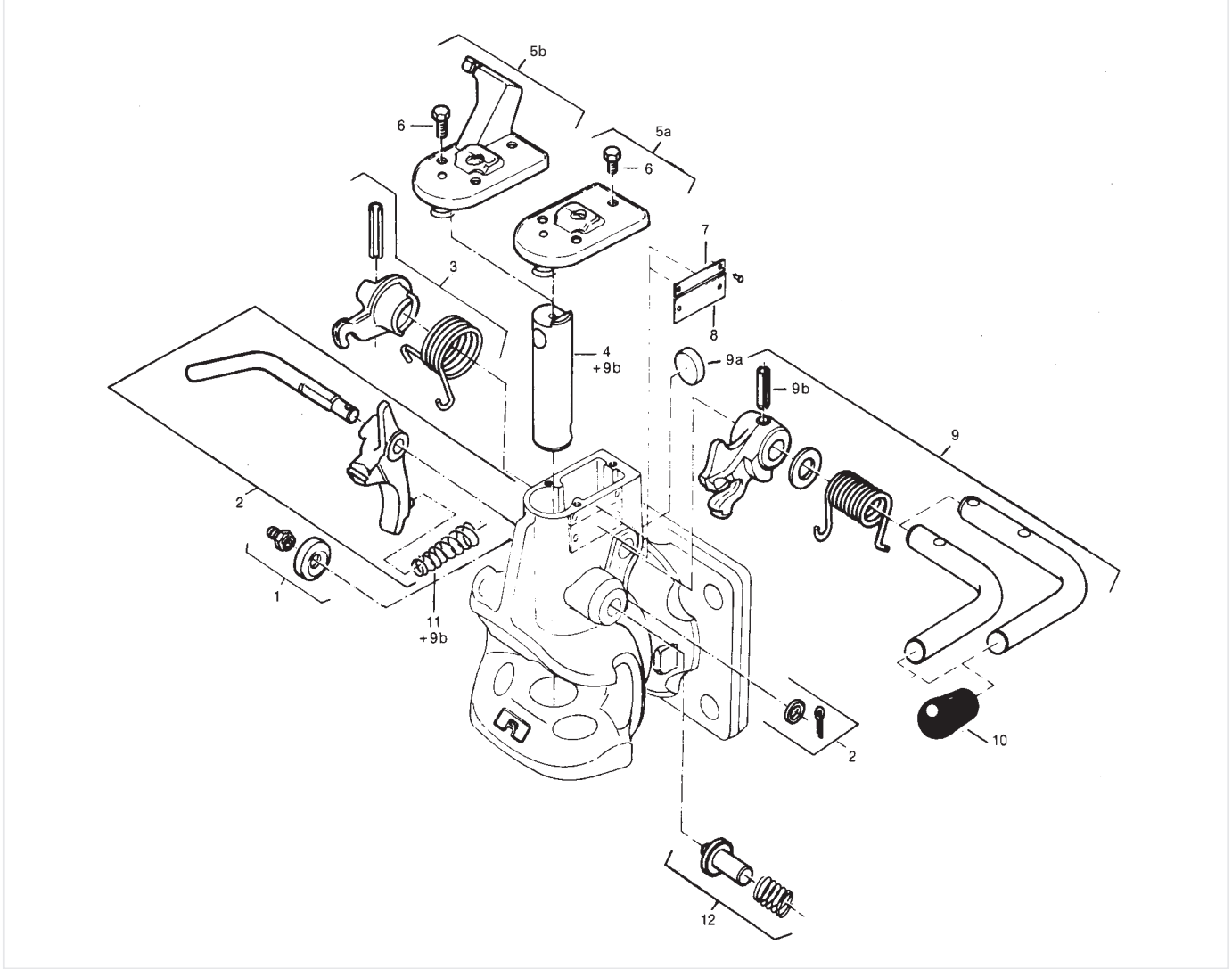
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|-----|--------|--------|--------|--------|--------|
| 145 | 140,0  | 80,0   | 182,0  | 122,0  | 17,0   |

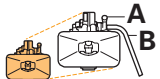

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

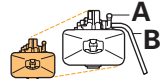

|                          | A | B | (mm) | D (kN) | (t)     | (t) | S (kg) | C (t) | (kg) |
|--------------------------|---|---|------|--------|---------|-----|--------|-------|------|
| RO245A45020              | A |   | 145  | 73,6   | 7 x 3,5 |     | 350    | 3,0   | 12,6 |
| RO245A45320 <sup>1</sup> | A |   | 145  | 68     | 5 x 23  |     | 350    |       | 16,7 |
| RO245A45500 <sup>2</sup> | A |   | 145  | 73,6   | 7 x 3,5 |     | 350    | 3,0   | 12,6 |

<sup>1</sup> für Zugöse ROE70341, for towing eye ROE70341, pour anneau de remorquage ROE70341, per occhione di traino ROE70341, para punta de lanza ROE70341

<sup>2</sup> für FB vorbereitet, prepared for FB, préparé pour FB, pronto per FB, preparado para FB (incl. ROE 70814)




| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 67593 | 1   |
| 02   |   | 70245 | 1   |
| 02   |   | 70246 | 1   |
| 04   |   | 47073 | 1   |
| 05a  |   | 65561 | 1   |

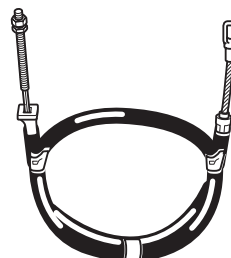
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 06   |  | 70248 | 1   |
| 09   |  | 70244 | 1   |
| 10   |  | 25173 | 1   |
| 11   |  | 70247 | 1   |
| 12   |  | 70242 | 1   |

Sonderzubehör für Fernbetätigung • Special accessories for remote operation • Accessoires spéciaux pour commande à distance • Accessori speciali per telecomandi • Accesorios especiales para telemando



| Pos. | ROE   |  |
|------|-------|---|
| 02   | 70332 | 1   |
| 03   | 65562 | 1   |
| 05b  | 70814 | 1   |
| 09   | 70243 | 1   |
| 13   | 71164 | 1   |

Bowdenzug • Bowden cable • Câble Bowden • Tirante Bowden • Cable Bowden

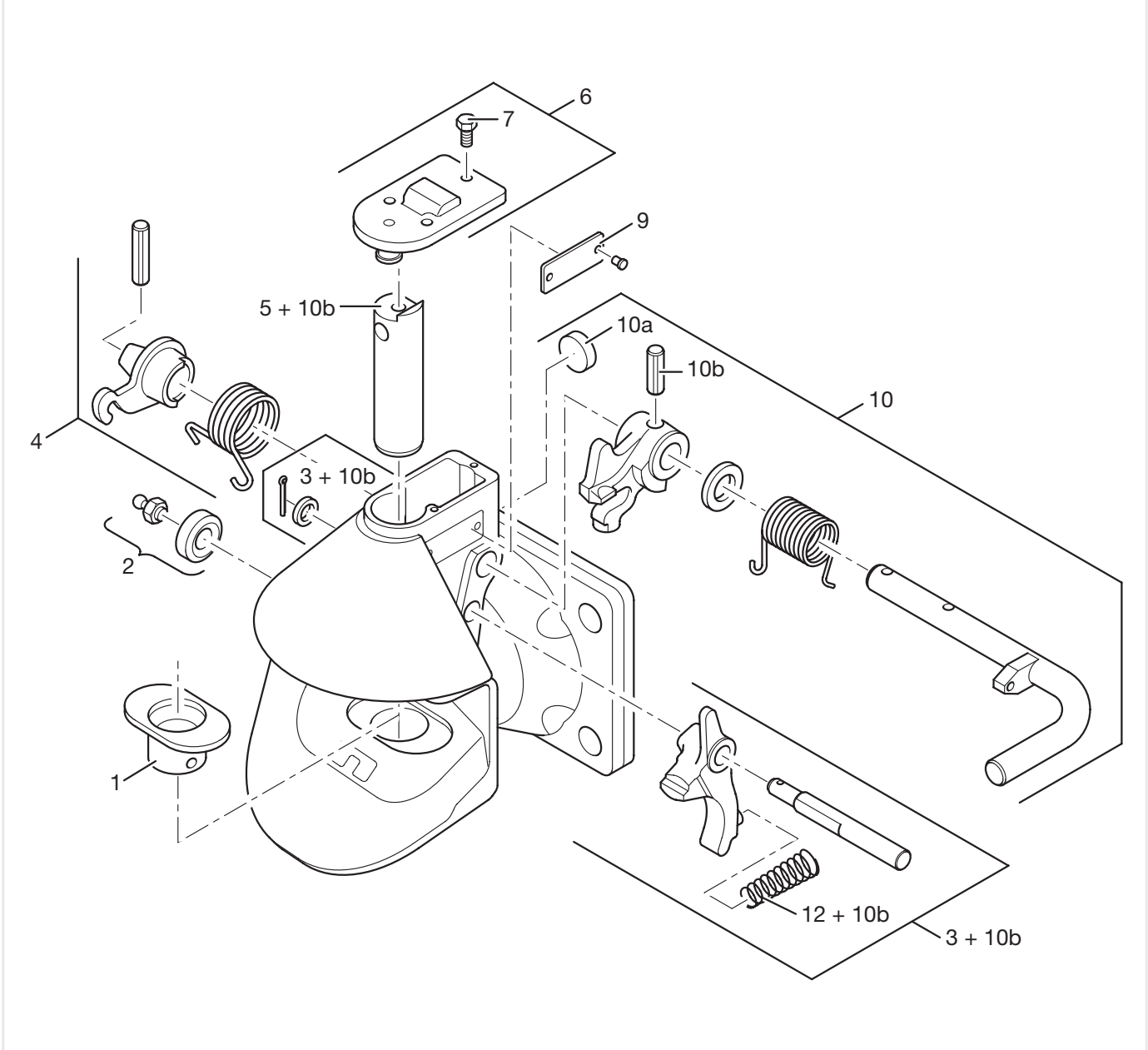


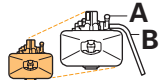

|       | L    |
|-------|------|
| 57337 | 850  |
| 57338 | 950  |
| 57339 | 1000 |
| 57340 | 1250 |
| 57341 | 1500 |
| 57342 | 1600 |
| 57343 | 2000 |
| 57344 | 2500 |
| 57345 | 3000 |
| 57346 | 4000 |
| 57347 | 5000 |
| 57348 | 7000 |

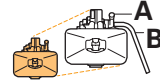



# RO\*245 A 45320

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

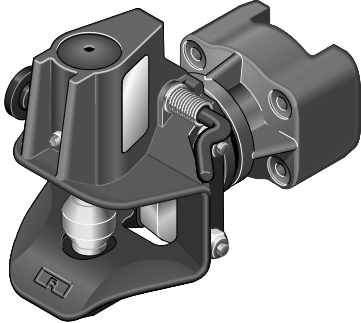


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 53325 | 1   |
| 02   |   | 67593 | 1   |
| 03   |   | 71056 | 1   |
| 04   |   | 65562 | 1   |
| 05   |   | 47073 | 1   |

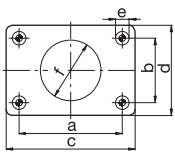
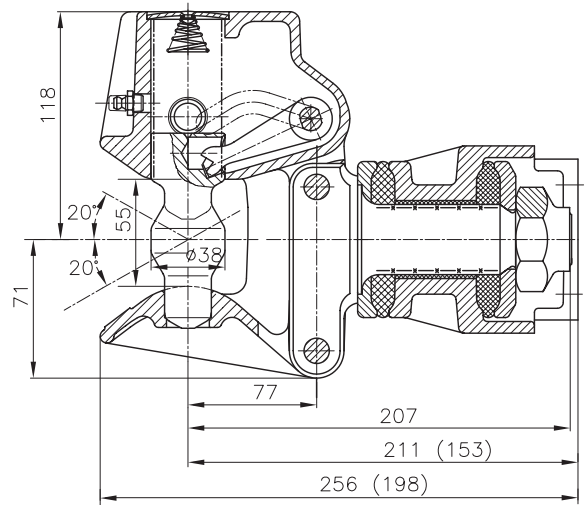
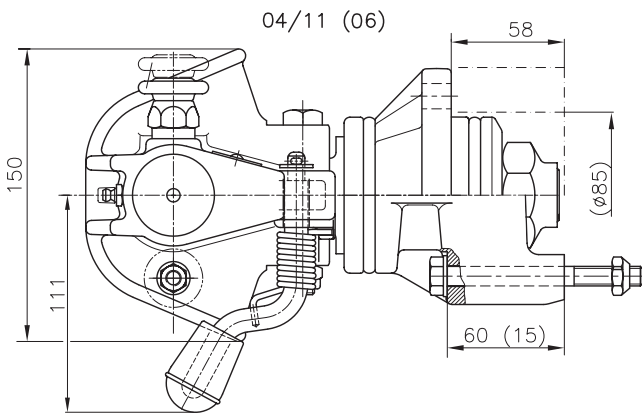
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 06   |  | 65561 | 1   |
| 07   |  | 70248 | 1   |
| 10   |  | 71057 | 1   |
| 12   |  | 70247 | 1   |

# RO★253 - 40 mm

- D** Drehbare Kupplung für Transporter
- GB** Rotable hitch for light trucks
- F** Crochet d'attelage tournant pour véhicules utilitaires
- I** Gancio girevole per motrici leggere
- E** Enganche giratorio para furgonetas



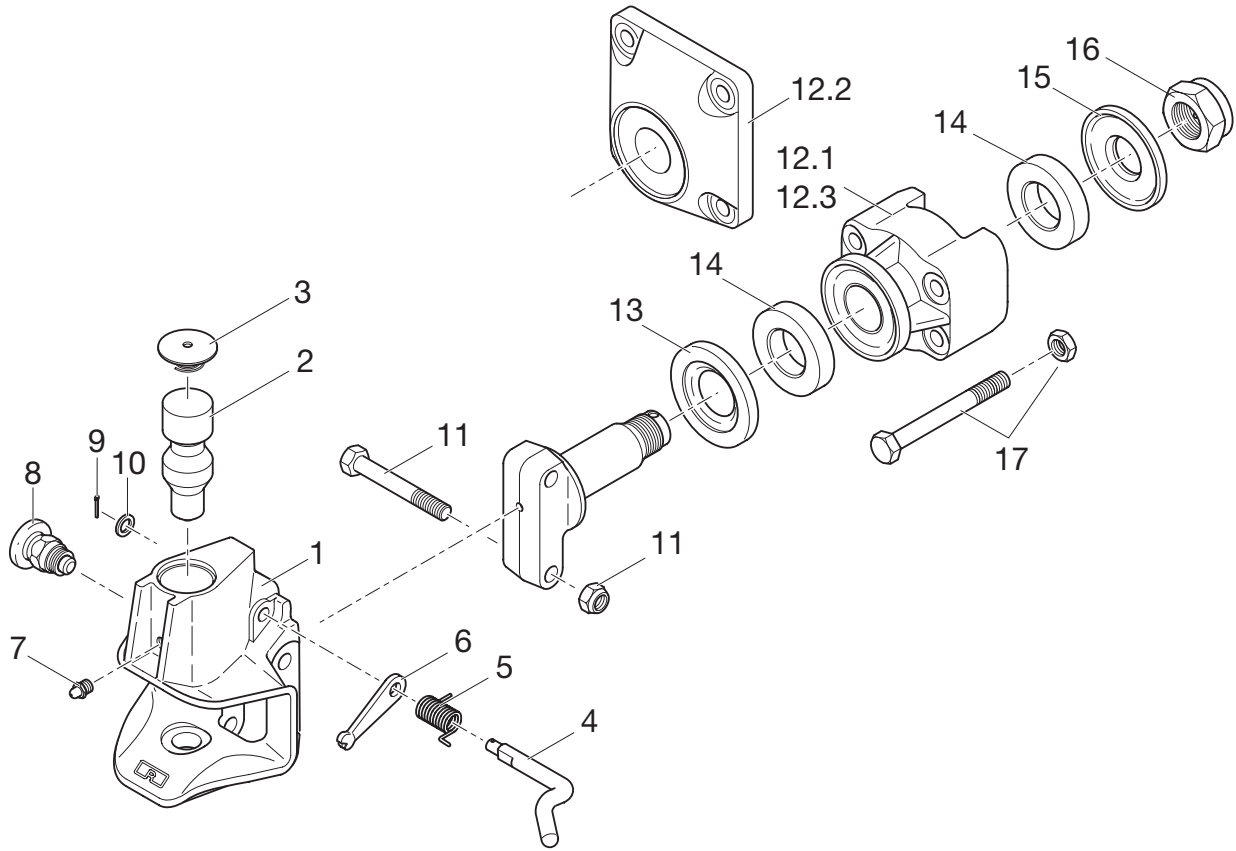
a = 40 mm  
 DIN 74054, 94/20/CE  
 für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhione di traino CH  
 para punta de lanza CH





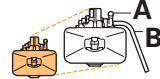

|    | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) |
|----|--------|--------|--------|--------|--------|
| 04 | 85,0   | 45,0   | 112,0  | 96,0   | 13,0   |
| 06 | 101,6  | 101,6  | 130,0  | 130,0  | 13,0   |
| 11 | 83,0   | 56,0   | 112,0  | 96,0   | 10,0   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   |    | (mm)          | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |
|-------------|---|----|---------------|--------|---------|--------|--------|------|
| RO253B04001 | B | 04 | 85,0 x 45,0   | 40     | 40      | 300    | 14,2   | 9,8  |
| RO253B04531 | B | 04 | 85,0 x 45,0   | 40     | 22      | 300    | 14,2   | 9,8  |
| RO253B06001 | B | 06 | 101,6 x 101,6 | 40     | 40      | 300    | 14,2   | 10,0 |
| RO253B06531 | B | 06 | 101,6 x 101,6 | 40     | 22      | 300    | 14,2   | 10,0 |
| RO253B11001 | B | 11 | 83,0 x 56,0   | 35     | 35      | 250    | 12,0   | 9,4  |
| RO253B11531 | B | 11 | 83,0 x 56,0   | 35     | 20      | 250    | 12,0   | 9,4  |



| Pos. |  | ROE       |  |
|------|---|-----------|---|
| 01   | 253B04001   | 253B04500 | 1   |
| 01   | 253B04531   | 253B04510 | 1   |
| 01   | 253B06001   | 253B06500 | 1   |
| 01   | 253B06531   | 253B06510 | 1   |
| 01   | 253B11001   | 253B11500 | 1   |
| 01   | 253B11531   | 253B11510 | 1   |
| 02   |   | 47097     | 1   |
| 03   |   | 67411     | 1   |
| 04   |   | 70867     | 1   |
| 06   | Kit (04, 05, 06, 09, 10)  | 70926     | 1   |
| 07   |   | 65018     | 1   |
| 08   |   | 70618     | 1   |
| 11   |   | 70868     | 1   |

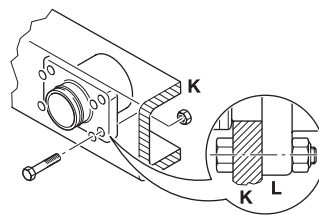
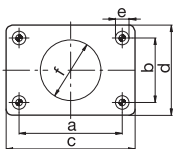
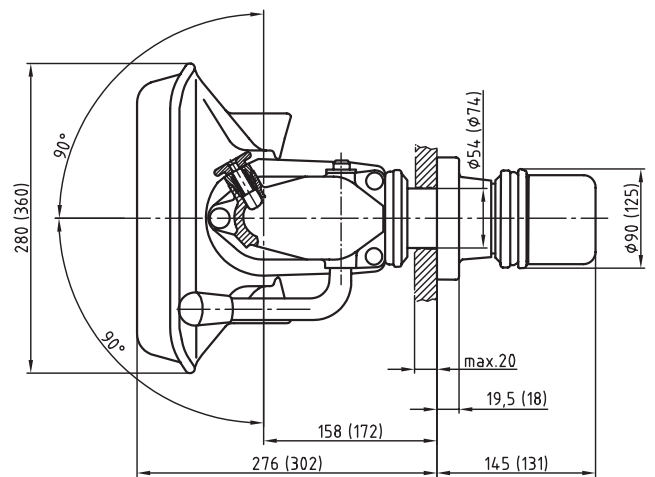
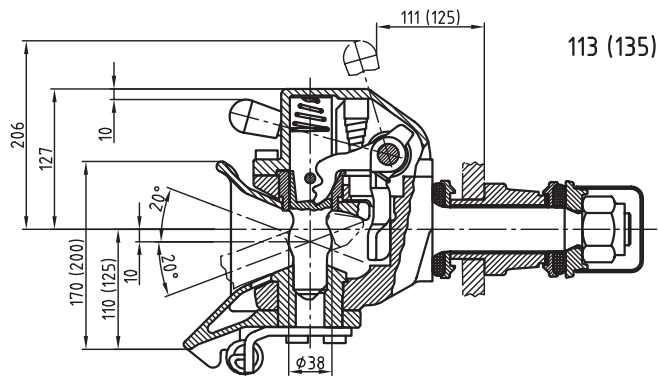
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 12.1 | 85,0 x 45,0 mm   | 70869 | 1   |
| 12.2 | 101,6 x 101,6 mm   | 70870 | 1   |
| 12.3 | 83,0 x 56,0 mm   | 70871 | 1   |
| 13   |  | 45131 | 1   |
| 14   | Kit  | 70872 | 1   |
| 15   |  | 59262 | 1   |
| 16   |  | 56124 | 1   |
| 17   | 253B04000  | 70879 | 1   |
| 17   | 253B04530  | 70873 | 1   |
| 17   | 253B06000  | 70880 | 1   |
| 17   | 253B06530  | 70874 | 1   |
| 17   | 253B11000  | 70878 | 1   |
| 17   | 253B11530  | 70875 | 1   |

# RO★256 - 40 mm

- D** Sonderkupplungen für Transporter
- GB** Special hitch for light trucks
- F** Crochets d'attelage spéciaux pour véhicules utilitaires
- I** Ganci speciali per motrici leggere
- E** Enganches especiales para furgonetas



a = 40 mm  
DIN 74054  
94/20/CE

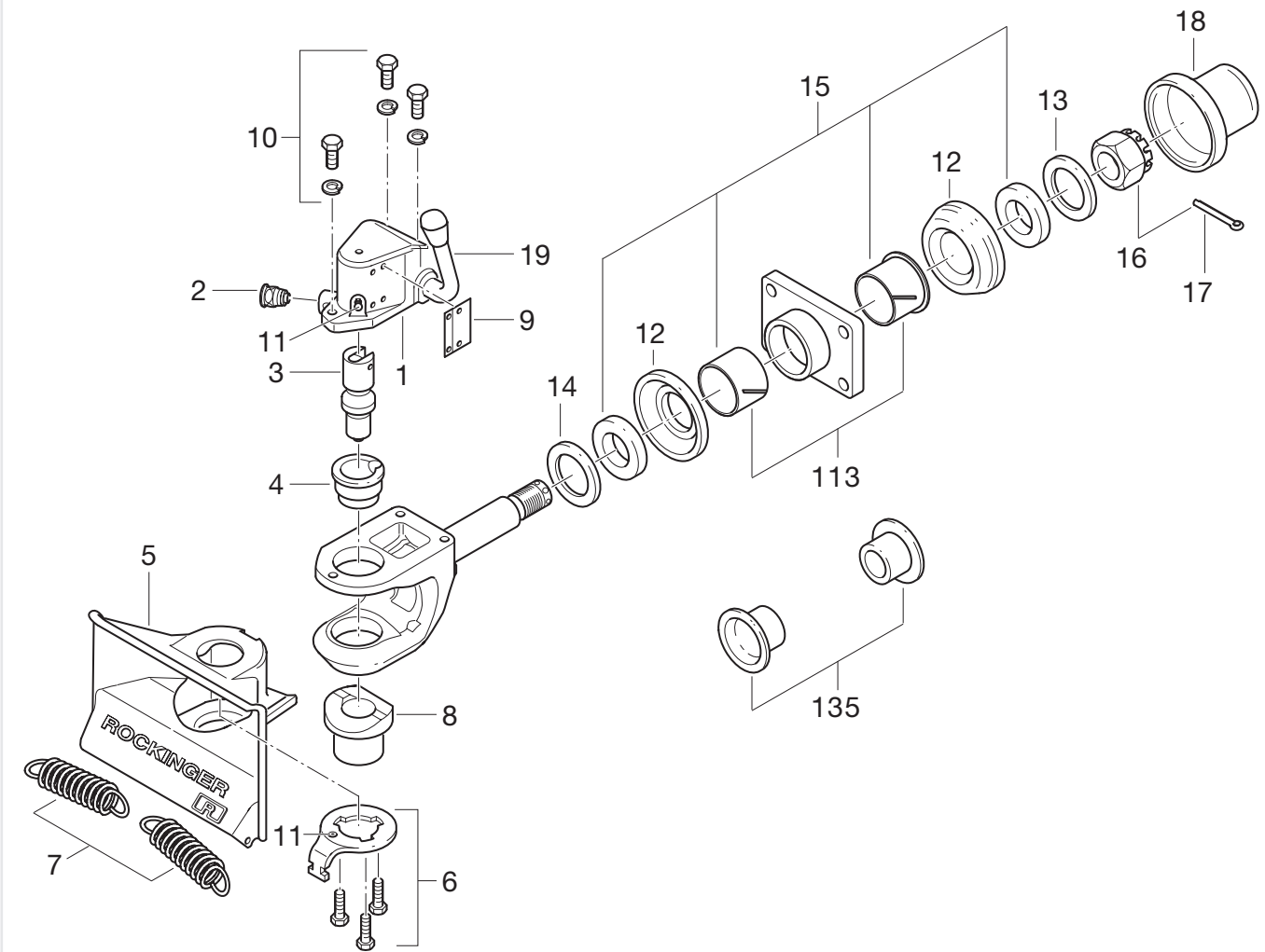




|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 113 | 83,0   | 56,0   | 110,0  | 85,0   | 10,5   | 55,0   |
| 135 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |

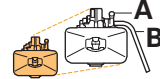

|     | K (mm) | K (mm) |
|-----|--------|--------|
| 113 | 20     | 20     |
| 135 | 20     | 20     |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   |     |          |  |        |         |        |        |      | e1      |
|-------------|---|-----|----------|--|--------|---------|--------|--------|------|---------|
|             |   |     | (mm)     |  | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |         |
| RO256A11020 | A | 113 | 83 x 56  |  | 66     | 42,5    | 500    | 12,0   | 24   | 00-0432 |
| RO256B11020 | B | 113 | 83 x 56  |  | 66     | 42,5    | 500    | 12,0   | 24   | 00-0432 |
| RO256A35020 | A | 135 | 120 x 55 |  | 70     | 70,0    | 700    | 19,0   | 24   | 00-0453 |
| RO256B35020 | B | 135 | 120 x 55 |  | 70     | 70,0    | 700    | 19,0   | 24   | 00-0453 |

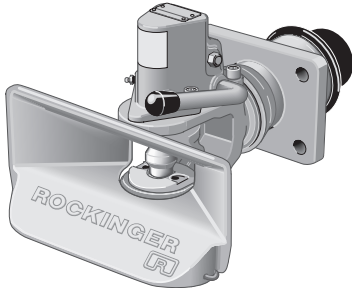


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxAxxxx, 113   | 66824 | 1   |
| 01   | ROxxxAxxxx, 135   | 70581 | 1   |
| 01   | ROxxxBxxxx, 113   | 66825 | 1   |
| 01   | ROxxxBxxxx, 135   | 70580 | 1   |
| 02   | 113   | 70352 | 1   |
| 02   | 135   | 70599 | 1   |
| 03   |   | 47007 | 1   |
| 04   |   | 53041 | 1   |
| 05   | 113   | 46074 | 1   |
| 05   | 135   | 46105 | 1   |
| 06   | 113   | 70228 | 1   |
| 06   | 135   | 70726 | 1   |
| 07   | 113   | 55008 | 1   |
| 07   |   | 55005 | 1   |
| 08   |   | 53055 | 1   |
| 10   | 135   | 70727 | 1   |

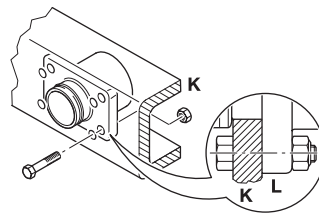
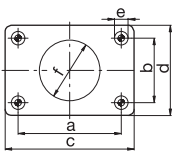
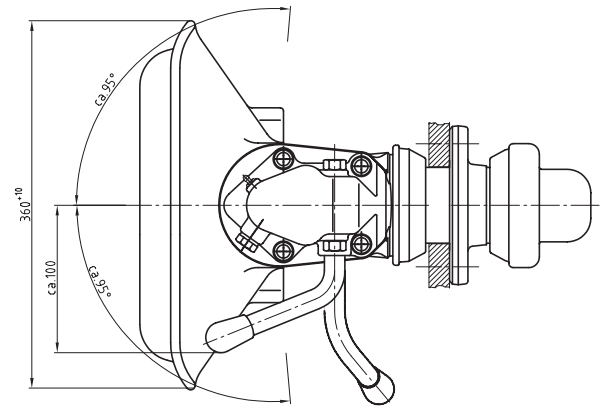
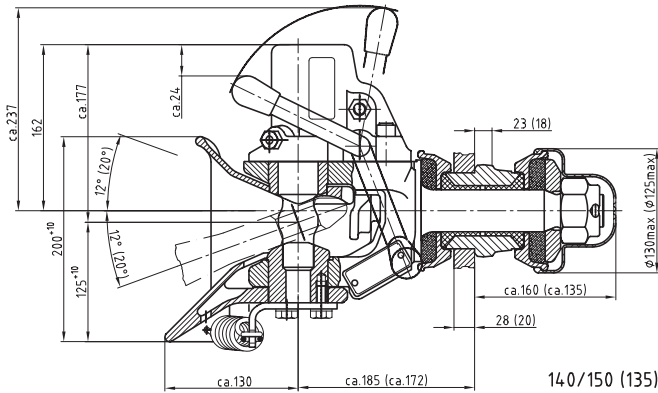
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 11   |  | 65018 | 1   |
| 11   | 113  | 65040 | 1   |
| 11   | 135  | 39179 | 1   |
| 12   | 113  | 44087 | 1   |
| 12   | 135  | 44080 | 1   |
| 13   | 113  | 54938 | 1   |
| 13   | 135  | 54707 | 1   |
| 14   | 135  | 54460 | 1   |
| 15   | 113  | 67855 | 1   |
| 15   | 135  | 70343 | 1   |
| 16   |  | 56051 | 1   |
| 17   |  | 35031 | 1   |
| 18   | 113  | 25217 | 1   |
| 18   | 135  | 25076 | 1   |
| 19   | ROxxxAxxxx   | 50070 | 1   |
| 19   | ROxxxBxxxx   | 50064 | 1   |

# RO★263 - 40 mm

- D** Standardkupplung für Zugöse CH
- GB** Standard hitch for towing eye CH
- F** Crochet standard pour anneau de remorquage CH
- I** Gancio di traino standard per occhione di traino CH
- E** Enganche estándar para punta de lanza CH



a = 40 mm  
 Zugöse CH  
 towing eye CH  
 anneau de remorquage CH  
 occhione di traino CH  
 punta de lanza CH



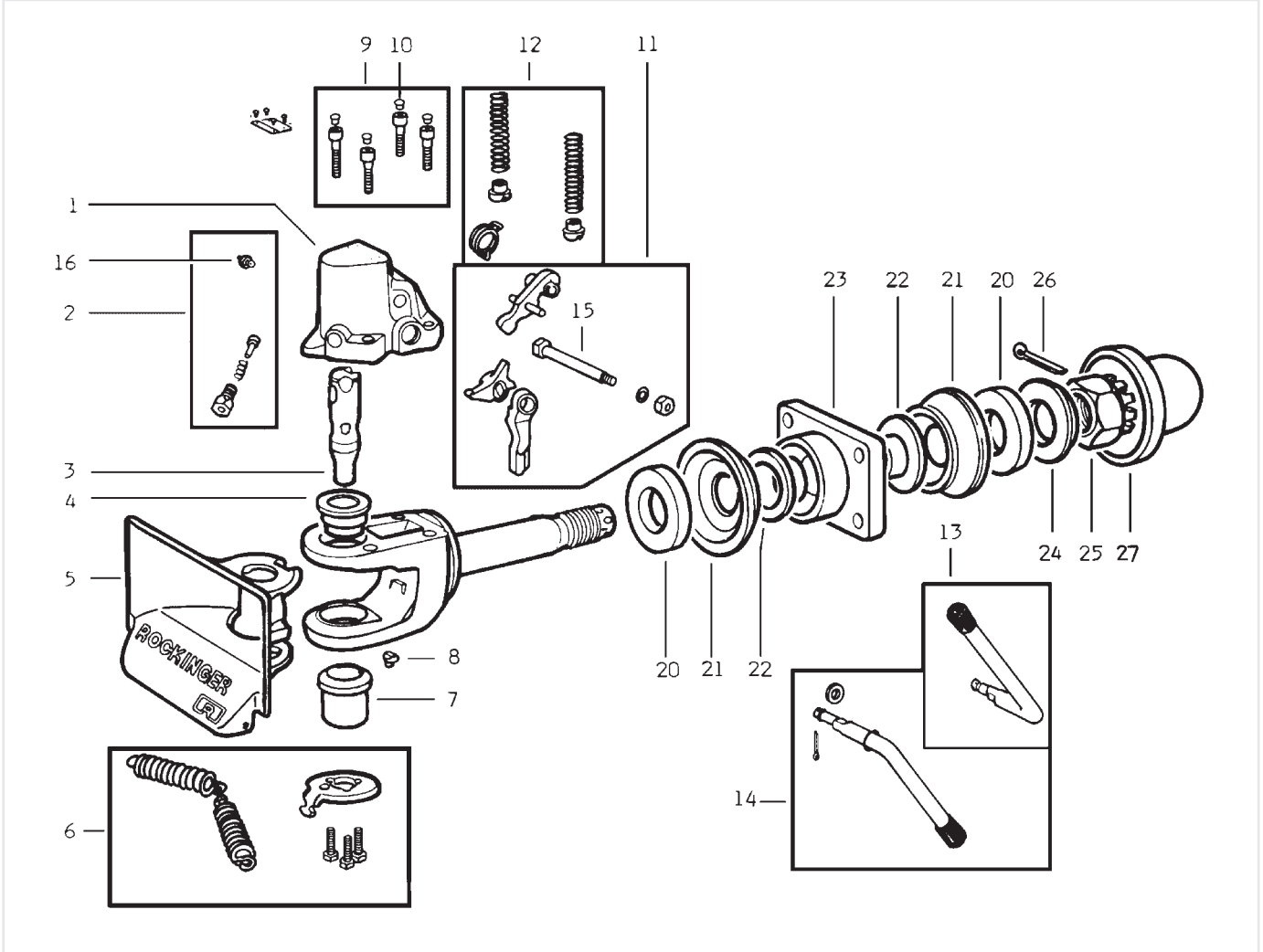
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 135 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 140 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 150 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|     | K (mm) | K (mm) |
|-----|--------|--------|
| 135 | 20     | 20     |
| 140 | 28     | 28     |
| 150 | 28     | 28     |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|            | A | B | (mm) | D (kN) | S (kg) | C (t) | (kg) |
|------------|---|---|------|--------|--------|-------|------|
| RO263A4602 | A |   | 145  | 100    | 950    | 9,0   | 29,6 |
| RO263A5153 | A |   | 150  | 120    | 1000   | 9,5   | 31,2 |
| RO263A5153 | A |   | 150  | 168    |        |       | 31,2 |
| RO263G135S | A |   | 135  | 70     | 700    | 6,5   | 25,2 |
| RO263G140S | A |   | 140  | 95     | 900    | 9,0   | 29,6 |
| RO263G150S | A |   | 150  | 120    | 950    | 9,5   | 31,2 |

## Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



| Pos. |                         | ROE   |   |
|------|-------------------------|-------|---|
| 01   | ROxxxAxxxx <sup>1</sup> | 67281 |   |
| 02   |                         | 67796 | 1 |
| 03   |                         | 47053 | 1 |
| 04   |                         | 53294 | 1 |
| 05   | 360 mm                  | 46078 | 1 |
| 05   | 280 mm                  | 46079 | 1 |
| 06   |                         | 70721 | 1 |
| 07   | 135, 140, 150           | 53060 | 1 |
| 07   | 135S, 140S, 150S        | 53357 | 1 |
| 08   |                         | 67825 | 1 |
| 09   |                         | 57162 | 1 |
| 10   |                         | 25151 | 4 |
| 11   |                         | 70670 | 1 |
| 12   |                         | 67798 | 1 |
| 13   | ROxxxAxxxx              | 50215 | 1 |
| 14   | ROxxxBxxxx              | 50184 | 1 |

| Pos. |                            | ROE   |   |
|------|----------------------------|-------|---|
| 16   |                            | 65018 | 1 |
| 16   |                            | 39179 | 1 |
| 21   | 135                        | 44084 | 2 |
| 21   | 140, 150                   | 44079 | 2 |
| 23   | 135                        | 43242 | 1 |
| 23   | 140                        | 43235 | 1 |
| 23   | 150                        | 43236 | 1 |
| 24   | 135                        | 54707 | 1 |
| 24   | 140, 150                   | 54680 | 1 |
| 25   | 135                        | 56051 | 1 |
| 25   | 140, 150                   | 56049 | 1 |
| 27   | 135                        | 25076 | 1 |
| 27   | 140, 150                   | 25072 | 1 |
| Kit  | 08, 20, 22, 26, (135)      | 67858 |   |
| Kit  | 08, 20, 22, 26, (140, 150) | 67859 |   |

<sup>1</sup> bei diesen Ersatzteilen wird der Kontrollstift in Überlänge geliefert. Er muß deshalb nach dem Aufschrauben der Automateinheit bei geschlossener Kupplung mit der Kontrollhülse plangeschliffen werden.

<sup>1</sup> the check pin will be supplied longer than required for these parts. Once the automatic unit has been bolted onto the closed hitch, the check pin must be ground flush with the guide sleeve.

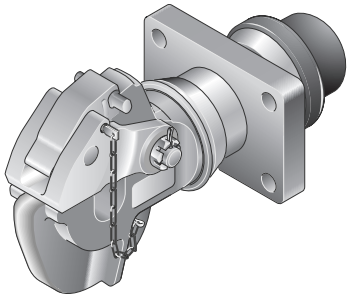
<sup>1</sup> pour ces pièces détachées, la tige de contrôle est livrée plus longue que nécessaire. Il faut par conséquent la rectifier au niveau avec la gaine de contrôle après vissage de l'unité automatique, le crochet d'attelage étant verrouillé.

<sup>1</sup> per questi pezzi di ricambio viene fornito uno spinotto di controllo più lungo del necessario. Quindi, una volta montata la torretta di comando automatica sul corpo del gancio, questo spinotto dovrà essere rettificato in piano, e con il gancio chiuso.

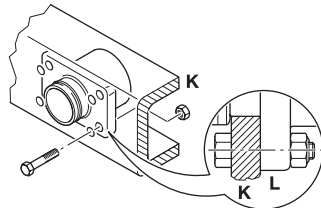
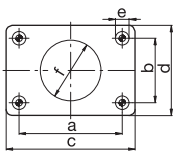
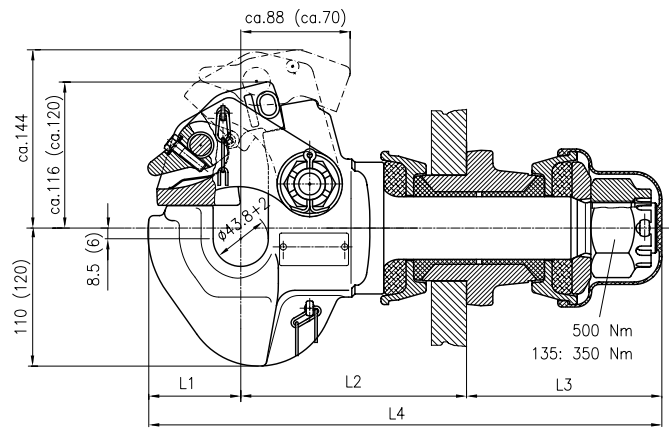
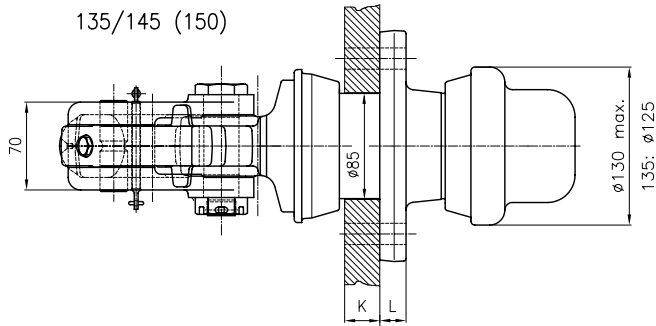
<sup>1</sup> con estas piezas de recambio se suministra el pasador de control con sobrelongitud. Por ello, se deberá rectificar en plano con el casquillo de control una vez atornillada la unidad automática con el enganche cerrado.

# RO★283 - 76 mm

- D** Gefederte Hakenkupplung mit Sicherheitsklinkenverschluss
- GB** Hook trailer hitch with buffers and safety lock
- F** Accouplement à crochet suspendu avec verrouillage à contrecliquet
- I** Gancio a uncino oscillante con spinotto di sicurezza
- E** Enganche de gancho con cierre de pestillo de seguridad



a = 76 mm  
VG 74059  
NATO



|     | L1 (mm) | L2 (mm) | L3 (mm) | L4 (mm) |
|-----|---------|---------|---------|---------|
| 135 | 74      | 167     | 131     | 372     |
| 145 | 88      | 180     | 156     | 410     |
| 150 | 88      | 180     | 156     | 424     |

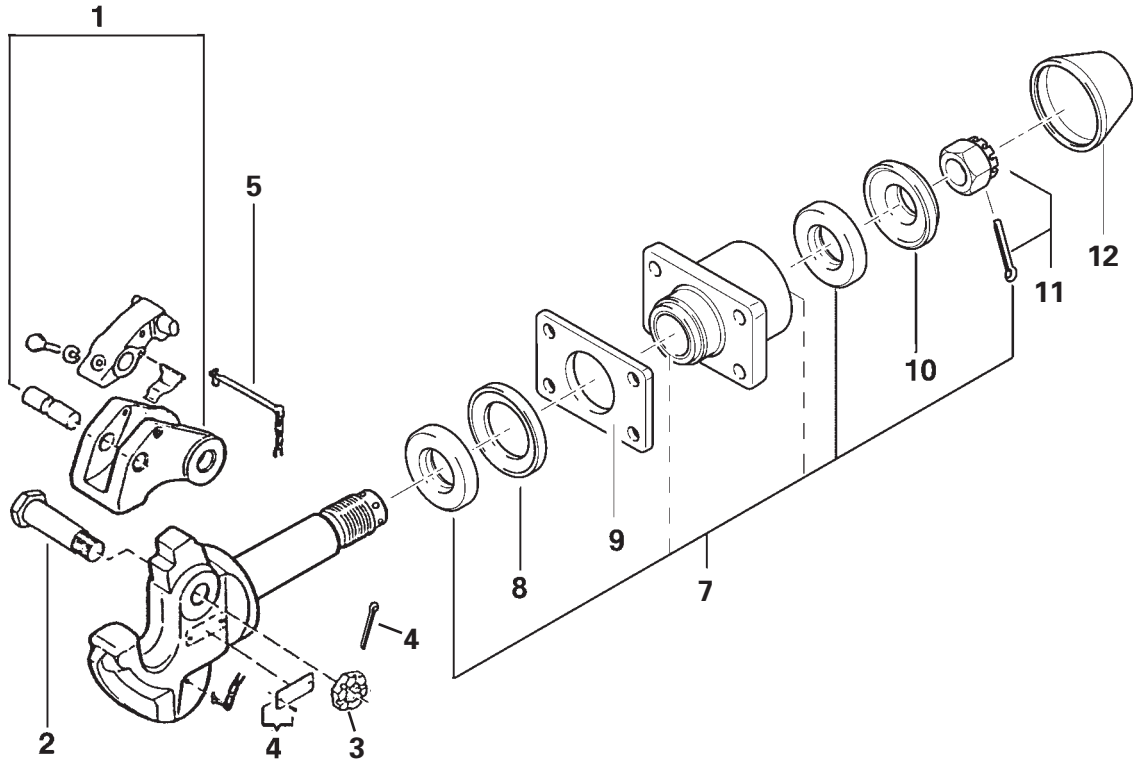
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 135 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 145 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 150 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

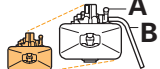

|     | K (mm) | K (mm) |
|-----|--------|--------|
| 135 | 20     | 20     |
| 145 | 28     | 28     |
| 150 | 28     | 28     |

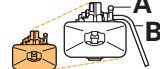

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |  | (mm) | R<br>D (kN) | C<br>Dc (kN) | S (kg) | V (kN) | C (t) | R (t) | (kg) |
|-------------|--|------|-------------|--------------|--------|--------|-------|-------|------|
| RO283A35001 |  | 135  | 70          | 42,5         | 800    | 15,6   | 6,5   | 16    | 17,7 |
| RO283A45000 |  | 145  | 95          | 54,0         | 1000   | 21,6   | 9,0   | 30    | 22,7 |
| RO283A50000 |  | 150  | 160         | 54,0         | 1500   | 21,6   | 9,0   | 40    | 31,0 |
| RO283A50090 |  | 150  | 160         | 54,0         | 1500   | 21,6   | 9,0   | 40    | 31,0 |



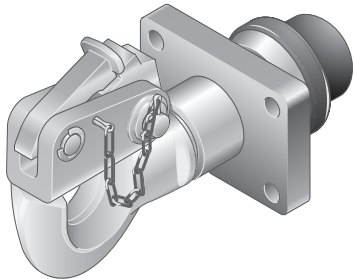


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | 135, 145  | 66393 | 1   |
| 01   | 150   | 66324 | 1   |
| 01   | 150   | 70932 | 1   |
| 02   | 135, 145  | 52036 | 1   |
| 02   | 150   | 52037 | 1   |
| 03   |   | 56030 | 1   |
| 04   |   | 35024 | 1   |
| 05   |   | 71606 | 1   |
| 05   | 283A50090   | 70285 | 1   |
| 07   | 135   | 70343 | 1   |
| 07   | 145, 150  | 70344 | 1   |

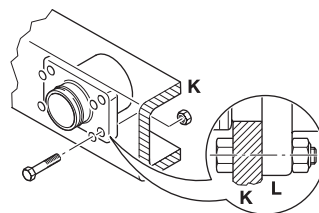
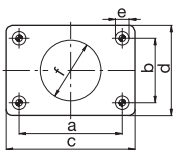
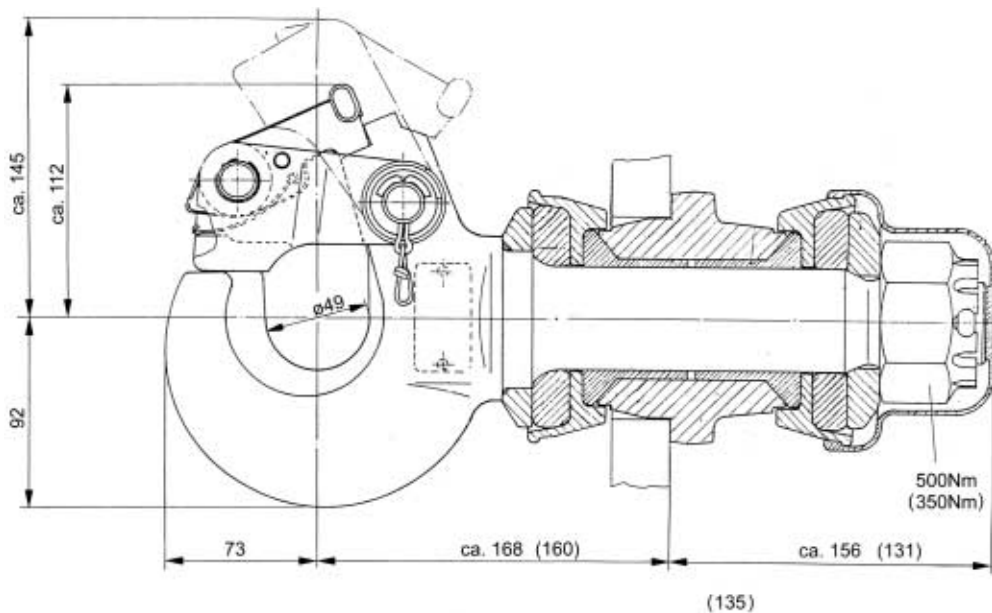
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 08   | 135  | 44080 | 2   |
| 08   | 145, 150   | 44079 | 2   |
| 09   | 135  | 43242 | 1   |
| 09   | 145  | 43235 | 1   |
| 09   | 150  | 43236 | 1   |
| 10   | 135  | 54707 | 1   |
| 10   | 145, 150   | 54680 | 1   |
| 11   | 135  | 56051 | 1   |
| 11   | 145, 150   | 56049 | 1   |
| 12   | 135  | 25076 | 1   |
| 12   | 145, 150   | 25072 | 1   |

# RO★285 - 76 mm

- D** Gefederte Hakenkupplung
- GB** Hook trailer hitch
- F** Accouplement à crochet suspendu
- I** Gancio a uncino oscillante
- E** Enganche de gancho



a = 76 mm  
VG 74059  
NATO

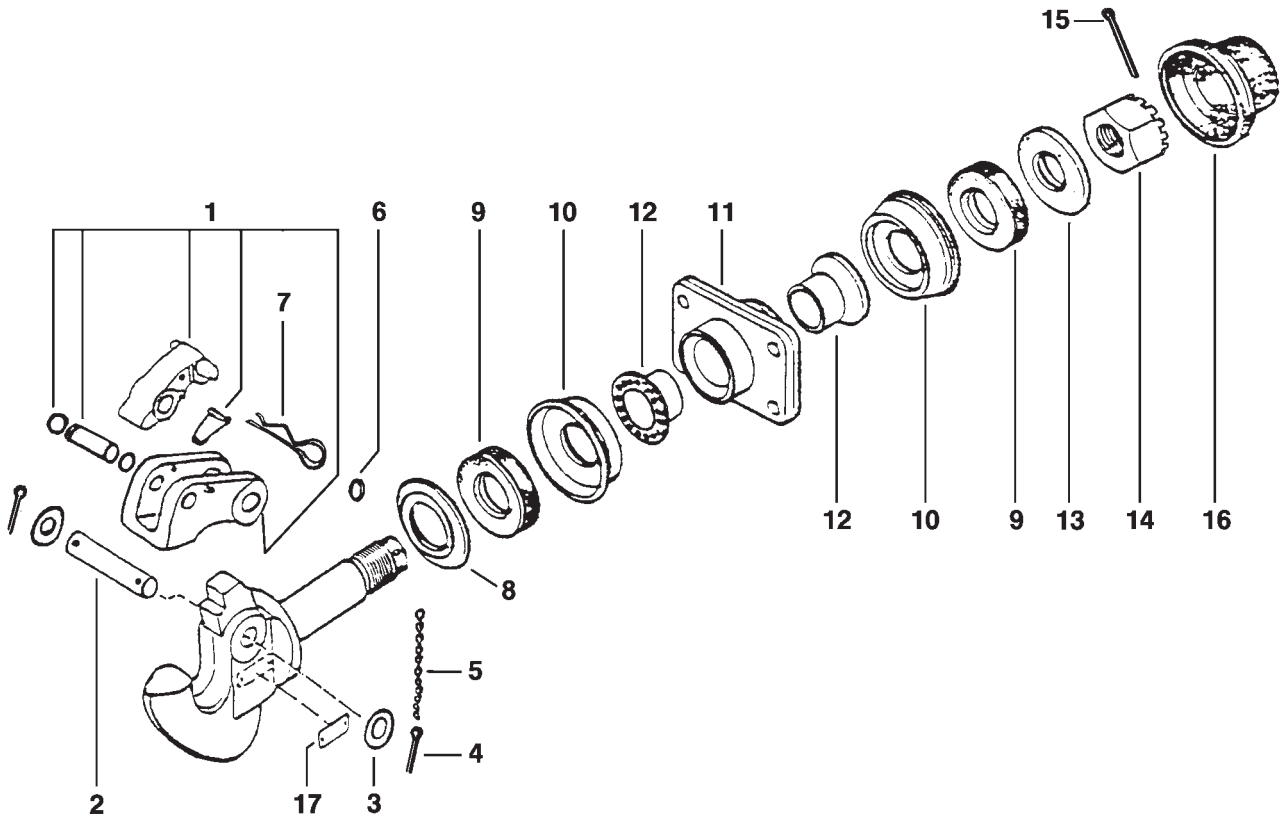


|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 135 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 145 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |

|     | K (mm) | K (mm) |
|-----|--------|--------|
| 135 | 20     | 20     |
| 145 | 28     | 28     |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             | (mm) | (mm)     | D (kN) | S (kg) | C (t) | (kg) |
|-------------|------|----------|--------|--------|-------|------|
| RO285A35020 | 135  | 120 x 55 | 65     | 250    | 2,5   | 15,0 |



| Pos. |     | ROE    |   |
|------|-----|--------|---|
| 01   |     | 401300 | 1 |
| 02   |     | 423408 | 1 |
| 03   |     | 400902 | 2 |
| 04   |     | 400903 | 2 |
| 05   |     | 408103 | 1 |
| 06   |     | 400904 | 1 |
| 07   |     | 400905 | 1 |
| 08   | 135 | 401002 | 1 |
| 10   | 135 | 44080  | 2 |

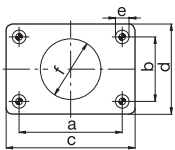
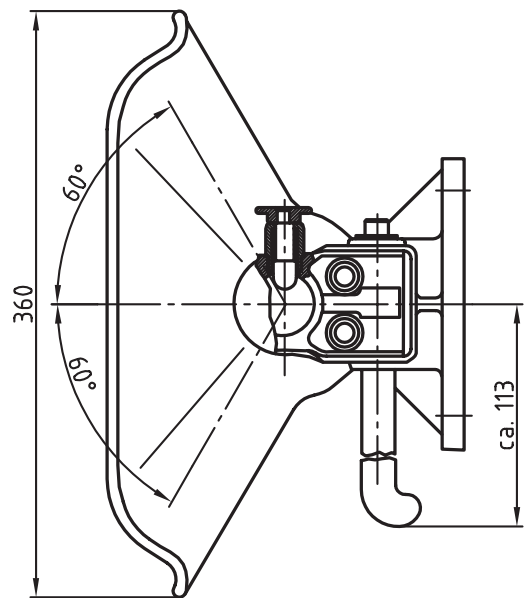
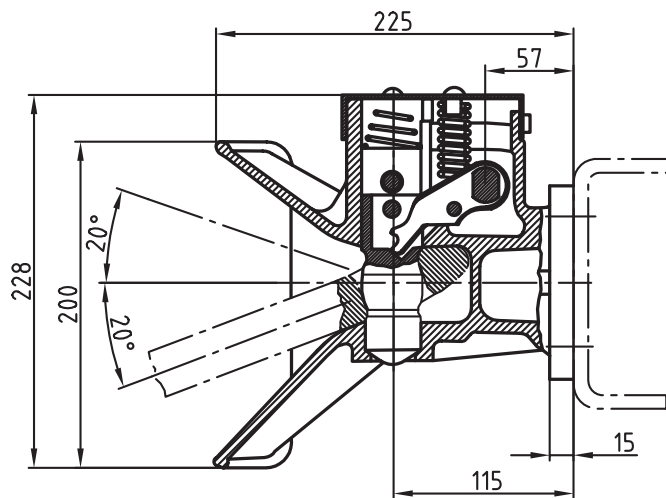
| Pos. |                  | ROE   |   |
|------|------------------|-------|---|
| 11   | 135              | 43242 | 1 |
| 13   | 135              | 54707 | 1 |
| 14   | 135              | 56051 | 1 |
| 15   | 135              | 35031 | 1 |
| 16   | 135              | 25076 | 1 |
| Kit  | 09, 12, 15 (135) | 67472 | 1 |
| Kit  | 09, 12, 15 (145) | 67471 | 1 |

# RO★290 - 40 mm

- D** Kupplung für schienengebundene Arbeitsmaschinen
- GB** Hitch for rail vehicles
- F** Crochet pour machines-outils sur rails
- I** Gancio per macchine di lavoro su rotaia
- E** Enganche para máquinas de trabajo sobre carriles



a = 40 mm  
DIN 74054



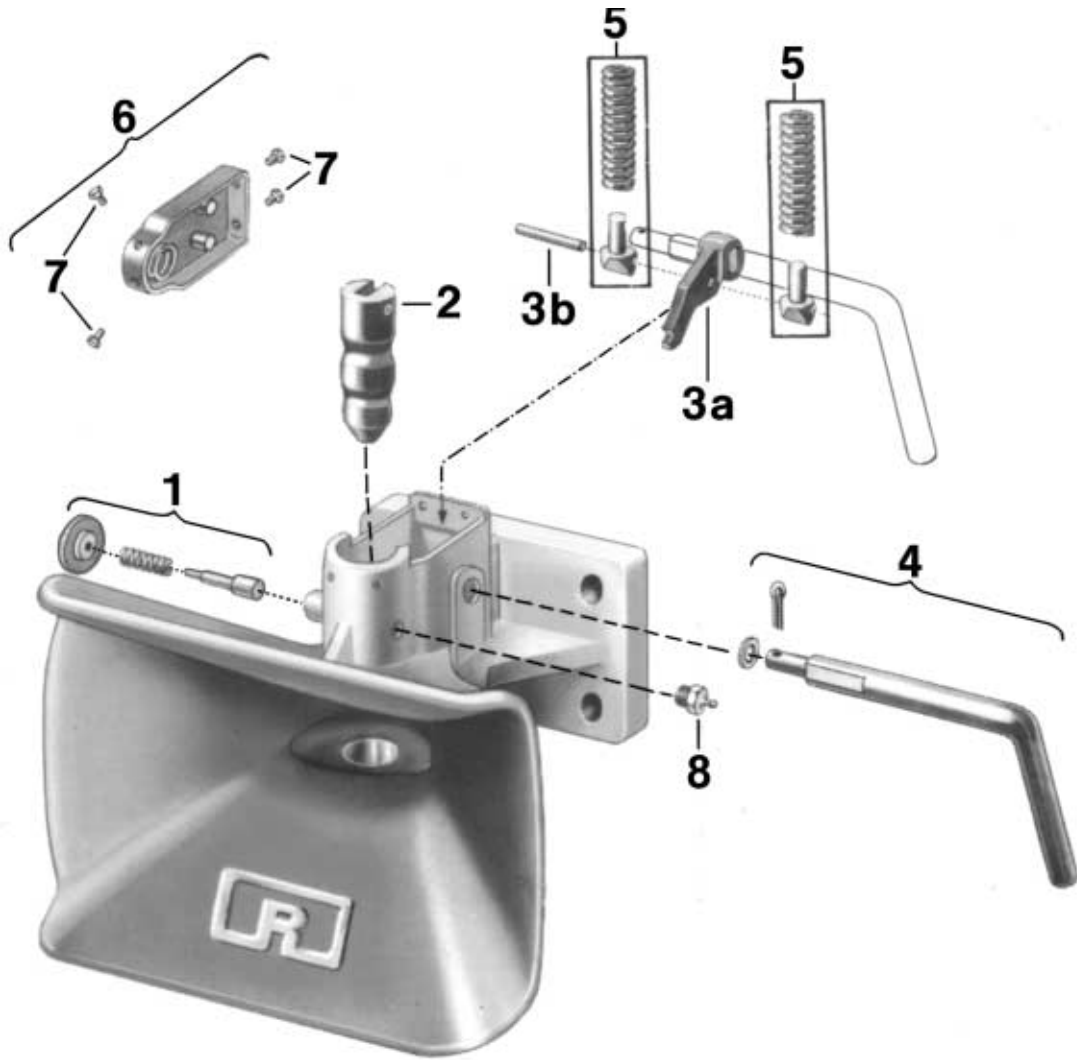
|  | a<br>(mm) | b<br>(mm) | c<br>(mm) | d<br>(mm) | e<br>(mm) |      |
|--|-----------|-----------|-----------|-----------|-----------|------|
|  | 145       | 140,0     | 80,0      | 180,0     | 120,0     | 17,0 |



## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

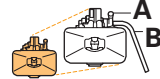

|             |   |     |                  |           |              |
|-------------|---|-----|------------------|-----------|--------------|
|             |   |     |                  |           |              |
| RO290A45020 | A | 145 | 140 x 80<br>(mm) | 14<br>(t) | 15,4<br>(kg) |

# RO★290

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

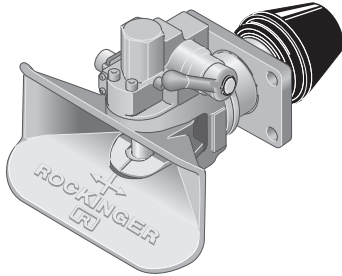


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 66017 | 1   |
| 02   |   | 47005 | 1   |
| 03   |   | 51005 | 1   |
| 04   |   | 70296 | 1   |

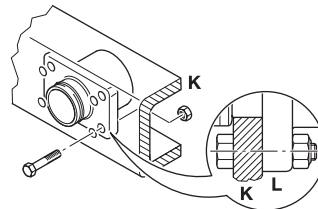
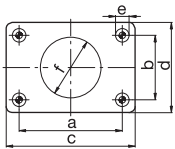
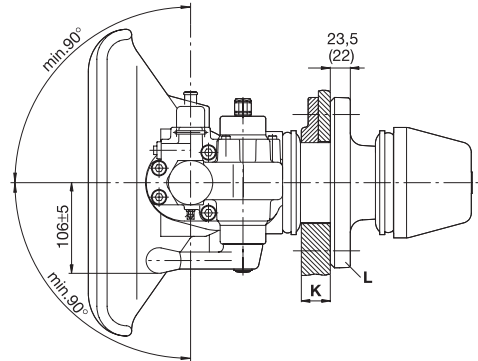
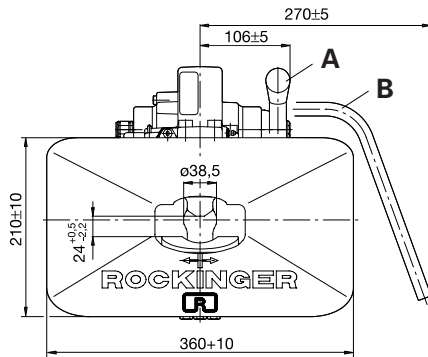
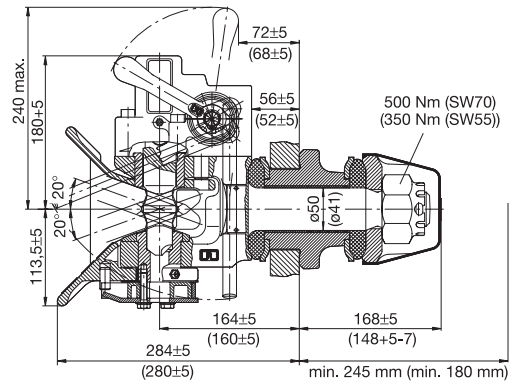
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 05   |  | 70297 | 1   |
| 06   |  | 70298 | 1   |
| 07   |  | 70324 | 1   |
| 08   |  | 65018 | 1   |

# RO★400 - 40 mm

- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



a = 40 mm  
DIN 74054  
94/20/CE

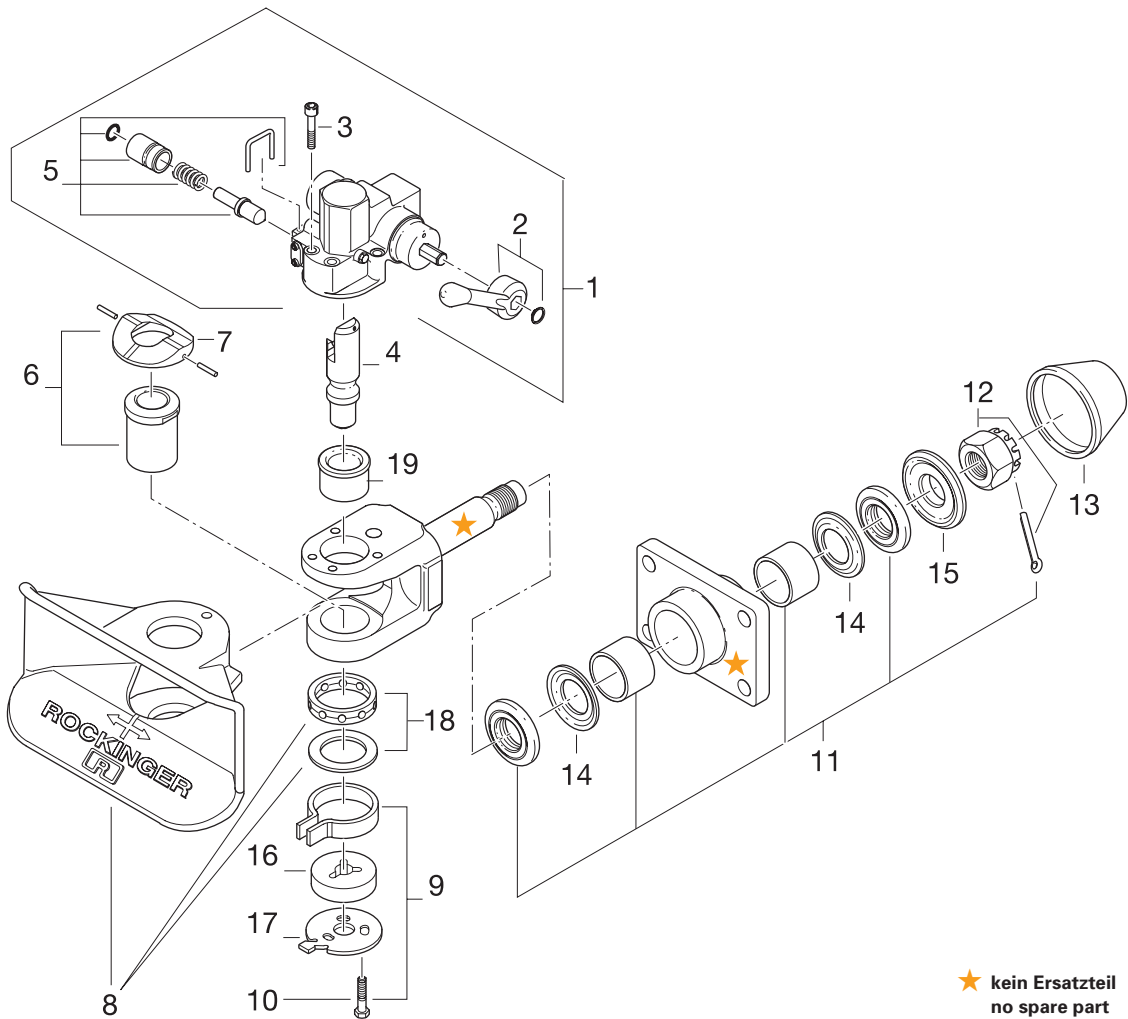


|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 135 | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 145 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 150 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|     | K (mm) | K (mm)  |
|-----|--------|---------|
| 135 | 11-32  | max. 32 |
| 145 | 11-35  | max. 35 |
| 150 | 11-35  | max. 35 |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |     |           |      |        |         |        |        |         |   | e1 |  |  |
|-------------|-----|-----------|------|--------|---------|--------|--------|---------|---|----|--|--|
|             | A   | B         | (mm) | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg)    |   |    |  |  |
| RO400A3600C | 135 | 120 x 55  | 70   | 70,0   | 700     | 24,0   | 30,0   | 00-0352 |   |    |  |  |
| RO400B3600C | 135 | 120 x 55  | 70   | 70,0   | 700     | 24,0   | 30,0   | 00-0352 |   |    |  |  |
| RO400A4600C | 145 | 140 x 80  | 100  | 91,5   | 1000    | 31,2   | 34,0   | 00-0351 |   |    |  |  |
| RO400B4600C | 145 | 140 x 80  | 100  | 91,5   | 1000    | 31,2   | 34,0   | 00-0351 |   |    |  |  |
| RO400A5100C | 150 | 160 x 100 | 130  | 90,0   | 1000    | 35,0   | 35,0   | 00-0350 |   |    |  |  |
| RO400B5100C | 150 | 160 x 100 | 130  | 90,0   | 1000    | 35,0   | 35,0   | 00-0350 |   |    |  |  |
| RO400A5120C | 150 | 160 x 100 | 130  | 90,0   | 1000    | 35,0   | 35,0   | 00-0350 | x |    |  |  |



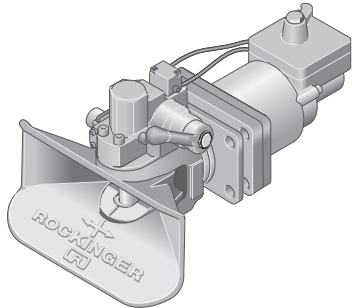
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |            | ROE   |   |
|------|------------|-------|---|
| 01   |            | 70944 | 1 |
| 02   | ROxxxAxxxx | 50244 | 1 |
| 02   | ROxxxBxxxx | 70735 | 1 |
| 03   |            | 30361 | 1 |
| 04   |            | 47099 | 1 |
| 05   |            | 70925 | 1 |
| 06   |            | 53519 | 1 |
| 07   |            | 59278 | 1 |
| 08   |            | 70812 | 1 |
| 09   |            | 55256 | 1 |
| 10   |            | 30362 | 1 |
| 11   | 135        | 25476 | 1 |
| 11   | 145, 150   | 25477 | 1 |
| 12   | 135        | 56111 | 1 |

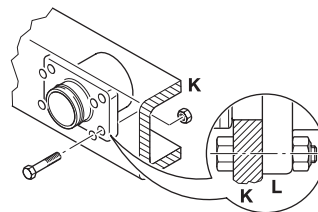
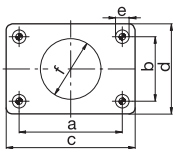
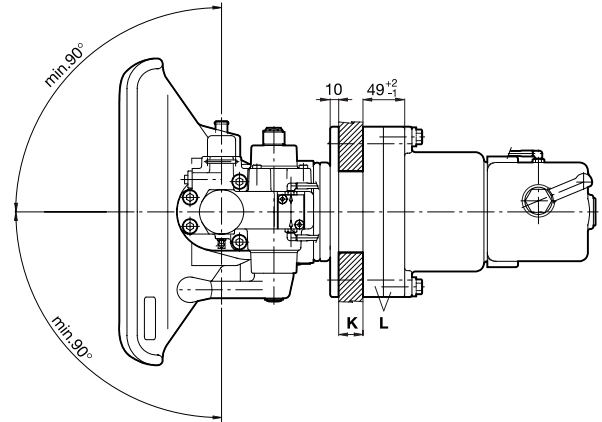
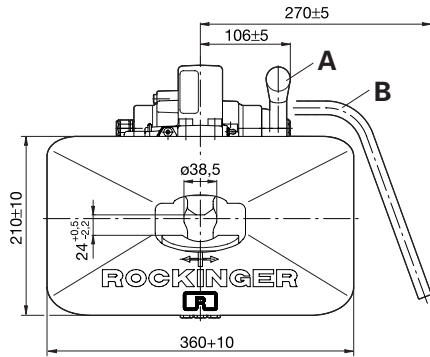
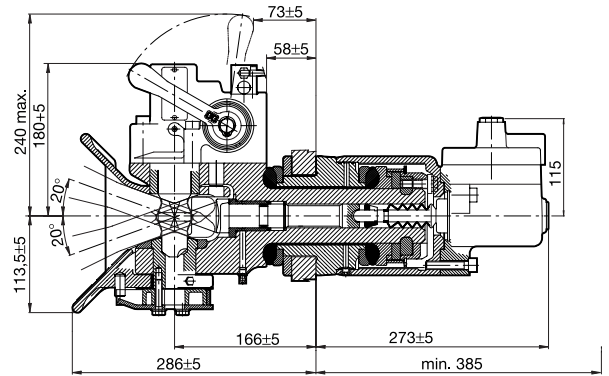
| Pos. |                        | ROE   |   |
|------|------------------------|-------|---|
| 12   | 145, 150               | 56112 | 1 |
| 13   | 135                    | 25254 | 1 |
| 13   | 145, 150               | 25347 | 1 |
| 14   | 135                    | 44160 | 1 |
| 14   | 145, 150               | 44161 | 1 |
| 15   | 135                    | 59279 | 1 |
| 15   | 145, 150               | 59280 | 1 |
| 16   |                        | 53467 | 1 |
| 17   |                        | 65626 | 1 |
| 18   |                        | 25479 | 1 |
| 19   |                        | 53520 | 1 |
| Kit  | 04, 06, 09, 16, 17, 19 | 71124 | 1 |

# RO★430 - 40 mm

- D** Comfortkupplung. Spielfrei, gefedert, gedämpft
- GB** Comfort hitch. Slack-free, with buffers, dampened
- F** Crochet d'attelage confort. Sans jeu, à ressorts, amorti
- I** Gancio comfort. Senza gioco, molleggiato, ammortizzato
- E** Enganche confort. Exento de juego, con almohadillas, amortiguado



a = 40 mm  
DIN 74054  
94/20/CE



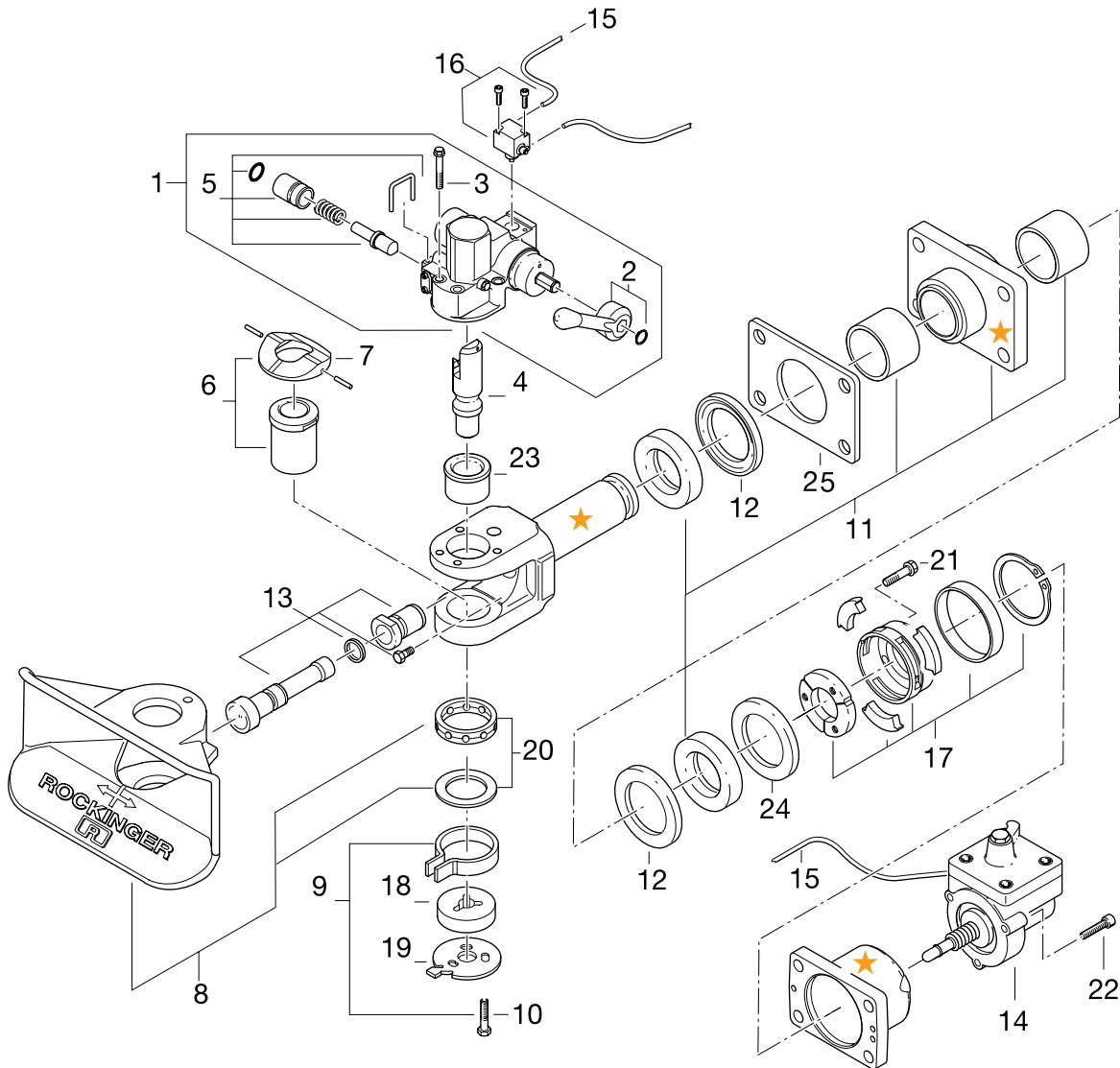
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 145 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 150 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|     | K (mm) | K (mm)  |
|-----|--------|---------|
| 145 | 11-28  | max. 28 |
| 150 | 11-28  | max. 28 |

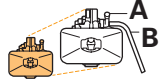

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

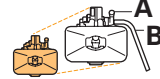

|             |     |           | T      |         |        |        |      | e1      |  |  |
|-------------|-----|-----------|--------|---------|--------|--------|------|---------|--|--|
|             | A B | (mm)      | R      | C       | S (kg) | V (kN) | (kg) |         |  |  |
|             |     |           | D (kN) | Dc (kN) |        |        |      |         |  |  |
| RO430A45000 | 145 | 140 x 80  | 100    | 91,5    | 1000   | 36     | 51,0 | 00-0406 |  |  |
| RO430B4500  | 145 | 140 x 80  | 100    | 91,5    | 1000   | 36     | 51,0 | 00-0406 |  |  |
| RO430A50000 | 150 | 160 x 100 | 130    | 91,5    | 1000   | 36     | 52,0 | 00-0405 |  |  |
| RO430B50000 | 150 | 160 x 100 | 130    | 91,5    | 1000   | 36     | 52,0 | 00-0405 |  |  |





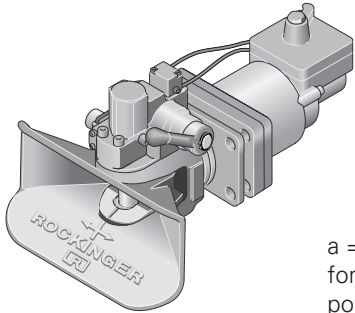
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70937 | 1   |
| 02   | ROxxxAxxxx  | 50244 | 1   |
| 02   | ROxxxBxxxx  | 70735 | 1   |
| 03   |   | 30361 | 1   |
| 04   |   | 47099 | 1   |
| 05   |   | 70925 | 1   |
| 06   |   | 53519 | 1   |
| 07   |   | 59278 | 1   |
| 08   |   | 70812 | 1   |
| 09   |   | 55256 | 1   |
| 10   |   | 30362 | 1   |
| 11   |   | 25475 | 1   |
| 12   |   | 44159 | 1   |
| 13   |   | 70938 | 1   |
| 14   | RO430xxxx0  | 70939 | 1   |
| 14   | RO430xxxx1  | 71611 | 1   |

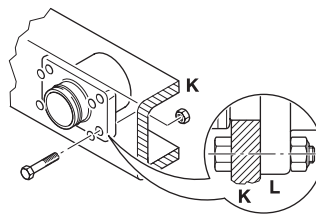
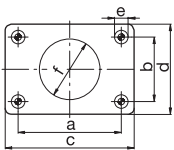
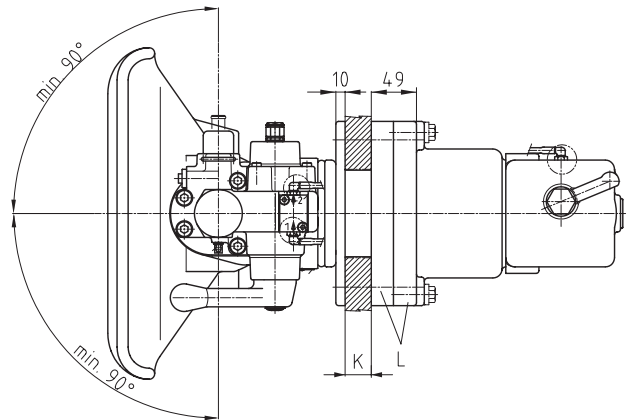
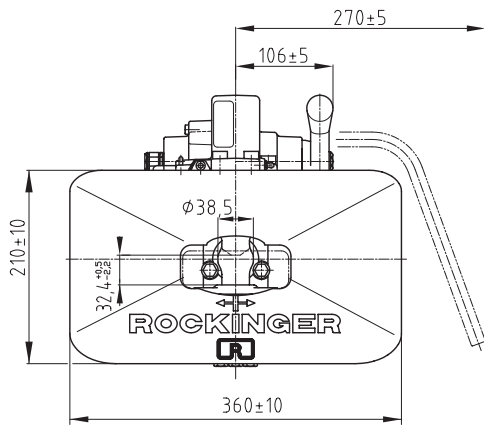
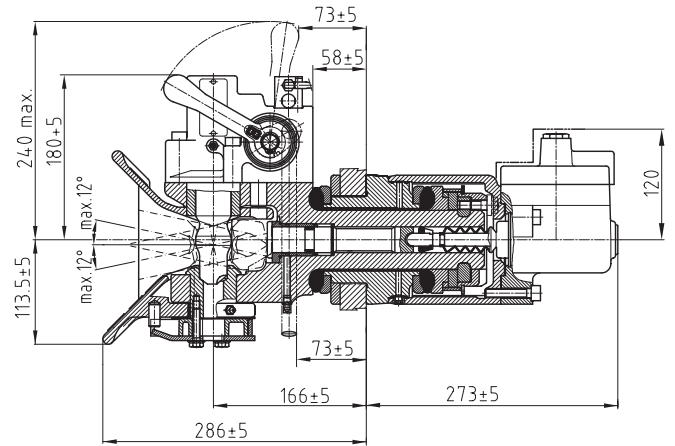
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 15   |  | 70981 | 1   |
| 16   | RO430xxxx0   | 90291 | 1   |
| 16   | RO430xxxx1   | 71610 | 1   |
| 17   |  | 59277 | 1   |
| 18   |  | 53467 | 1   |
| 19   |  | 65626 | 1   |
| 20   |  | 25479 | 1   |
| 21   |  | 30365 | 1   |
| 22   |  | 30364 | 1   |
| 23   |  | 53520 | 1   |
| 24   |  | 45133 | 1   |
| 25   |  | 59169 | 1   |
| Kit  | 04, 05, 06, 09, 18, 19, 23   | 71124 | 1   |

# RO★433 - 40 mm

- D** Comfortkupplung. Spielfrei, gefedert, gedämpft, CH
- GB** Comfort hitch. Slack-free, with buffers, dampened, CH
- F** Crochet d'attelage confort. Sans jeu, à ressorts, amorti, CH
- I** Gancio comfort. Senza gioco, molleggiato, ammortizzato, CH
- E** Enganche confort. Exento de juego, con almohadillas, amortiguado, CH



a = 40 mm für Zugöse CH  
 for towing eye CH  
 pour anneau de remorquage CH  
 per occhione di traino CH  
 para punta de lanza CH

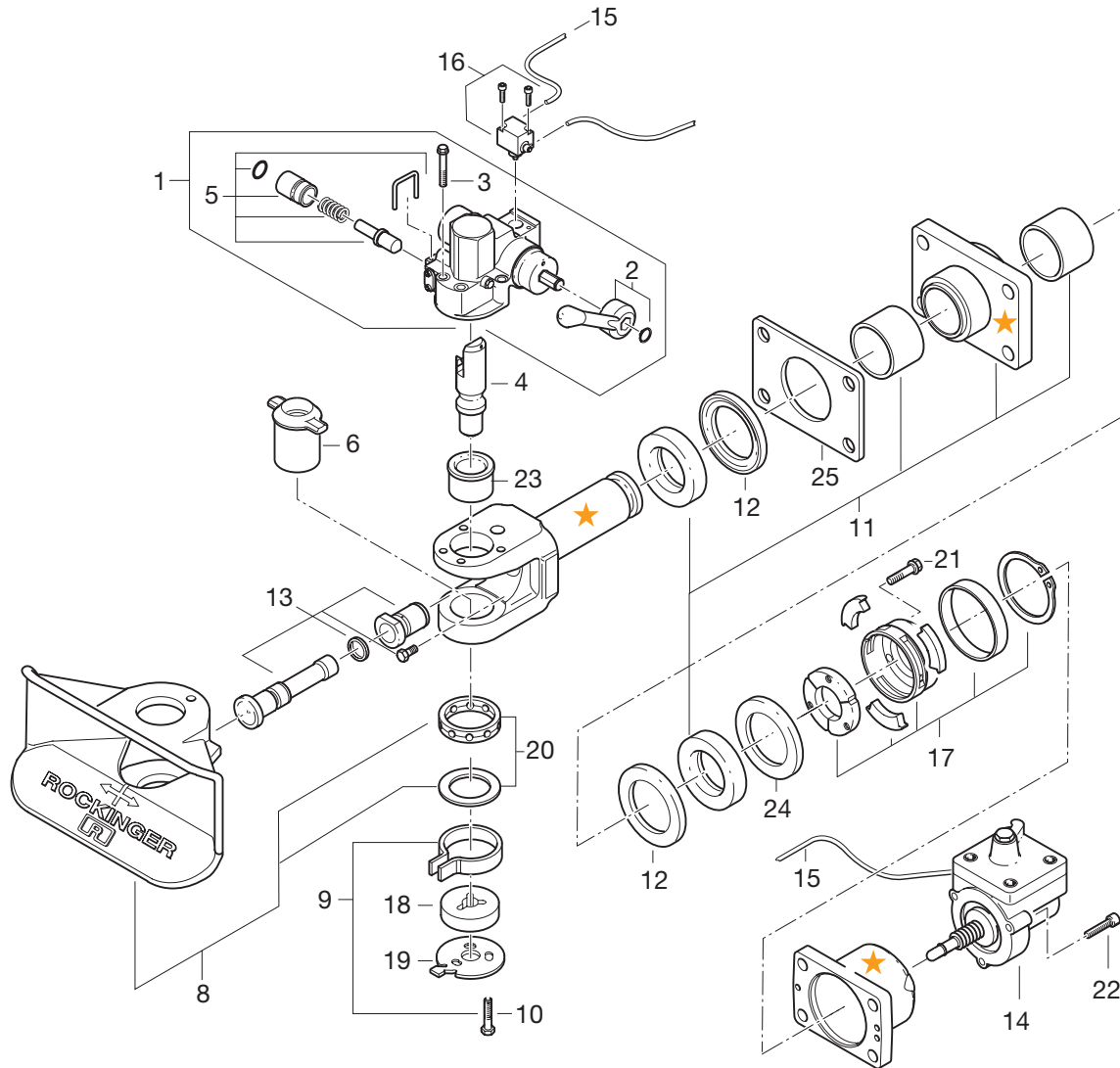


|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 145 | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 150 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

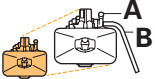

|     | K (mm) | K (mm)  |
|-----|--------|---------|
| 145 | 11-28  | max. 28 |
| 150 | 11-28  | max. 28 |

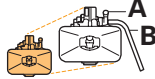

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|            | A<br>B | (mm)      | R<br>D (kN) | T<br>C<br>Dc (kN) | S (kg) | V (kN) | (kg) |  |  |
|------------|--------|-----------|-------------|-------------------|--------|--------|------|--|--|
| RO433A4500 | 145    | 140 x 80  | 100         | 91,5              | 1000   | 36,0   | 51,0 |  |  |
| RO433A5000 | 150    | 160 x 100 | 130         | 91,5              | 1000   | 36,0   | 52,0 |  |  |



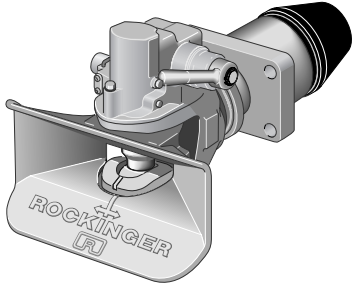
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70937 | 1   |
| 02   | ROxxxAxxxx  | 50244 | 1   |
| 02   | ROxxxBxxxx  | 70735 | 1   |
| 03   |   | 30361 | 1   |
| 04   |   | 47099 | 1   |
| 05   |   | 70925 | 1   |
| 06   |   | 53540 | 1   |
| 08   |   | 46121 | 1   |
| 09   |   | 55256 | 1   |
| 10   |   | 30362 | 1   |
|      |   | 25475 | 1   |
|      |   | 44159 | 1   |
| 13   |   | 71096 | 1   |

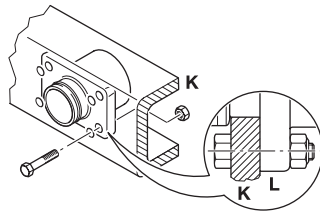
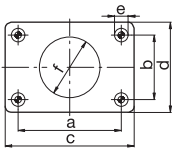
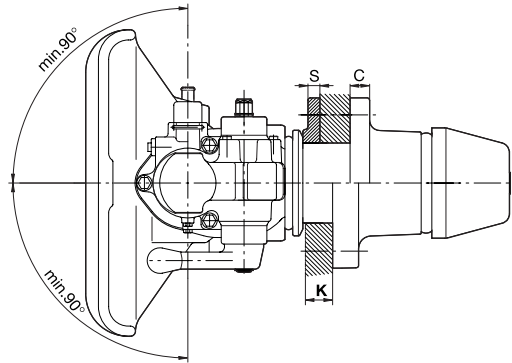
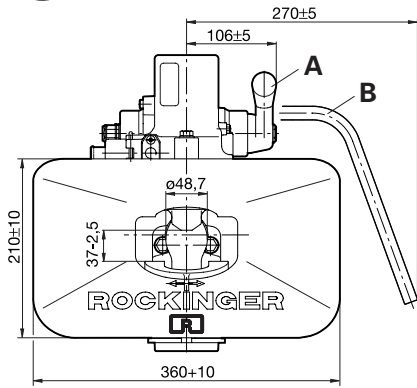
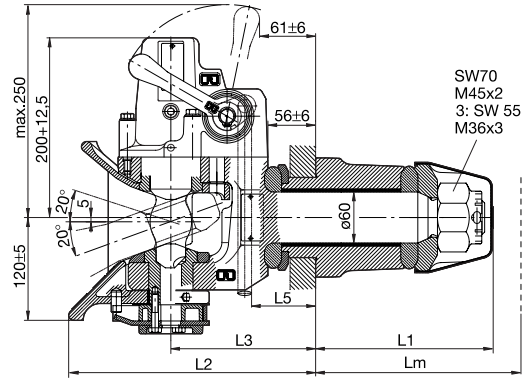
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 14   |  | 70939 | 1   |
| 15   |  | 70981 | 1   |
| 16   |  | 90291 | 1   |
| 17   |  | 59277 | 1   |
| 18   |  | 53467 | 1   |
| 19   |  | 65626 | 1   |
| 20   |  | 25479 | 1   |
| 21   |  | 30365 | 1   |
| 22   |  | 30364 | 1   |
| 23   |  | 53520 | 1   |
| 24   |  | 45133 | 1   |
| 25   |  | 59169 | 1   |

# RO★500 - 50 mm

- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



a = 50 mm  
DIN 74053,  
94/20/CE  
ISO 1102,  
ROE57005



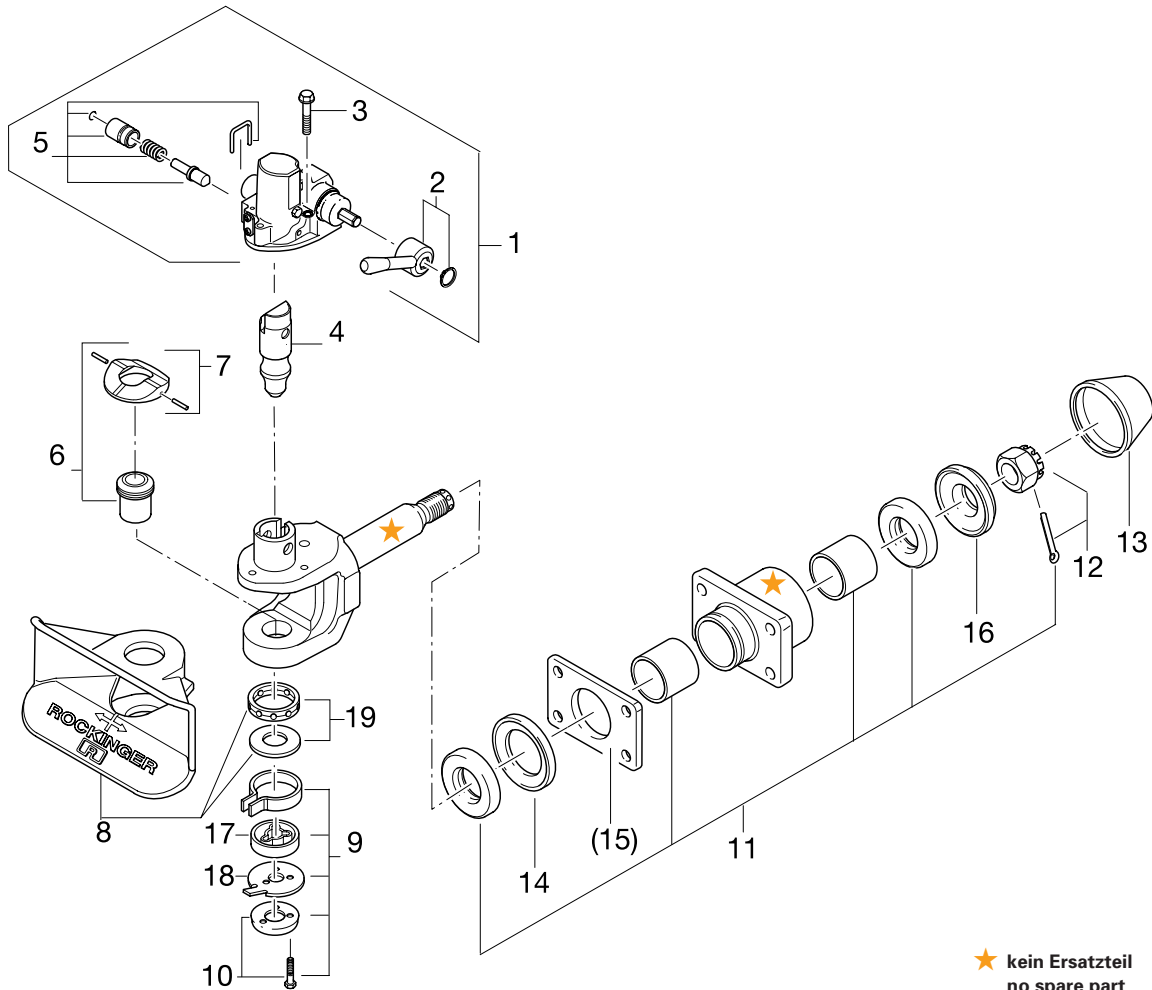
|     | L1 (mm) | L2 (mm) | L3 (mm) | Lm (mm)  | C (mm) | S (mm) |
|-----|---------|---------|---------|----------|--------|--------|
| 3   | 168     | 285     | 165     | min. 180 | 22,0   |        |
| 4/5 | 168     | 290     | 170     | min. 245 | 23,5   |        |
| 61  | 209     | 290     | 170     | min. 285 | 30,5   |        |
| 62  | 206     | 293     | 173     | min. 285 | 27,5   |        |
| 63  | 184     | 315     | 195     | min. 260 | 23,5   | 13     |
| 64  | 209     | 290     | 170     | min. 285 | 30,5   | 10     |

|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 3   | 120,0  | 55,0   | 155,0  | 90,0   | 15,0   | 74,0   |
| 4   | 140,0  | 80,0   | 180,0  | 120,0  | 17,0   | 84,0   |
| 5/6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|        | K (mm) | K (mm)  |
|--------|--------|---------|
| 3/61   | 11-32  | max. 32 |
| 4/5/62 | 11-35  | max. 35 |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             | A B | (mm)      | R      | C       | S (kg) | V (kN) | (kg) | e1      |   |  |
|-------------|-----|-----------|--------|---------|--------|--------|------|---------|---|--|
|             |     |           | D (kN) | Dc (kN) |        |        |      |         |   |  |
| RO500A31003 | 3   | 120 x 55  | 70     | 70,0    | 700    | 24,0   | 32,0 | 00-0335 |   |  |
| RO500A41003 | 4   | 140 x 80  | 100    | 91,5    | 1000   | 31,2   | 37,0 | 00-0354 |   |  |
| RO500A50003 | 5   | 160 x 100 | 130    | 90,0    | 1000   | 35,0   | 38,0 | 00-0353 |   |  |
| RO500A50513 | 5   | 160 x 100 | 130    | 90,0    | 1000   | 35,0   | 38,0 | 00-0353 |   |  |
| RO500A61003 | 6   | 160 x 100 | 190    | 135,0   | 1000   | 72,5   | 43,0 | 00-0012 |   |  |
| RO500A61203 | 6   | 160 x 100 | 190    | 135,0   | 1000   | 72,5   | 43,0 | 00-0012 | x |  |
| RO500B61003 | 6   | 160 x 100 | 190    | 135,0   | 1000   | 72,5   | 43,0 | 00-0012 |   |  |
| RO500A62003 | 6   | 160 x 100 | 190    | 135,0   | 1000   | 72,5   | 43,0 | 00-0012 |   |  |



★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |            | ROE    |   |
|------|------------|--------|---|
| 01   | ROxxxAx2   | 70849  | 1 |
| 01   | ROxxxAx3   | 71366A | 1 |
| 01   | ROxxxBxx3  | 71366B | 1 |
| 02   | ROxxxAxxx2 | 50244  | 1 |
| 02   | ROxxxAxxx3 | 50257  | 1 |
| 02   | ROxxxBxxx2 | 70735  | 1 |
| 02   | ROxxxBxxx3 | 50282  | 1 |
| 03   |            | 30269  | 1 |
| 04   |            | 47081  | 1 |
| 05   |            | 70925  | 1 |
| 06   | *          | 53490  | 1 |
| 06   | **         | 53536  | 1 |
| 07   | *          | 70850  | 1 |
| 07   | **         | 70851  | 1 |
| 08   |            | 46111  | 1 |
| 08   |            | 46118  | 1 |
| 09   |            | 65693  | 1 |
| 10   |            | 30358  | 1 |
| 11   | 3          | 25476  | 1 |

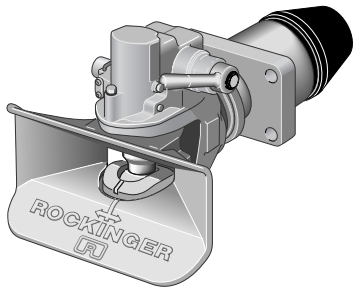
| Pos. |                | ROE   |   |
|------|----------------|-------|---|
| 11   | 4, 5           | 25477 | 1 |
| 11   | 6              | 25345 | 1 |
| 12   | 3              | 56111 | 1 |
| 12   | 4, 5           | 56112 | 1 |
| 12   | 6              | 56102 | 1 |
| 13   | 3              | 25254 | 1 |
| 13   | 4, 5, 6        | 25347 | 1 |
| 14   | 3              | 44160 | 1 |
| 14   | 4, 5           | 44161 | 1 |
| 14   | 6              | 44121 | 1 |
| 15   | 63, 64         | 59144 | 1 |
| 16   | 3              | 59279 | 1 |
| 16   | 4, 5           | 59280 | 1 |
| 16   | 6              | 59141 | 1 |
| 17   |                | 53467 | 1 |
| 18   |                | 65626 | 1 |
| 19   |                | 25479 | 1 |
| Kit  | 04, 05, 06, 09 | 71125 | 1 |

\* Bronze, bronz, bronz, bronz, bronce

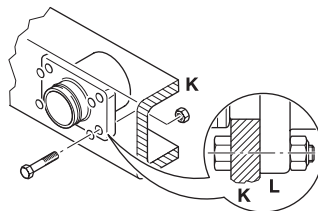
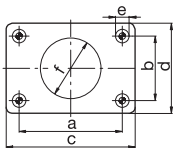
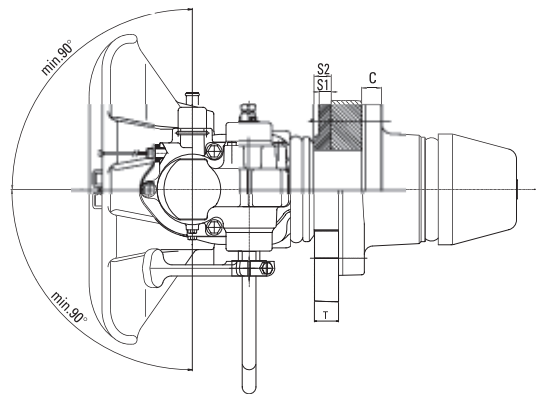
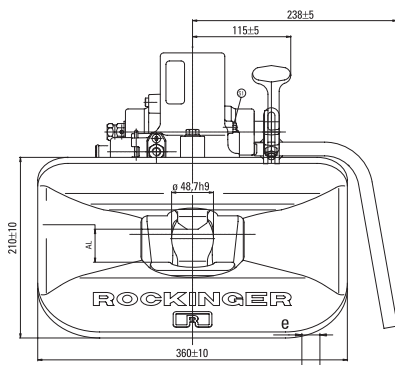
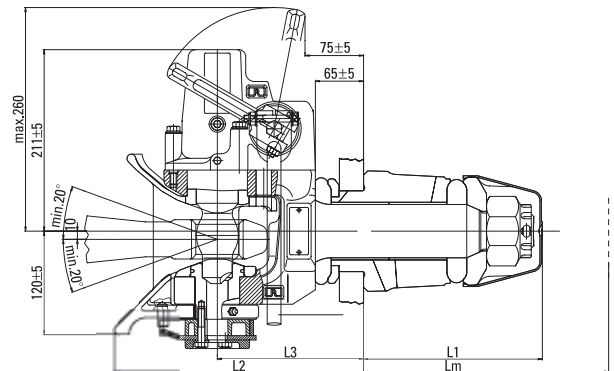
\*\* Stahl, steel, acier, acciaio, acero

# RO★500 G 65 - 50 mm

- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



a = 50 mm  
DIN 74053,  
94/20/CE  
ISO 1102,  
ROE57005



|  | L1 (mm) | L2 (mm) | L3 (mm) | Lm (mm) | C (mm)   | S (mm) |
|--|---------|---------|---------|---------|----------|--------|
|  | 65      | 214     | 299     | 179     | min. 285 | -      |

|  | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|--|--------|--------|--------|--------|--------|--------|
|  | 6      | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   |

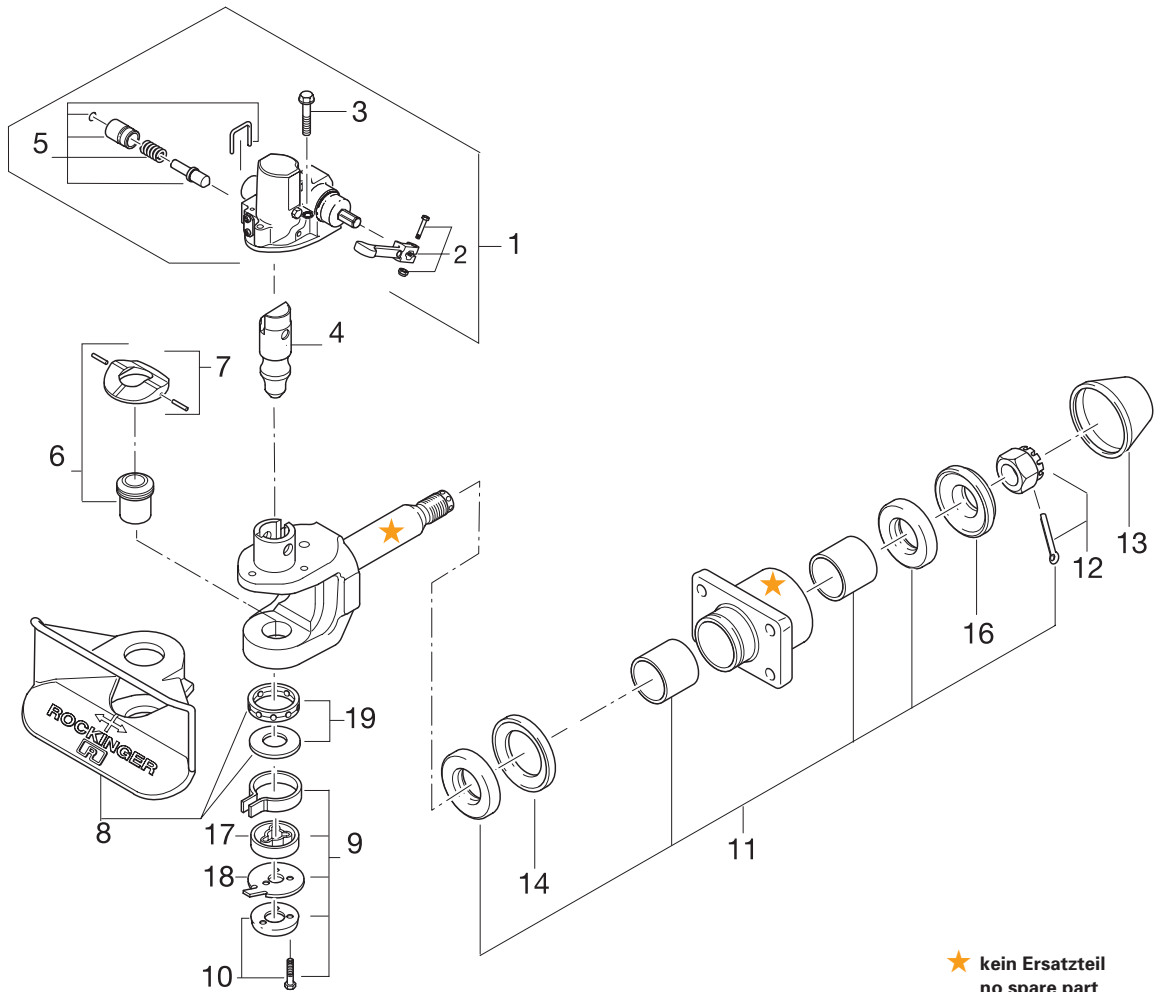
|  | K (mm) | K (mm)  |
|--|--------|---------|
|  | 65     | 13-28   |
|  |        | max. 28 |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

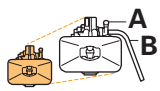

|             |    |         |        |        |      |    |    |         | e1 |   |  |
|-------------|----|---------|--------|--------|------|----|----|---------|----|---|--|
|             |    |         | R (kN) | C (kN) |      |    |    |         |    |   |  |
| RO500A65003 | 65 | 160x100 | 200    | 135,0  | 1000 | 90 | 45 | 00-1468 |    |   |  |
| RO500A65003 | 65 | 160x100 | 200    | 135,0  | 2500 | 55 | 45 | 00-1468 |    |   |  |
| RO500B65003 | 65 | 160x100 | 200    | 135,0  | 1000 | 90 | 45 | 00-1468 |    |   |  |
| RO500B65003 | 65 | 160x100 | 200    | 135,0  | 2500 | 55 | 45 | 00-1468 |    |   |  |
| RO500A65403 | 65 | 160x100 | 200    | 135,0  | 1000 | 90 | 48 | 00-1468 | x  | x |  |
| RO500A65403 | 65 | 160x100 | 200    | 135,0  | 2500 | 55 | 48 | 00-1468 | x  | x |  |
| RO500A65202 | 65 | 160x100 | 200    | 135,0  | 1000 | 90 | 45 | 00-1468 | x  |   |  |
| RO500A65203 | 65 | 160x100 | 200    | 135,0  | 2500 | 55 | 45 | 00-1468 | x  |   |  |

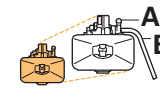

# RO★500 G 65

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



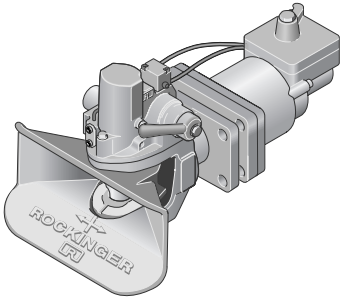
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE    |  |
|------|---|--------|---|
| 01   | ROxxxAxxxx  | 71366A | 1   |
| 01   | ROxxxBxxxx  | 71366B | 1   |
| 02   | ROxxxAxxxx  | 50257  | 1   |
| 02   | ROxxxBxxxx  | 50282  | 1   |
| 03   |   | 30269  | 1   |
| 04   |   | 47081  | 1   |
| 05   |   | 70925  | 1   |
| 06   |   | 53536  | 1   |
| 07   |   | 70851  | 1   |
| 08   |   | 46118  | 1   |

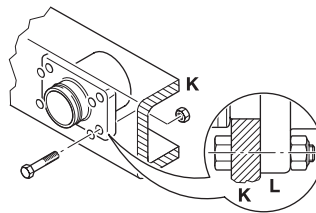
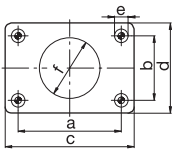
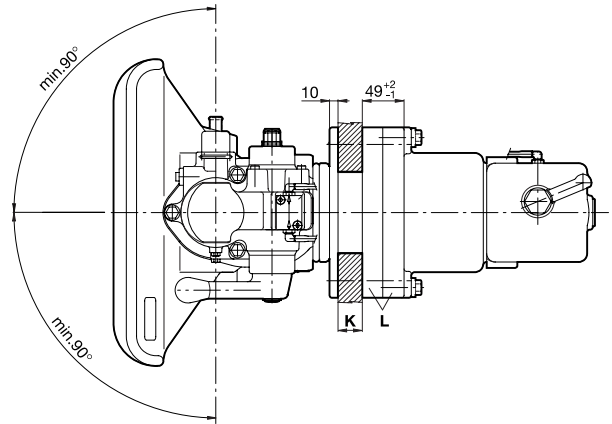
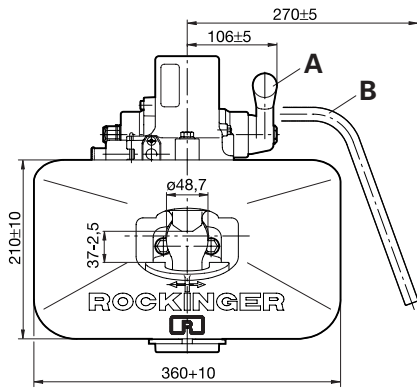
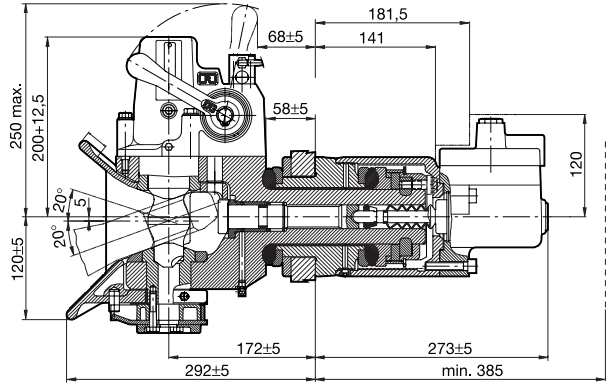
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 09   |  | 65693 | 1   |
| 10   |  | 30358 | 1   |
| 11   |  | 71534 | 1   |
| 12   |  | 56102 | 1   |
| 13   |  | 25347 | 1   |
| 14   |  | 44177 | 1   |
| 16   |  | 59141 | 1   |
| 17   |  | 53467 | 1   |
| 18   |  | 65626 | 1   |
| 19   |  | 25479 | 1   |

# RO★530 - 50 mm

- D** Comfortkupplung. Spielfrei, gefedert, gedämpft
- GB** Comfort hitch. Slack-free, with buffers, dampened
- F** Crochet d'attelage confort. Sans jeu, à ressorts, amorti
- I** Gancio comfort. Senza gioco, molleggiato, ammortizzato
- E** Enganche confort. Exento de juego, con almohadillas, amortiguado



a = 50 mm  
 DIN 74053,  
 94/20/CE  
 ISO 1102,  
 ROE57005



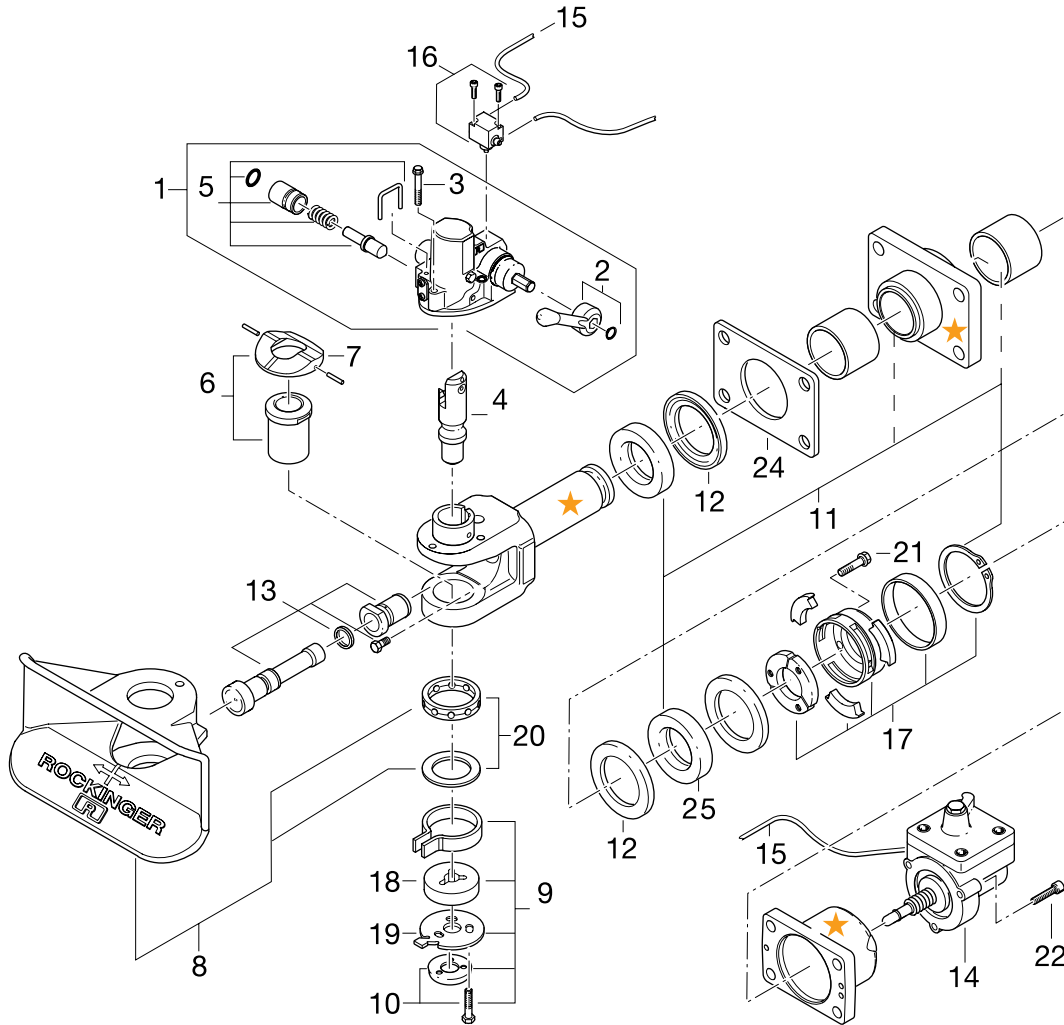
|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

|   | K (mm) | K (mm)  |
|---|--------|---------|
| 6 | 11-28  | max. 28 |

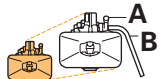

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

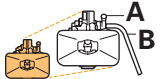

|             | A      | B       | (mm)      | R   | C   | T    | S (kg) | V (kN) | (kg)    | e1 |  |  |
|-------------|--------|---------|-----------|-----|-----|------|--------|--------|---------|----|--|--|
|             | D (kN) | Dc (kN) |           |     |     |      |        |        |         |    |  |  |
| RO530A6000C | 190    | 115     | 160 x 100 | 190 | 115 | 1000 | 50,0   | 54,0   | 00-0407 |    |  |  |
| RO530B6000C | 190    | 115     | 160 x 100 | 190 | 115 | 1000 | 50,0   | 54,0   | 00-0407 |    |  |  |





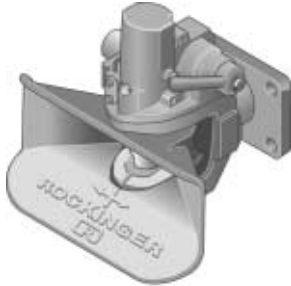
★ kein Ersatzteil  
no spare part  
non pièce de rechange  
no ricambio  
no es pieza de recambio

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70947 | 1   |
| 02   | ROxxx Axxxx   | 50244 | 1   |
| 02   | ROxxx Bxxxx   | 70735 | 1   |
| 03   |   | 30269 | 1   |
| 04   |   | 47081 | 1   |
| 05   |   | 70925 | 1   |
| 06   |   | 53490 | 1   |
| 07   |   | 70850 | 1   |
| 07   |   | 70851 | 1   |
| 08   |   | 46111 | 1   |
| 09   |   | 65693 | 1   |
| 10   |   | 30358 | 1   |
| 11   |   | 25475 | 1   |
| 12   |   | 44159 | 1   |
| 13   |   | 70948 | 1   |

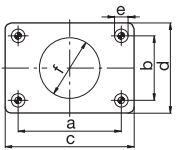
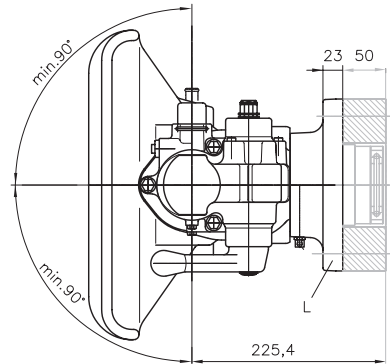
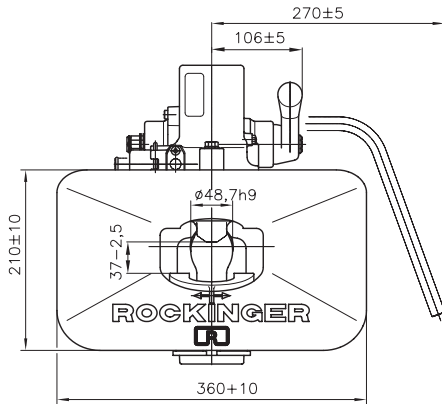
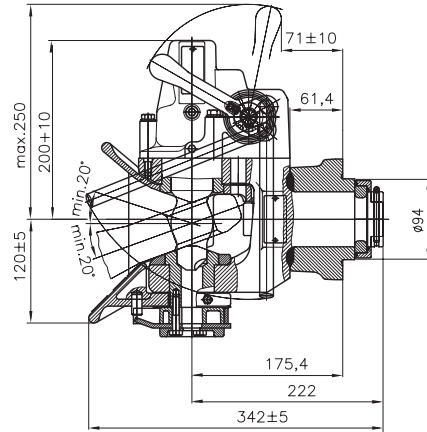
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 14   |  | 70939 | 1   |
| 15   |  | 70981 | 1   |
| 16   |  | 90291 | 1   |
| 17   |  | 59277 | 1   |
| 18   |  | 53467 | 1   |
| 19   |  | 65626 | 1   |
| 20   |  | 25479 | 1   |
| 21   |  | 30365 | 1   |
| 22   |  | 30364 | 1   |
| 24   |  | 59169 | 1   |
| 25   |  | 45133 | 1   |
| Kit  | 04, 05, 06, 09   | 71125 | 1   |

# RO★560 - 50 mm

- D** Kupplung mit Flansch
- GB** Hitch with flange
- F** Crochet avec bride
- I** Gancio con flangia
- E** Enganche con brida



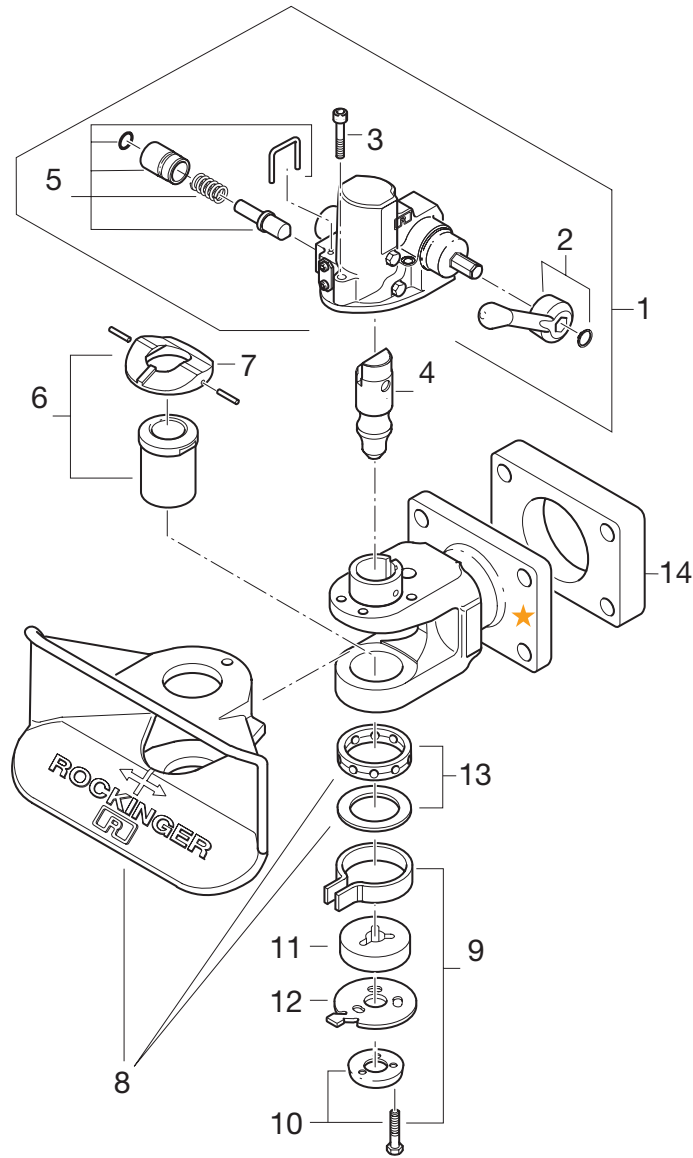
a = 50 mm  
 DIN 74053,  
 94/20/CE  
 ISO 1102,  
 ROE57005

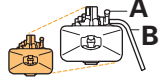



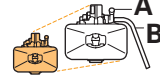

|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             | A | B         | (mm) | R      | C       | S (kg) | V (kN) | (kg)    | e1 |  |  |  |
|-------------|---|-----------|------|--------|---------|--------|--------|---------|----|--|--|--|
|             |   |           |      | D (kN) | Dc (kN) |        |        |         |    |  |  |  |
| RO560A6000C | 6 | 160 x 100 | 190  | 106    | 1000    | 45,6   | 38,0   | 00-0404 |    |  |  |  |
| RO560B6000C | 6 | 160 x 100 | 190  | 106    | 1000    | 45,6   | 38,0   | 00-0404 |    |  |  |  |

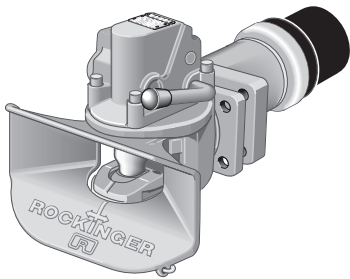


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70849 | 1   |
| 02   | ROxxxAxxxx  | 50244 | 1   |
| 02   | ROxxxBxxxx  | 70735 | 1   |
| 03   |   | 30269 | 1   |
| 04   |   | 47081 | 1   |
| 05   |   | 70925 | 1   |
| 06   |   | 53490 | 1   |
| 07   |   | 70850 | 1   |
| 07   |   | 70851 | 1   |

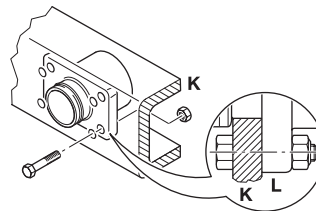
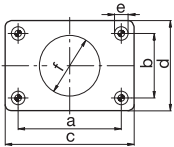
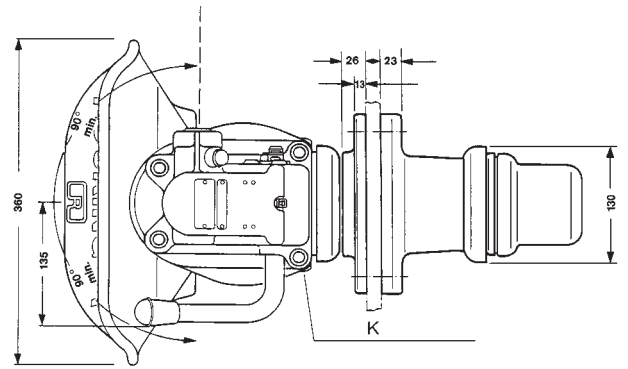
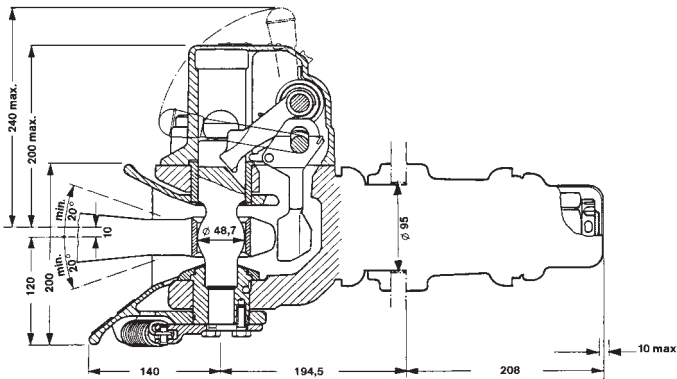
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 08   |  | 46111 | 1   |
| 09   |  | 65693 | 1   |
| 10   |  | 30358 | 1   |
| 11   |  | 53467 | 1   |
| 12   |  | 65626 | 1   |
| 13   |  | 25479 | 1   |
| 14   |  | 71053 | 1   |
| Kit  | 04, 05, 06, 09   | 71125 | 1   |

# RO★700 - 50 mm

- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



a = 50 mm  
 DIN 74053,  
 94/20/CE  
 ISO 1102,  
 ROE57005



|   | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|---|--------|--------|--------|--------|--------|--------|
| 6 | 160,0  | 100,0  | 200,0  | 140,0  | 21,0   | 94,0   |

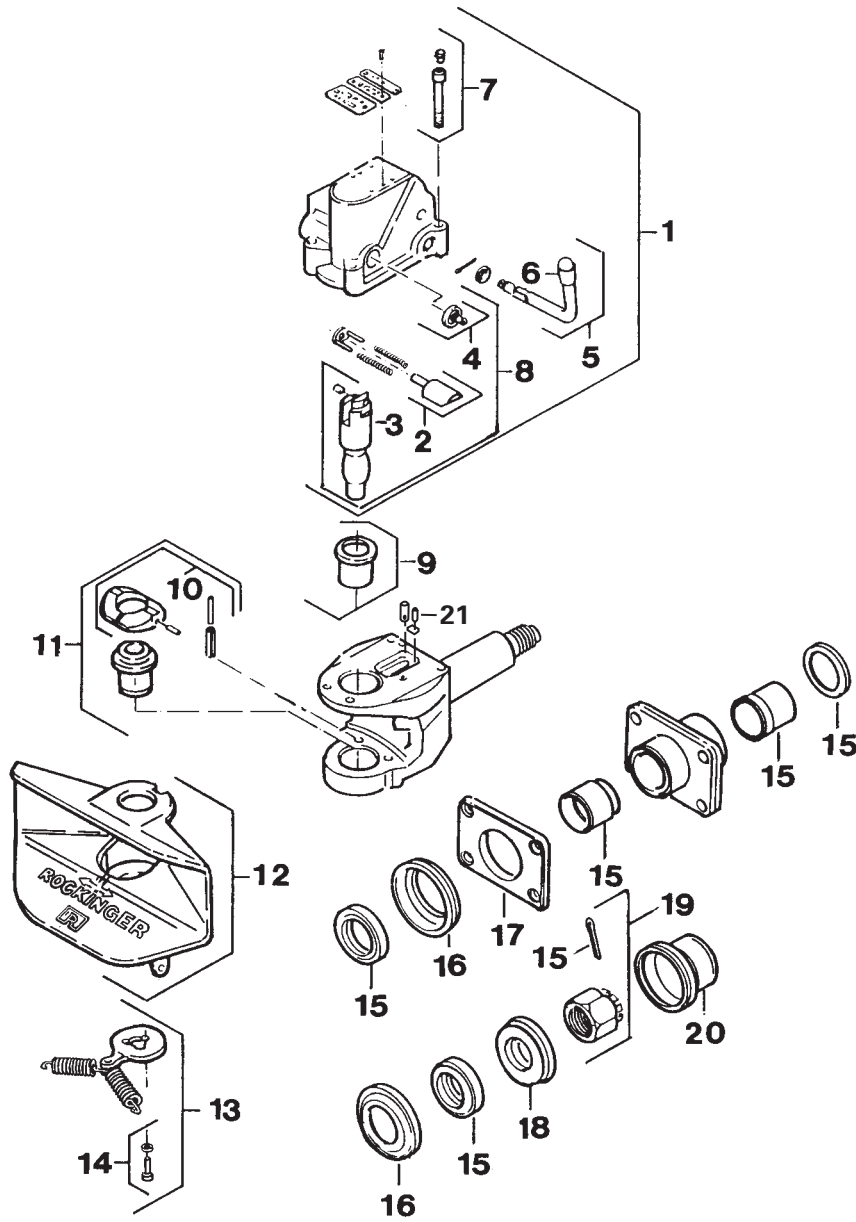
|    | K (mm) | K (mm)  |
|----|--------|---------|
| 61 | 22-28  | max. 32 |

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|                          | A<br>B | (mm)      | R<br>D (kN) | C<br>Dc (kN) | T | S (kg) | V (kN) | (kg) | e1      |   |   |
|--------------------------|--------|-----------|-------------|--------------|---|--------|--------|------|---------|---|---|
| RO70061A010              | 6      | 160 x 100 | 190         | 135          |   | 1000   | 72,5   | 50,0 | 00-0308 |   |   |
| RO70061A170 <sup>1</sup> | 6      | 160 x 100 | 190         | 135          |   | 1000   | 72,5   | 50,0 | 00-0308 |   |   |
| RO70061B010              | 6      | 160 x 100 | 190         | 135          |   | 1000   | 72,5   | 50,0 | 00-0308 |   |   |
| RO70061C010              | 6      | 160 x 100 | 190         | 135          |   | 1000   | 72,5   | 50,0 | 00-0308 | x |   |
| RO70061E010 <sup>2</sup> | 6      | 160 x 100 | 190         | 135          |   | 1000   | 72,5   | 50,0 | 00-0308 |   | x |

<sup>1</sup> verstärktes Fangmaul • reinforced funnel • renforcé pavillon • rinforzato testa campana • reforzado boca de enganche

<sup>2</sup> mechanische Fernbedienung • mechanical remote operation • commande à distance mécanique • telemando mecánico • apertura meccanica a distanza

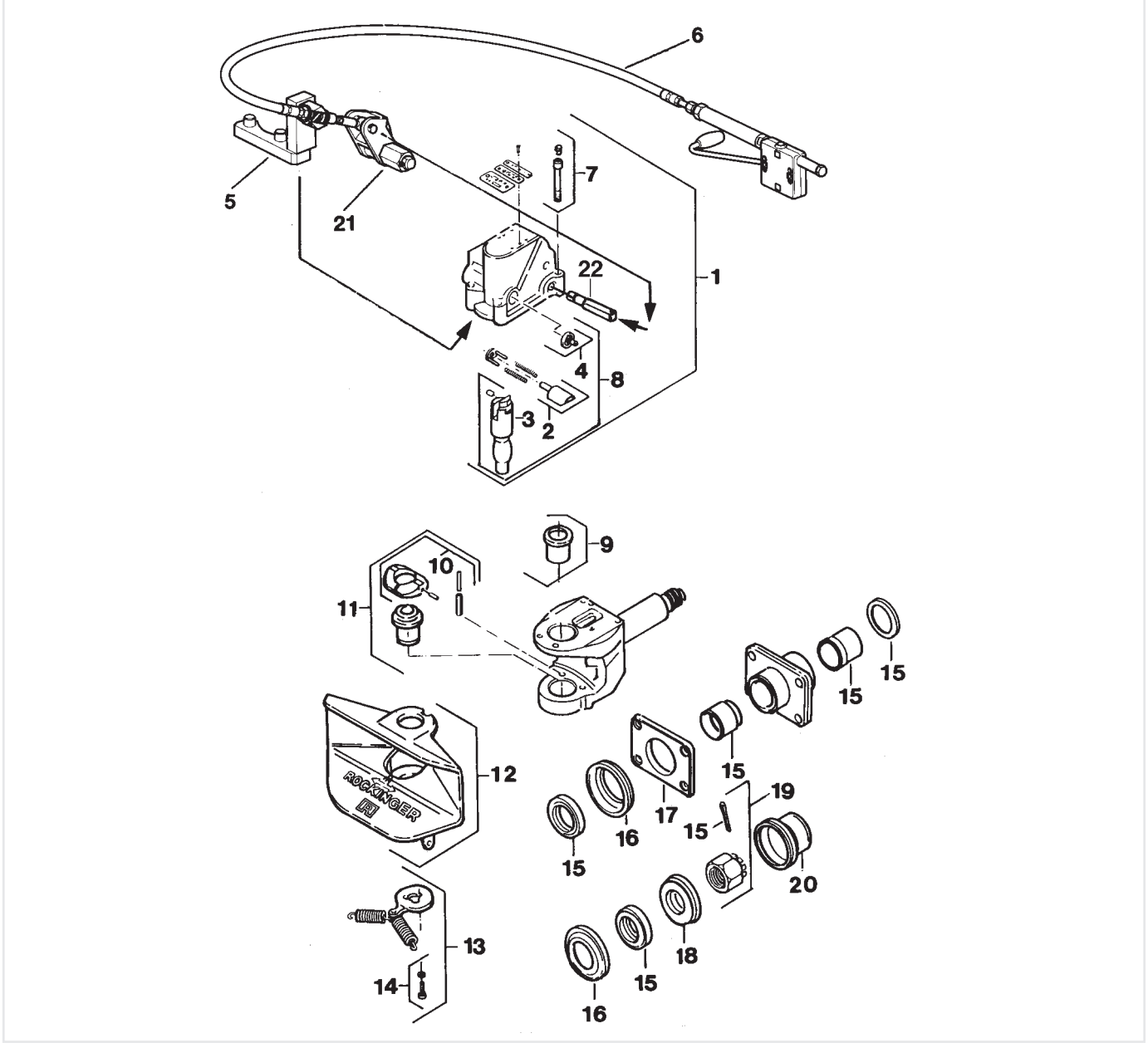


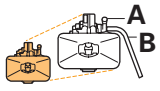

| Pos. |            | ROE   |   |
|------|------------|-------|---|
| 01   | 61         | 70428 | 1 |
| 01   | ROxxxBxxxx | 71023 | 1 |
| 02   |            | 70078 | 1 |
| 03   |            | 70009 | 1 |
| 04   |            | 70036 | 1 |
| 05   | ROxxxAxxxx | 70005 | 1 |
| 05   | ROxxxBxxxx | 70006 | 1 |
| 06   |            | 25104 | 1 |
| 07   |            | 57275 | 1 |
| 08   |            | 71024 | 1 |
| 09   |            | 53456 | 1 |
| 10   |            | 70074 | 1 |
| 11   |            | 70429 | 1 |

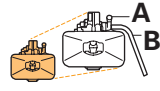

| Pos. |    | ROE   |   |
|------|----|-------|---|
| 12   |    | 46098 | 1 |
| 13   |    | 70430 | 1 |
| 14   |    | 70431 | 1 |
| 15   |    | 70432 | 1 |
| 15   | 6  | 70453 | 1 |
| 16   |    | 44119 | 2 |
| 17   | 61 | 59144 | 1 |
| 17   | 62 | 59146 | 1 |
| 18   |    | 59122 | 1 |
| 19   |    | 56100 | 1 |
| 20   |    | 25326 | 1 |
| 21   | 6  | 70073 | 1 |

# RO★700 E

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

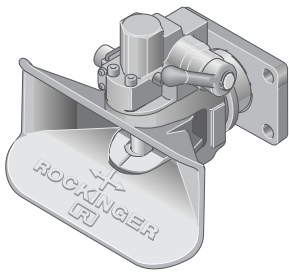


| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70446 | 1   |
| 02   |   | 70078 | 1   |
| 03   |   | 47063 | 1   |
| 04   |   | 70036 | 1   |
| 05   |   | 70467 | 1   |
| 06   |   | 57315 | 1   |
| 07   |   | 70115 | 1   |
| 08   |   | 70114 | 1   |
| 09   |   | 53456 | 1   |
| 10   |   | 70074 | 1   |
| 11   |   | 70429 | 1   |
| 12   |   | 46098 | 1   |
| 13   |   | 70430 | 1   |

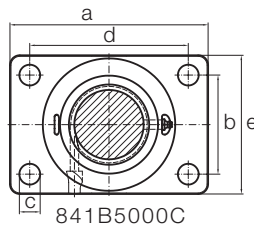
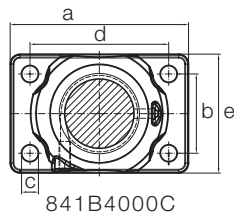
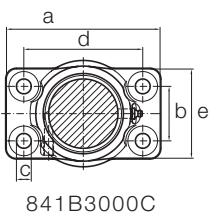
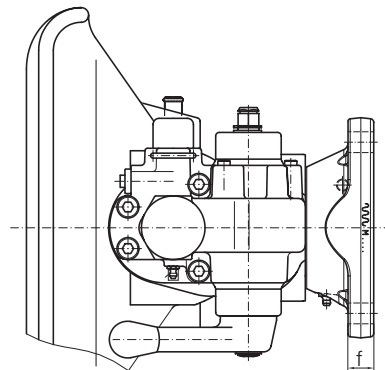
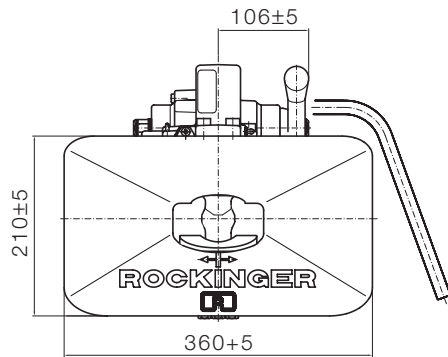
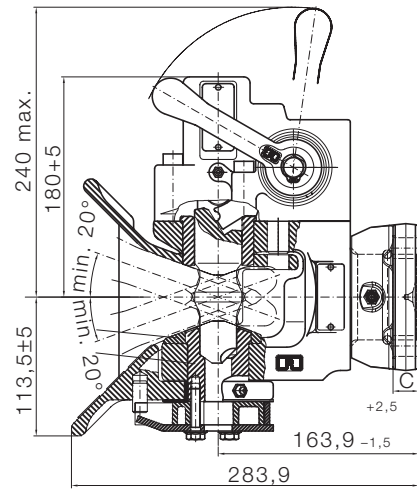
| Pos. |  | ROE   |  |
|------|--|-------|---|
| 14   |  | 70431 | 1   |
| 15   |  | 70432 | 1   |
| 16   |  | 44119 | 2   |
| 17   |  | 59144 | 1   |
| 18   |  | 59122 | 1   |
| 19   |  | 56100 | 1   |
| 20   |  | 25326 | 1   |
| 21   |  | 70466 | 1   |
| 22   |  | 52495 | 1   |
| •    |  | 70595 | 1   |
| •    |  | 90091 | 1   |
| •    |  | 90080 | 1   |

# RO★841 (460) - 40 mm

- D** Ungefederte Kupplung mit Flansch
- GB** Hitch with flange without buffers
- F** Crochet avec bride de sans ressorts
- I** Gancio con flangia fisso
- E** Enganche con brida sin almohadillas



a = 40 mm  
DIN 74054  
94/20/CE



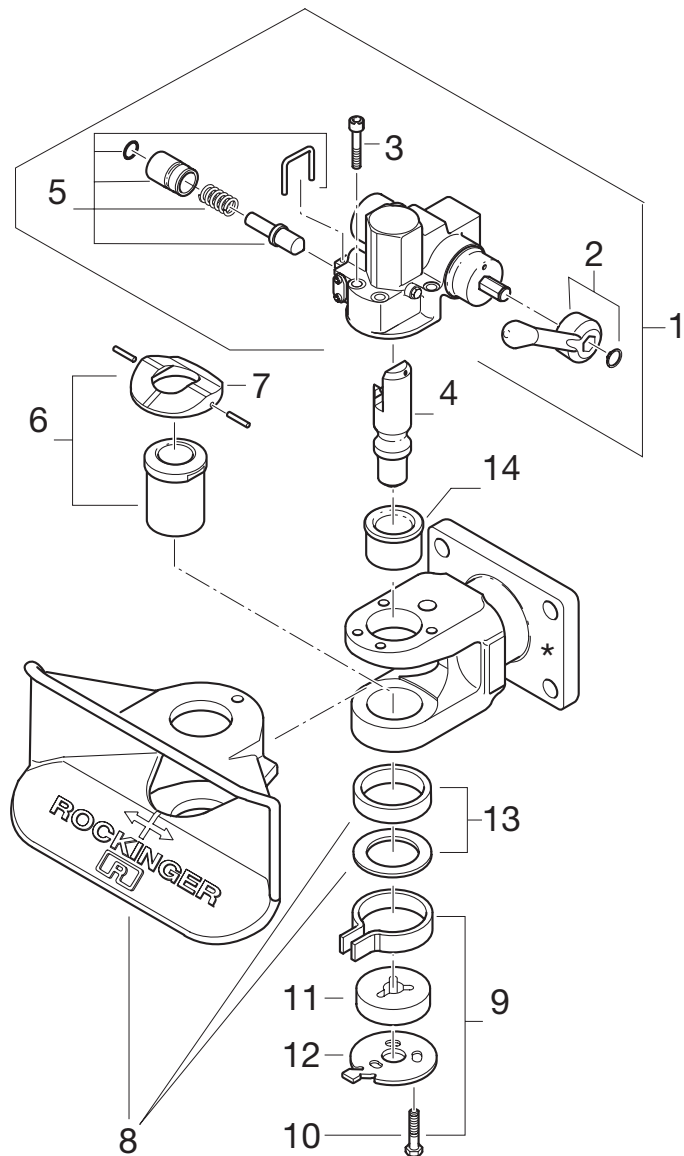
|     | a (mm) | b (mm) | c (mm) | d (mm) | e (mm) | f (mm) |
|-----|--------|--------|--------|--------|--------|--------|
| 130 | 155,0  | 55,0   | 15,0   | 120,0  | 90,0   | 16,0   |
| 140 | 180,0  | 80,0   | 17,0   | 140,0  | 120,0  | 21,0   |
| 150 | 200,0  | 100,0  | 21,0   | 160,0  | 140,0  | 20,0   |

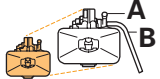

## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

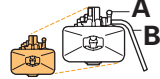

|             |   |     |           |        |         |        |        |      | e1      |
|-------------|---|-----|-----------|--------|---------|--------|--------|------|---------|
|             |   |     | (mm)      | D (kN) | Dc (kN) | S (kg) | V (kN) | (kg) |         |
| R0841B3000C | A | 130 | 120 x 55  | 60     | 45      | 350    | 15,6   | 26,0 | 00-1457 |
| R0841B3010C | B | 130 | 120 x 55  | 60     | 45      | 350    | 15,6   | 26,0 | 00-1457 |
| R0841B4000C | A | 140 | 140 x 80  | 100    | 64      | 1000   | 23,0   | 28,0 | 00-1456 |
| R0841B4010C | B | 140 | 140 x 80  | 100    | 64      | 1000   | 23,0   | 28,0 | 00-1456 |
| R0841B5000C | A | 150 | 160 x 100 | 100    | 64      | 1000   | 23,0   | 28,0 | 00-1456 |
| R0841B5010C | B | 150 | 160 x 100 | 100    | 64      | 1000   | 23,0   | 28,0 | 00-1456 |

# RO★841 (460)

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



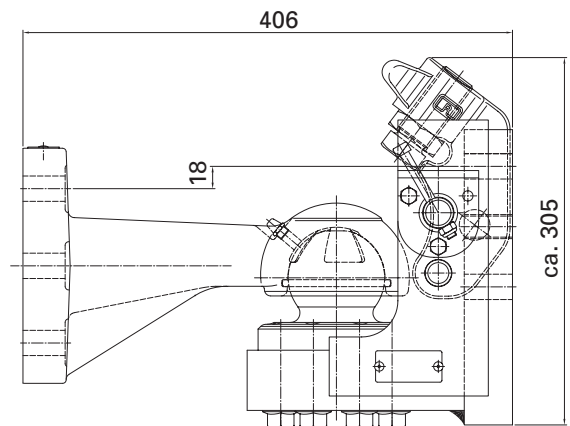
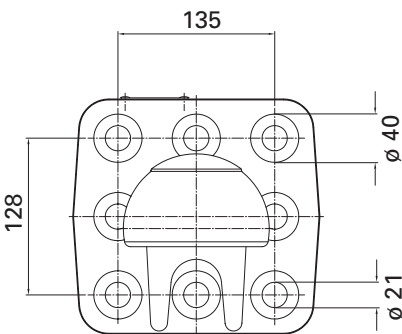
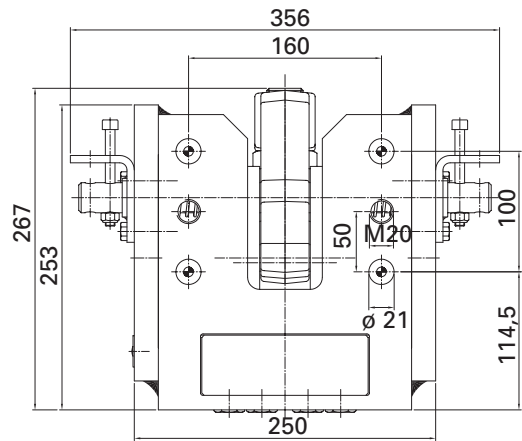
| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70944 | 1   |
| 02   | ROxxxAxxxx  | 50244 | 1   |
| 03   | ROxxxBxxxx  | 70735 | 1   |
| 04   |   | 30361 | 1   |
| 05   |   | 47099 | 1   |
| 06   |   | 70925 | 1   |
| 07   |   | 53519 | 1   |
| 08   |   | 59278 | 1   |
|      |   | 70812 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 09   |  | 55256 | 1   |
| 10   |  | 30362 | 1   |
| 11   |  | 53467 | 1   |
| 12   |  | 65626 | 1   |
| 13   |  | 25479 | 1   |
| 14   |  | 53520 | 1   |
| Kit  | 04, 05, 06, 09, 11, 12, 14   | 71124 | 1   |


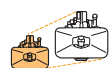









# RO★KU 80 - 80 mm

- D** Kugelkupplungssystem 80 mm für Fahrzeugtransporter
- GB** Ball Coupling System 80 mm for Car Carrier
- F** Système d'attelage à boule 80 mm pour plateau porte-voiture
- I** Sistema gancio a sfera 80 mm per veicolo adibito al trasporto vetture
- E** Sistema de enganches esféricos de 80 mm para vehículos de transporte



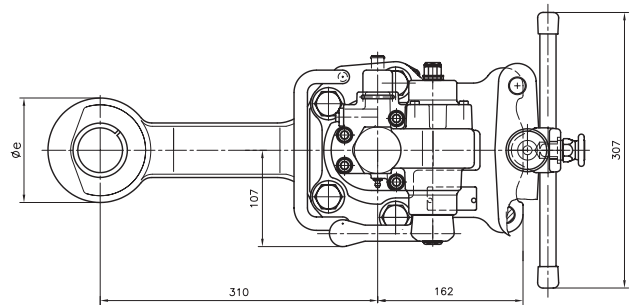
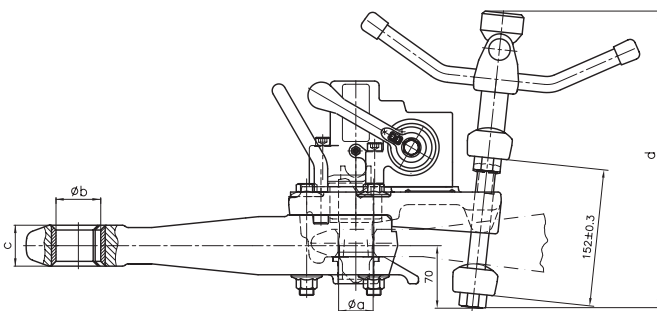
## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|  |  | <br>(mm) | <br><br>D (kN) |         | <br>Dc (kN) |        | <br>S (kg) |                   | <br>V (kN) |  | <br>(kg) | <b>e1</b> |
|---|---|---|--|---------|--|--------|---|-------------------|---|--|---|-----------|
|   |   |   | D (kN)   | Dc (kN) | S (kg)   | V (kN) | (kg)  |                   |   |  |   |           |
| RO908H61000   | 6   | 160x100   | 140,0  | 140,0   | 1000   | 90     | 59*   | e11 94/20-00-5779 |   |  |   |           |
| RO908H61000   | 6   | 160x100   | 140,0  | 140,0   | 2500   | 75     | 59*   | e11 94/20-00-5779 |   |  |   |           |
| RO908H61000   | 6   | 160x100   | 140,0  | 140,0   | 1000   | 90     | 59*   | e11 55R-01 5779   |   |  |   |           |
| RO908H61000   | 6   | 160x100   | 140,0  | 140,0   | 2500   | 75     | 59*   | e11 55R-01 5779   |   |  |   |           |

\* Gewicht komplett mit Zugöse • weight complete with towing eye • poids complet avec anneau de remorquage • peso totale con occhio di traino • peso total con punta de lanza

## RO★480 / 483 / 580 - 40 mm / 50 mm

- D** Selbsttätige Adapterkupplungen für 40 / 50 mm Zugösen und 40 / 50 mm Kupplungen
- GB** Automatic adapter hitches for 40 / 50 mm towing eyes and 40 / 50 mm hitches
- F** Crochets d'adaptation automatiques pour anneaux de remorquage 40 / 50 mm et crochets 40 / 50 mm
- I** Adattatori automatici per occhioni da 40 / 50 mm e ganci da 40 / 50 mm
- E** Enganches adaptadores automáticos para puntas de lanza de 40 / 50 mm y enganches de 40 / 50 mm



|     | $\phi a$<br>(mm) | $\phi b$<br>(mm) | c<br>(mm) | d<br>(mm) | $\phi e$<br>(mm) |
|-----|------------------|------------------|-----------|-----------|------------------|
| 480 | 38,5             | 50,0             | 45,0      | 330,0     | 115,0            |
| 483 | 38,5             | 50,0             | 45,0      | 338,0     | 115,0            |
| 580 | 48,7             | 40,0             | 30,5      | 344,0     | 100,0            |

### Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

|             |   | <br>R<br>D (kN) | <br>C<br>S (kg) | <br>40 (mm)<br>R           | <br>50 (mm)<br>T           | <br>(kg) |
|-------------|---|-----------------|-----------------|----------------------------|----------------------------|----------|
| ROE480B0000 | A | 130             | 50              | DIN 74054 / 94/20/CE Kl. S | DIN 74052 / 94/20/CE Kl. C | 35       |
| ROE483B0000 | A | 130             | 50              | CH                         | DIN 74052 / 94/20/CE Kl. C | 35       |

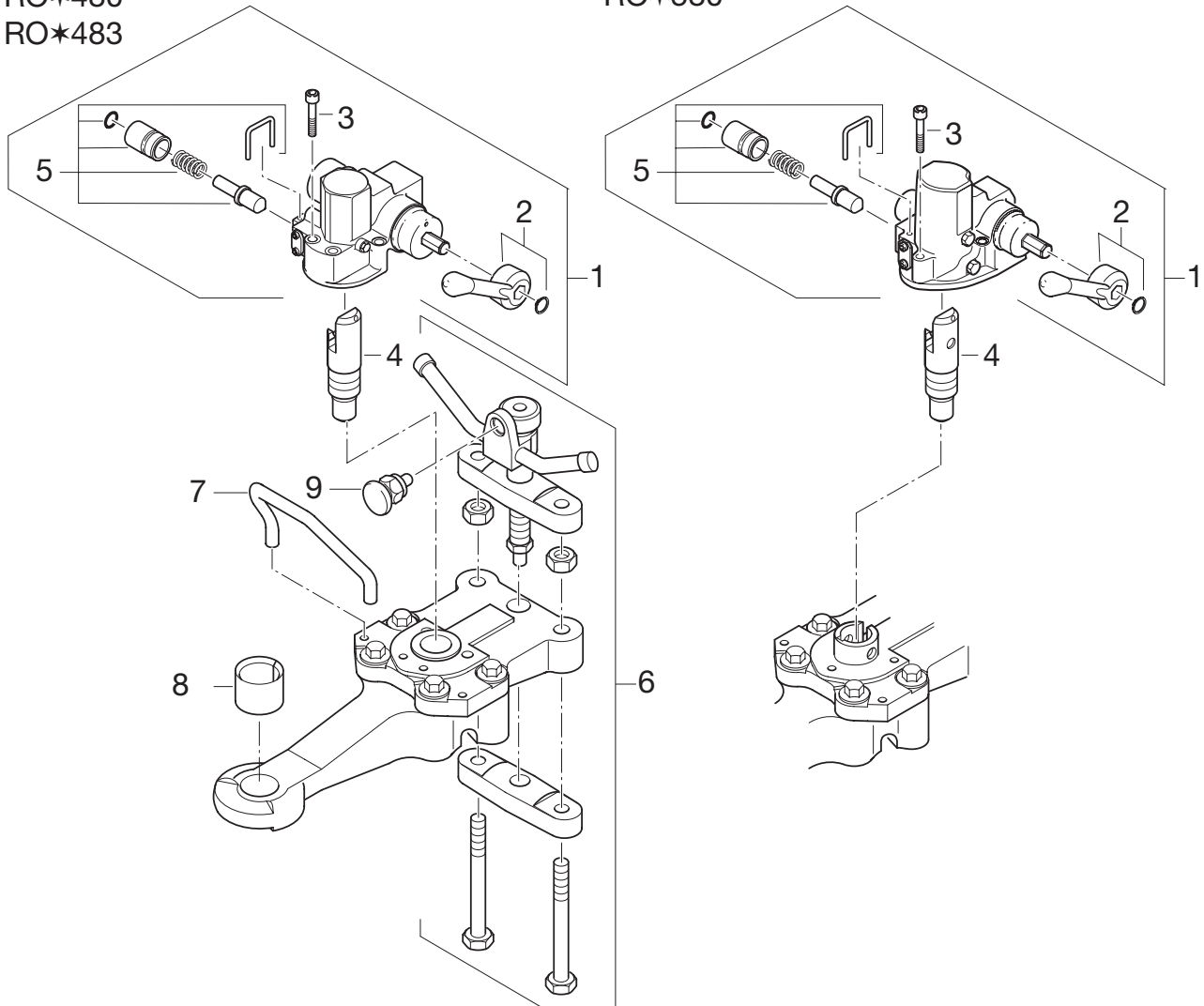
|             |   | <br>R<br>D (kN) | <br>C<br>S (kg) | <br>50 (mm)<br>R           | <br>40 (mm)<br>T           | <br>(kg) |
|-------------|---|-----------------|-----------------|----------------------------|----------------------------|----------|
| ROE580B0000 | A | 130             | 50              | DIN 74053 / 94/20/CE Kl. D | DIN 74051 / 94/20/CE Kl. S | 33       |


# RO\*480 / 483 / 580


Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

RO\*480  
RO\*483

RO\*580

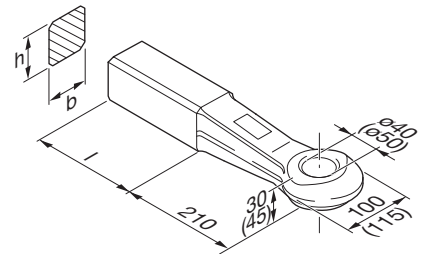


| Pos. |          | ROE   |  |
|------|----------|-------|---|
| 01   | 480, 483 | 71093 | 1   |
| 01   | 580      | 70849 | 1   |
| 02   |          | 50244 | 1   |
| 03   | 480, 483 | 30361 | 1   |
| 03   | 580      | 30369 | 1   |
| 04   | 480      | 47111 | 1   |
| 04   | 483      | 47112 | 1   |






| Pos. |          | ROE   |  |
|------|----------|-------|---|
| 04   | 580      | 47113 | 1   |
| 05   |          | 70925 | 1   |
| 06   |          | 71095 | 1   |
| 07   |          | 52501 | 1   |
| 08   | 480, 483 | 53004 | 1   |
| 08   | 580      | 53051 | 1   |
| 09   |          | 70618 | 1   |

# Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza 40 mm / 50 mm

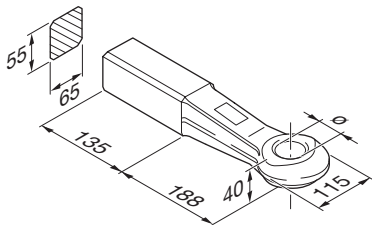
- D** Form A mit Schweißende
- GB** Shape A for welding
- F** Forme A avec extrémité soudée
- I** Forma A con estremità saldata
- E** Forma A con extremo soldado








## Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

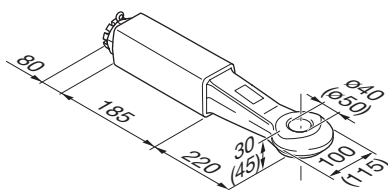
|  | ø (mm) | h x b (mm) | l (mm) |   |         |  |        |  (kg) | e1      |
|---|--------|------------|--------|---|---------|---|--------|--|---------|
|   |        |            |        | D (kN)  | Dc (kN) | S (kg)  | V (kN) |  |         |
| 57260   | 40     | 40 x 40    | 110    | 18  | 18      | 180   | 8      | 4,1  | 00-0739 |
| 57262   | 40     | 50 x 40    | 110    | 25  | 25      | 250   | 9      | 4,7  | 00-0740 |
| 57264   | 40     | 50 x 50    | 110    | 70  | 50      | 500   | 14     | 5,9  | 00-0741 |
| 57268   | 40     | 65 x 55    | 125    | 125   | 66      | 900   | 20     | 7,8  | 00-0743 |
| 57270   | 40     | 65 x 60    | 125    | 125   | 74      | 1000  | 23     | 8,2  | 00-0744 |
| 57374   | 40     | 65 x 57    | 125    | 125   | 42,4    | 250   | 12     | 5,0  | 00-0690 |
| 57272   | 50     | 65 x 60    | 170    | 190   | 90      | 1000  | 30     | 11,4   | 00-1553 |






Form A mit Schweißende nur für Schweizer Kupplungen • Shape A for welding only for Swiss hitches • Forme A avec extrémité soudée uniquement pour crochets suisses • Forma A con estremità saldata solo per ganci svizzeri • Forma A con extremo soldado sólo para enganches suizos



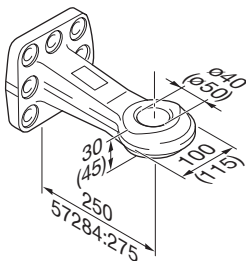
|  | ø (mm) |   |         |  |         |  (kg) | e1      |
|---|--------|--|---------|---|---------|--|---------|
|   |        | D (kN)   | Dc (kN) | S (kg)  | V' (kN) |  |         |
| 57229   | 40     | 125  | 66      | 900   | 20,0    | 8,7  | 00-0694 |
| 57229   | 40     | 168  |         |   |         | 8,7  | 00-0694 |






Form B mit Schraubende • Shape B for bolting • Forme B avec extrémité vissée • Forma B con estremità a vite • Forma B con extremo atornillado

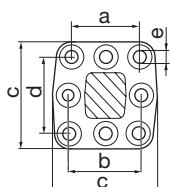



|  | ø (mm) |   |         |  |         |  (kg) | e1      |
|---|--------|--|---------|---|---------|--|---------|
|   |        | D (kN)   | Dc (kN) | S (kg)  | V' (kN) |  |         |
| 57318   | 40     | 125  | 74      | 1000  | 23,0    | 11,0   | 00-0691 |
| 57320   | 50     | 130  | 90      | 1000  | 25,0    | 12,6   | 00-0627 |

Form C/D mit Flansch • Shape C/D with flange • Forme C/D avec platine • Forma C/D con flangia • Forma C/D con brida



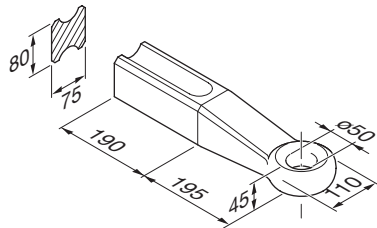
|  | ø (mm) |   |         |  |         |  (kg) | e1      |
|---|--------|--|---------|---|---------|--|---------|
|   |        | D (kN)   | Dc (kN) | S (kg)  | V' (kN) |  |         |
| 57243   | 40     | 130  | 100     | 1000  | 35,8    | 8,8  | 00-0046 |
| 57349   | 40     | 130  | 100     | 1000  | 35,8    | 8,8  | 00-0046 |
| 57244   | 50     | 190  | 135     | 1000  | 72,5    | 9,5  | 00-0045 |
| 57244   | 50     | 190  | 113     | 2500  | 43,2    | 9,5  | 00-0045 |
| 57284   | 50     | 250  | 135     | 1000  | 90,0    | 17,9   | 00-0162 |
| 57284   | 50     | 250  | 113     | 3000  | 43,2    | 17,9   | 00-0162 |



|  | a (mm)  | b (mm)  | c (mm)  | d (mm)  | e (mm) |
|---|---------|---------|---------|---------|--------|
| 57243   | 100±0,5 | 110±0,5 | ca. 154 | 110±0,5 | 17,0   |
| 57349   | 100±0,5 |         | ca. 154 | 110±0,5 | 17,0   |
| 57244   | 100±0,5 | 110±0,5 | ca. 154 | 110±0,5 | 17,0   |
| 57284   | 130±0,3 | 130±0,3 | 190+4   | 130±0,3 | 21,0   |

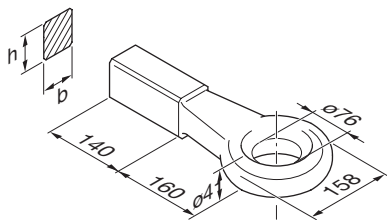
# Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza

Schwerlastzugösen mit Schweißende 50 mm • Heavy duty towing eyes for welding 50 mm • Anneaux de remorquage pour lourdes charges avec extrémité soudée 50 mm • Occhioni per traini eccezionali con estremità saldata 50 mm • Puntas de lanza para cargas pesadas con extremo soldado 50 mm



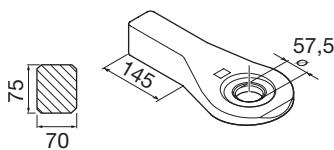
|       | <b>D (kN)</b> | <b>R (t)</b> | <b>(kg)</b> | <b>e1</b> |
|-------|---------------|--------------|-------------|-----------|
| 57005 | 314           | 250          | 13,4        | 00-0693   |
| 57394 | 314           | 250          | 13,4        | 00-0693   |

Ringzugösen mit Schweißende 76 mm • Ring towing eyes for welding 76 mm • Anneaux de remorquage avec extrémité soudée 76 mm • Occhioni torici con estremità saldata 76 mm • Puntas de lanza anulares con extremo soldado 76 mm



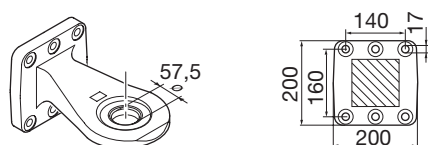
|       | <b>h x b (mm)</b> | <b>D' (kN)</b> | <b>S (kg)</b> | <b>C' (t)</b> | <b>(kg)</b> |
|-------|-------------------|----------------|---------------|---------------|-------------|
| 57006 | 60 x 65           | 120            | 1000          | 12            | 10,3        |

Zugösen 57,5 mm • Towing eyes 57,5 mm • Anneaux de remorquage de 57,5 mm • Occhioni di traino 57,5 mm • Puntas de lanza 57,5 mm



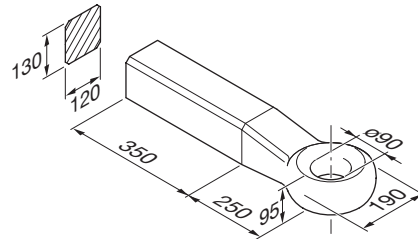
|       | <b>D (kN)</b> | <b>S (kg)</b> | <b>Pc (kN)</b> | <b>(kg)</b> | <b>e1</b> |
|-------|---------------|---------------|----------------|-------------|-----------|
| 57384 | 200           | 1000          | 25             | 10,0        | 00-1659   |
| 57386 | 200           | 1000          | 25             | 10,0        | 00-1658   |

Zugösen 57,5 mm • Towing eyes 57,5 mm • Anneaux de remorquage de 57,5 mm • Occhioni di traino 57,5 mm • Puntas de lanza 57,5 mm



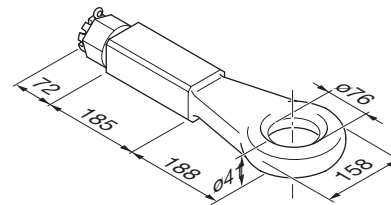
|       | <b>D (kN)</b> | <b>Dc (kN)</b> | <b>S (kg)</b> | <b>V (kN)</b> | <b>Pc (kN)</b> | <b>Av (t)</b> | <b>(kg)</b> | <b>e1</b> |
|-------|---------------|----------------|---------------|---------------|----------------|---------------|-------------|-----------|
| 57370 | 300           | 131            | 1000          | 82            | 30             | 18            | 18,7        | 00-1356   |
| 57370 | 300           | 130            | 2000          | 50            | 30             | 18            | 18,7        | 00-1356   |
| 57370 | 300           | 146,5          | 1000          | 65,5          | 30             | 18            | 18,7        | 00-1356   |

mit Schweißende 90 mm • for welding 90 mm • avec extrémité soudée 90 mm • con estremità saldata 90 mm • con extremo soldado 90 mm



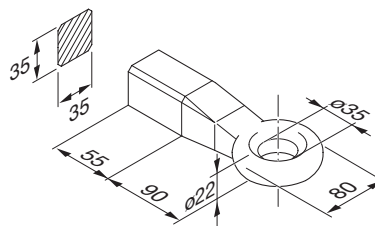
|       | <b>S (kg)</b> | <b>R (t)</b> | <b>(kg)</b> |
|-------|---------------|--------------|-------------|
| 57121 |               | 1000         | 82          |

mit Schraubende 76 mm • for bol ting 76 mm • avec extrémité vissée 76 mm • con estremità a vite 76 mm • con extremo atornillado 76 mm



|       | <b>D' (kN)</b> | <b>S (kg)</b> | <b>C' (t)</b> | <b>(kg)</b> |
|-------|----------------|---------------|---------------|-------------|
| 57294 | 120            | 1000          | 12            | 18,5        |
| 57295 | 200            | 1500          | 15            | 18,5        |

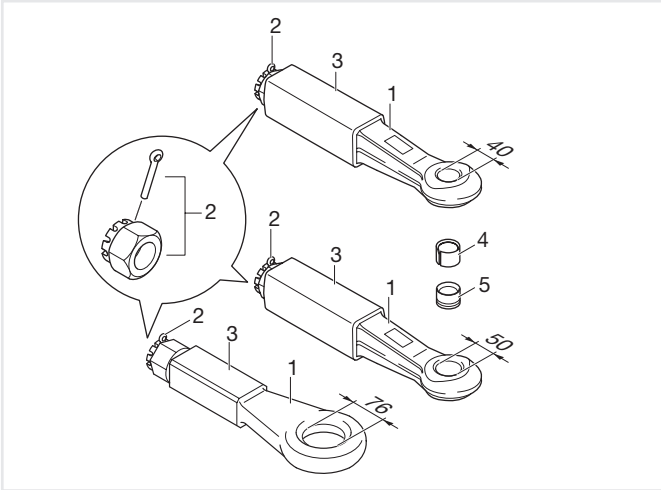
Zugösen für Flurförderzeuge mit Schweißende 35 mm • Towing eyes for industrial trucks for welding 35 mm • Anneaux de remorquage pour chariots de manutention avec extrémité soudée 35 mm • Occhioni per veicoli trasporti interni con estremità saldata 35 mm • Puntas de lanza para vehículos industriales con extremo soldado 35 mm



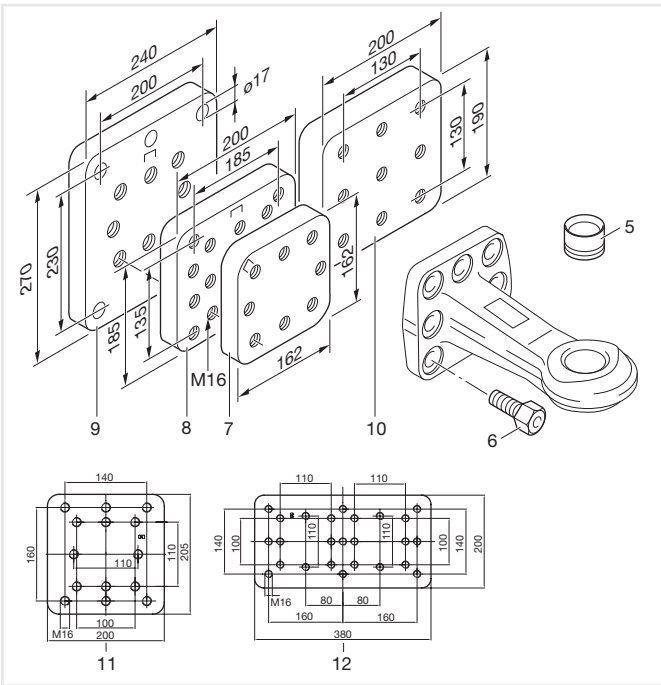
|       | <b>R (t)</b> | <b>S (kg)</b> | <b>(kg)</b> |
|-------|--------------|---------------|-------------|
| 57065 | 4            |               | 1,4         |

**Zugösen • Towing eyes • Anneaux de remorquage • Occhio-  
nei di traino • Puntas de lanza 40 mm / 50 mm**

**Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio**

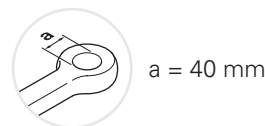
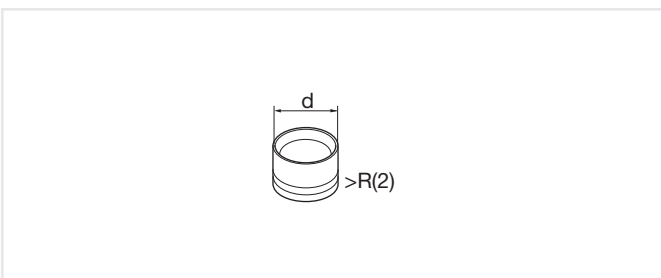


| Pos. | Ø (mm)   | ROE   |   |
|------|----------|-------|---|
| 01   | 40       | 57317 | 1 |
| 01   | 50       | 57292 | 1 |
| 01   | 76       | 57303 | 1 |
| 01   | 76       | 57304 | 1 |
| 02   | 40/50/76 | 56049 | 1 |
| 03   | 40/50/76 | 53435 | 1 |
| 04   | 40       | 53051 | 1 |
| 04   | 50       | 53004 | 1 |
| 05   | 40       | 53386 | 1 |
| 05   | 50       | 53376 | 1 |
| 05   | 90       | 53250 | 1 |

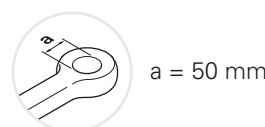


| Pos. | Ø (mm)     | ROE   |   |
|------|------------|-------|---|
| 05   | 40         | 53386 | 1 |
| 05   | 50         | 53376 | 1 |
| 05   | 57,5 R     | 53556 | 1 |
| 05   | 57,5 V     | 53611 | 1 |
| 06   | 40         | 70951 | 1 |
| 06   | 40         | 70950 | 1 |
| 06   | 50         | 70950 | 1 |
| 06   | 50         | 70965 | 1 |
| 06   | 57,5       | 30414 | 1 |
| 07   | 40/50      | 70304 | 1 |
| 08   | 40/50      | 70305 | 1 |
| 09   | 40/50      | 70306 | 1 |
| 10   | 50         | 70307 | 1 |
| 11   | 50/57,5/40 | 59394 | 1 |
| 12   | 57,5/50/40 | 59395 | 1 |

**Übermaßbuchsen • Oversize bushes • Douilles à surmesure • Bussole maggiorate •  
Casquillos de sobremedida**



| d (mm) | R |       |
|--------|---|-------|
| 48,5   | 1 | 53206 |
| 49,0   | 2 | 53207 |
| 49,5   | 3 | 53208 |
| 50,0   | 4 | 53209 |



| d (mm) | R |       |
|--------|---|-------|
| 60,5   | 1 | 53362 |
| 61,0   | 2 | 53363 |

## Prüflehren • Wear gauges • Calibres de contrôle • Calibri • Patrones de comprobación

- D** Kupplungsbolzen und Zugöse
- GB** Hitch pin and towing eye
- F** Boulon d'accouplement et anneau de remorquage
- I** Perno di traino e occhione
- E** Pernos de acoplamiento y punta de lanza



| (mm)         | ROE   |
|--------------|-------|
| 30 (LoF), 40 | 57026 |
| 50 (ISO)     | 57122 |

Untere Buchse • Lower bush • Coussinet inférieur • Bussola inferiore • Casquillo inferior

| (mm)                        | ROE   |
|-----------------------------|-------|
| 40                          | 57290 |
| 50 (RO*700, RO*710, RO*715) | 57277 |
| 50 (RO*500, RO*530, RO*560) | 57334 |
| 57,5                        | 58243 |

## Werkzeuge • Tools • Outils • Attrezzi • Herramientas

- D** Montagedorn zum Ein- und Ausschlagen von Zugösenbuchsen
- GB** Mounting tool for hammering in and removing bushes
- F** Outil enrouleur pour coussinets d'anneaux de remorquage
- I** Mandrino di montaggio per infilare e sfilare le bussole degli occhioni
- E** Punzón de montaje para insertar y sacar los casquillos de las puntas de lanza



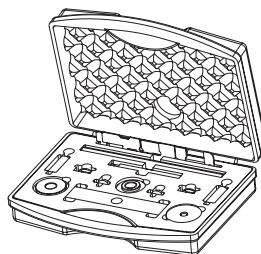
| ø (mm) | ROE   |
|--------|-------|
| 40     | 57111 |
| 50     | 57228 |

- D** Einroll-Werkzeug für Zugösenbuchsen
- GB** Rolling-in-device for bushes
- F** Outil enrouleur pour coussinets d'anneaux de remorquage
- I** Utensile per profilare a rullo le bussole degli occhioni
- E** Herramienta de arrollar para casquillos de punta de lanza



| ø (mm) | ROE   |
|--------|-------|
| 40     | 57059 |
| 50     | 57088 |

- D** Werkzeugkoffer
- GB** Tool Box
- F** Boîte à outils
- I** Maletín de herramientas
- E** Valigia utensili

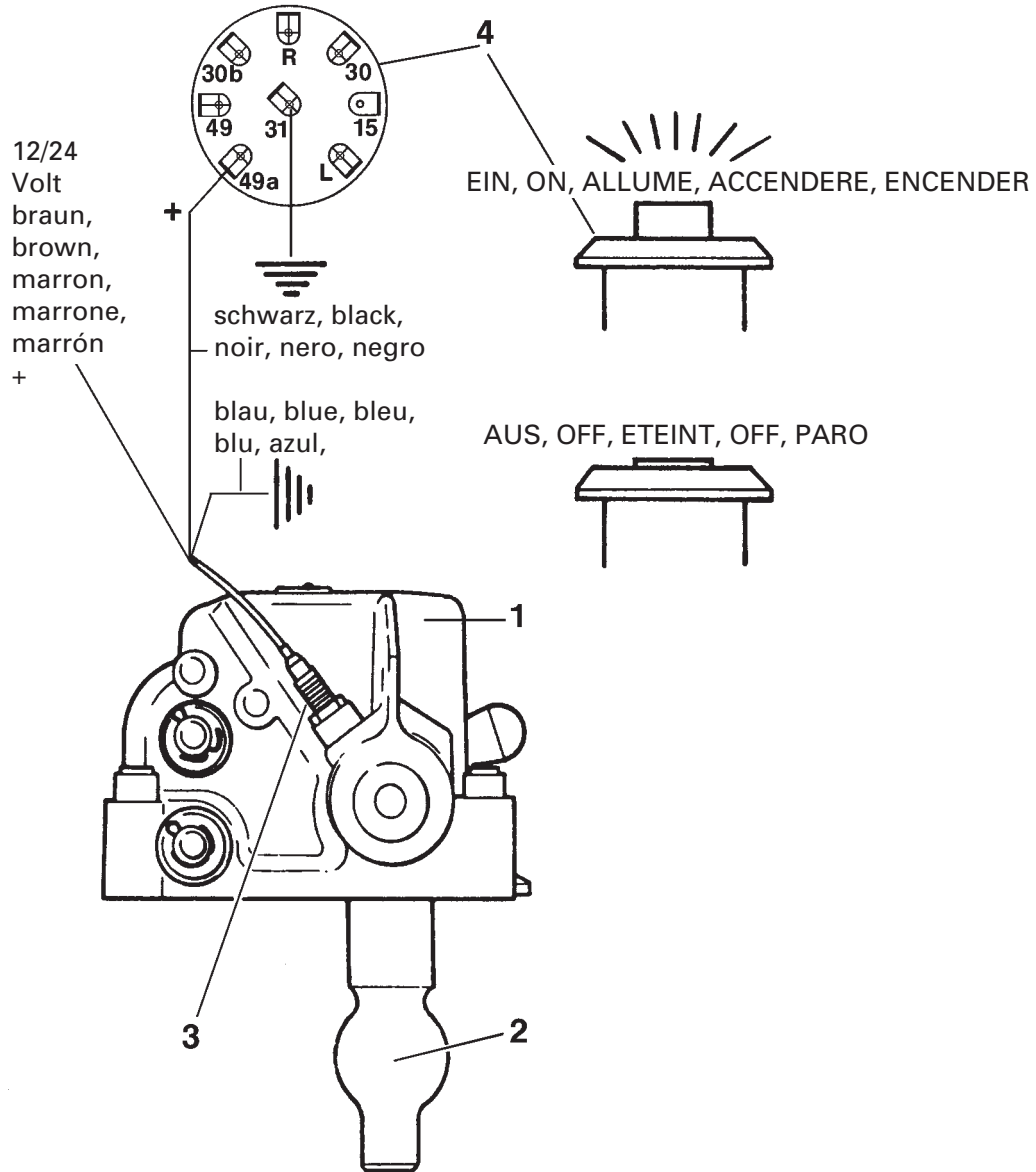


| ROE   |   |
|-------|---|
| 71275 | RO57/57flex                               |
| 71352 | ROE57370 / ROE57371 / ROE57386 / ROE57384 |
| 71354 | RO57/57                                   |

# Fernanzeige, In-cab status indicator, Affichage à distance, Teleindicación, Segnalatore

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio

Druckknopfschalter, Press button, Interrupteur à poussoir, Interruttore a pulsante, Interruptor pulsador



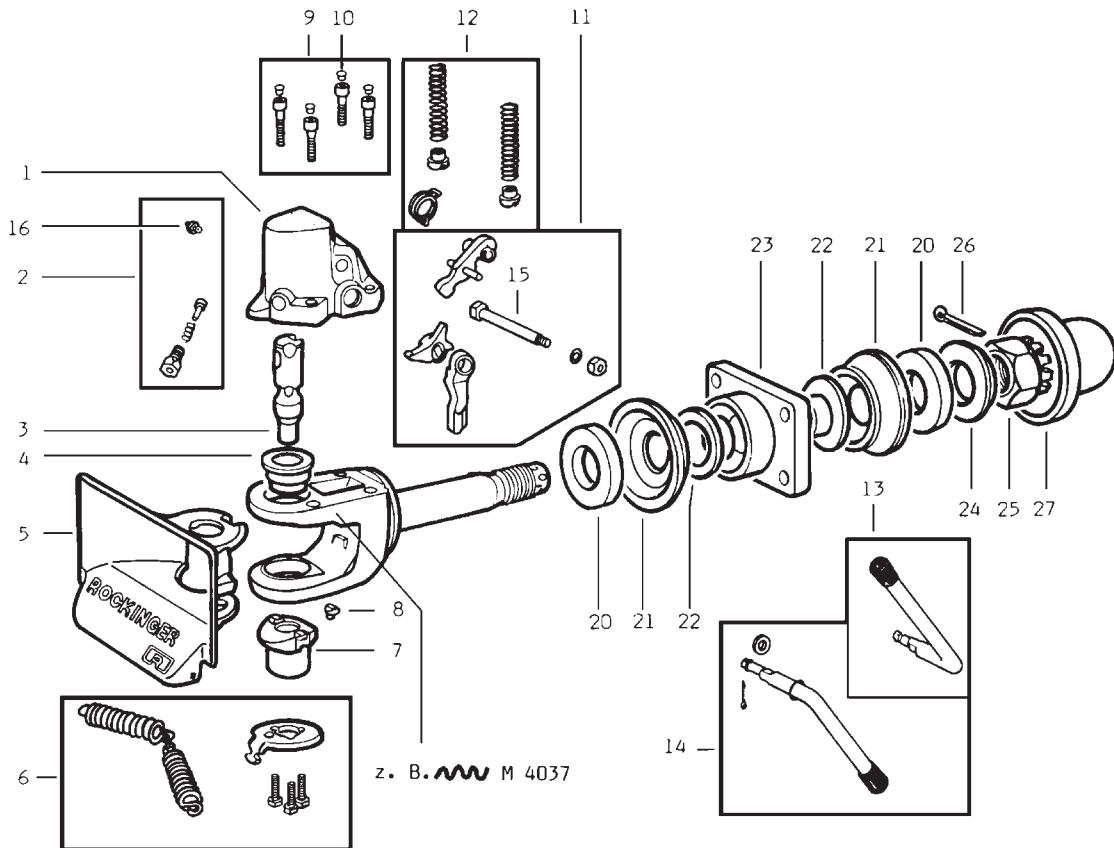
| Pos. |        | ROE   |   |
|------|--------|-------|---|
| 01   | RO*260 | 67740 | 1 |
| 01   | RO*260 | 67739 | 1 |
| 01   | RO*340 | 70441 | 1 |
| 01   | RO*700 | 70428 | 1 |
| 01   | RO*710 | 70001 | 1 |
| 02   | RO*260 | 47012 | 1 |

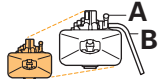

| Pos. |                                | ROE   |   |
|------|--------------------------------|-------|---|
| 02   | RO*340                         | 47075 | 1 |
| 02   | RO*700, RO*710                 | 47063 | 1 |
| 03   | RO*260, RO*340, RO*700, RO*710 | 90091 | 1 |
| 04   | RO*260, RO*340, RO*700, RO*710 | 90080 | 1 |

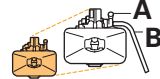



# RO★260

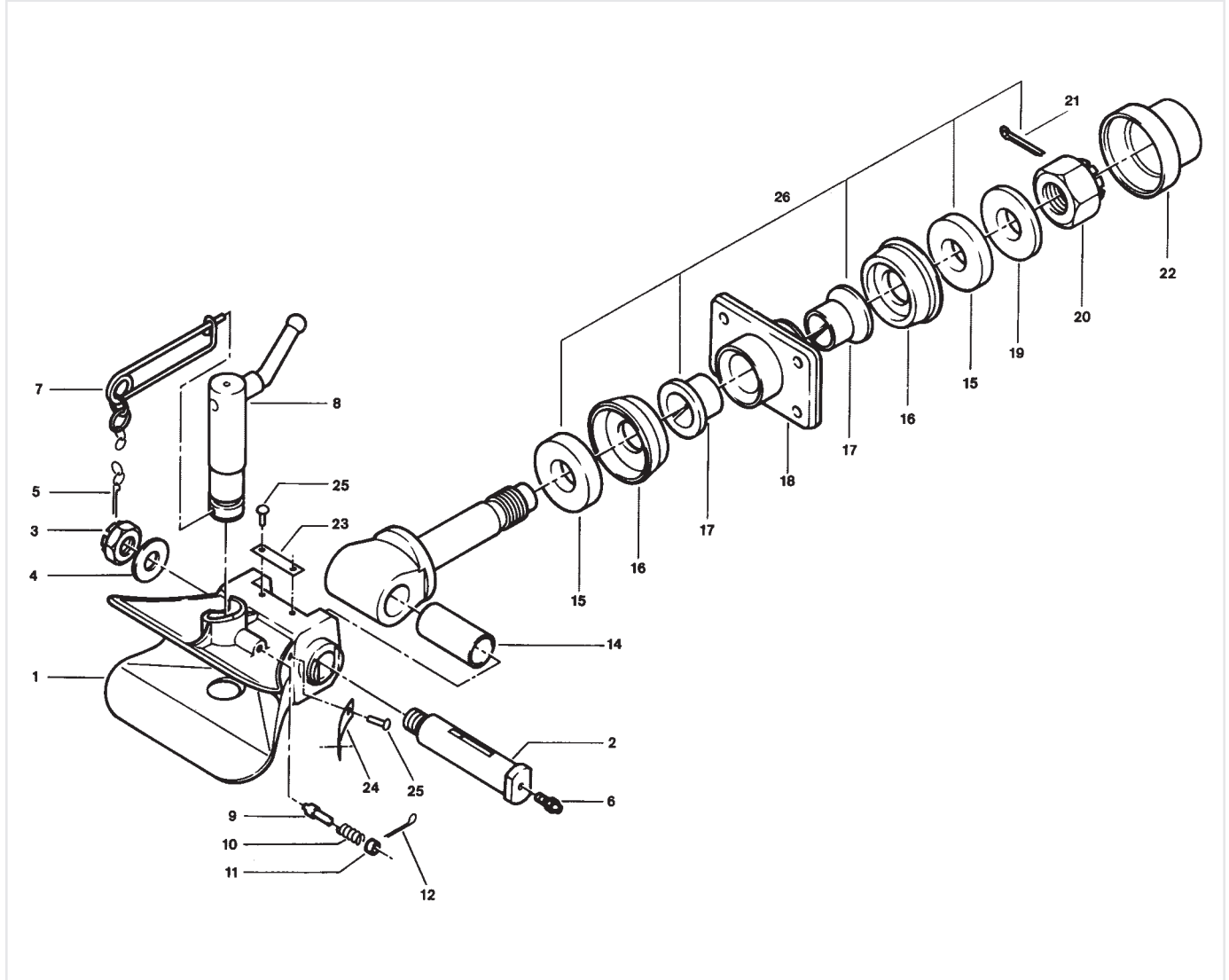
Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio  
 Auslaufmodell • Discontinued model • Modèle de fin de série • Modello in via di esaurimento • Modelo de expiración

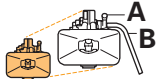



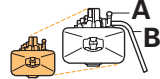

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxAxxxx  | 67262 |   |
| 01   | ROxxxBxxxx  | 67263 |   |
| 02   |   | 67796 | 1   |
| 03   |   | 47012 | 1   |
| 04   |   | 53293 | 1   |
| 05   |   | 46049 | 1   |
| 06   |   | 70721 | 1   |
| 07   |   | 67260 | 1   |
| 09   |   | 57162 | 1   |
| 10   |   | 25151 | 4   |
| 11   |   | 67797 | 1   |
| 12   |   | 67798 | 1   |
| 13   | ROxxxAxxxx  | 50215 | 1   |
| 14   | ROxxxBxxxx  | 50184 | 1   |
| 16   |   | 39179 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 21   | 135  | 44080 | 2   |
| 21   | 145, 150   | 44079 | 2   |
| 23   | 135  | 43242 | 1   |
| 23   | 145  | 43235 | 1   |
| 23   | 150  | 43236 | 1   |
| 24   | 135  | 54707 | 1   |
| 24   | 145, 150   | 54680 | 1   |
| 25   | 135  | 56051 | 1   |
| 25   | 145, 150   | 56049 | 1   |
| 27   | 135  | 25214 | 1   |
| 27   | 145, 150   | 25072 | 1   |
| Kit  | 08, 20, 22, 26 (135)   | 67472 |   |
| Kit  | 08, 20, 22, 26 (145, 150)  | 67471 |   |
| Kit  | 02, 03, 04, 06, 07, 08   | 71123 | 1   |

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio  
 Auslaufmodell • Discontinued model • Modèle de fin de série • Modello in via di esaurimento • Modelo de expiración

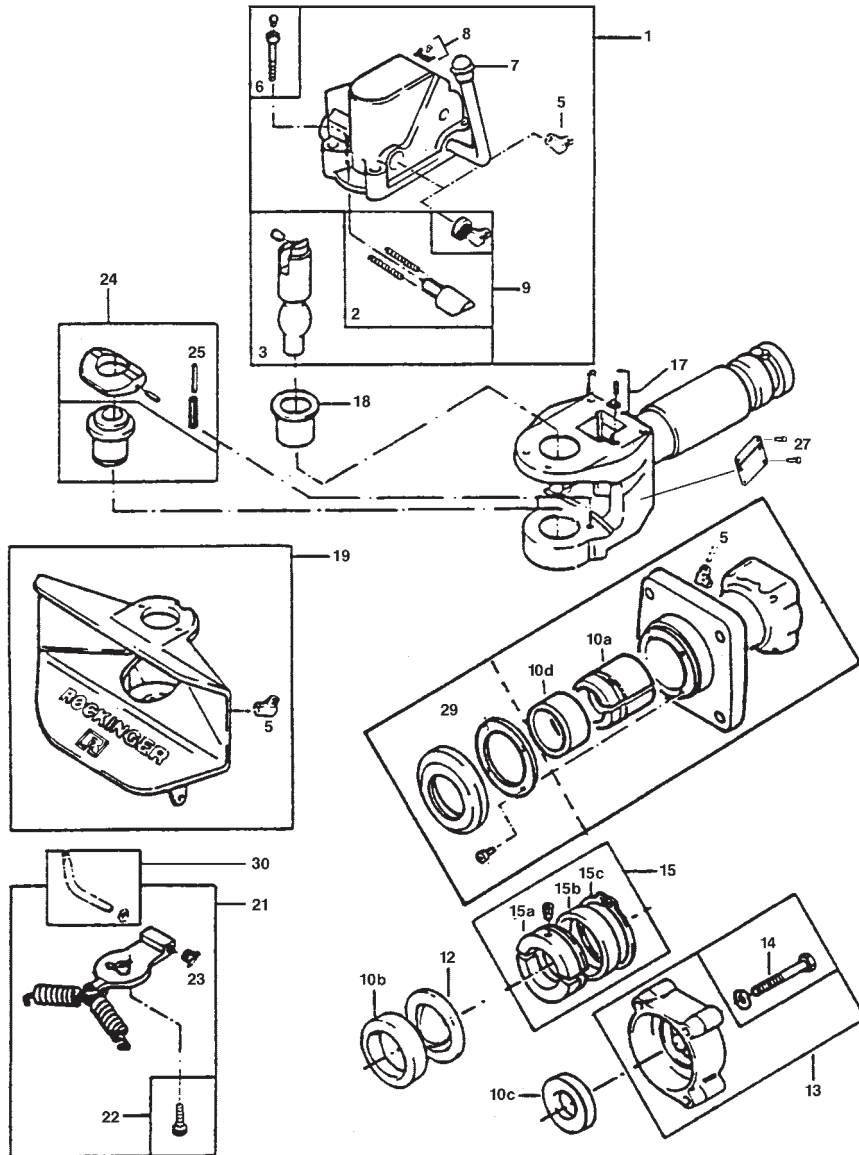


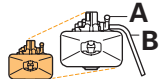

| Pos. |  | ROE   |  |
|------|---|-------|---|
| 02   |   | 70052 | 1   |
| 07   |   | 65526 | 1   |
| 08   |   | 65527 | 1   |
| 09   |   | 70051 | 1   |
| 14   |   | 70508 | 2   |
| 16   | 235   | 44084 | 2   |
| 16   | 240, 250  | 44079 | 2   |
| 18   | 235   | 43242 | 1   |
| 18   | 240   | 43235 | 1   |
| 18   | 250   | 43236 | 1   |

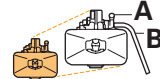

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 19   | 235  | 54707 | 1   |
| 19   | 240, 250   | 54680 | 1   |
| 20   | 235  | 56051 | 1   |
| 20   | 240, 250   | 56049 | 1   |
| 22   | 235  | 25214 | 1   |
| 22   | 240, 250   | 25072 | 1   |
| Kit  | 15, 17, 21 (235)   | 70343 | 1   |
| Kit  | 15, 17, 21 (240, 250)  | 70344 | 1   |
| Kit  | 01, 02, 07, 08, 09   | 70048 | 1   |

# RO★715 A

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio  
 Auslaufmodell • Discontinued model • Modèle de fin de série • Modello in via di esaurimento • Modelo de expiración



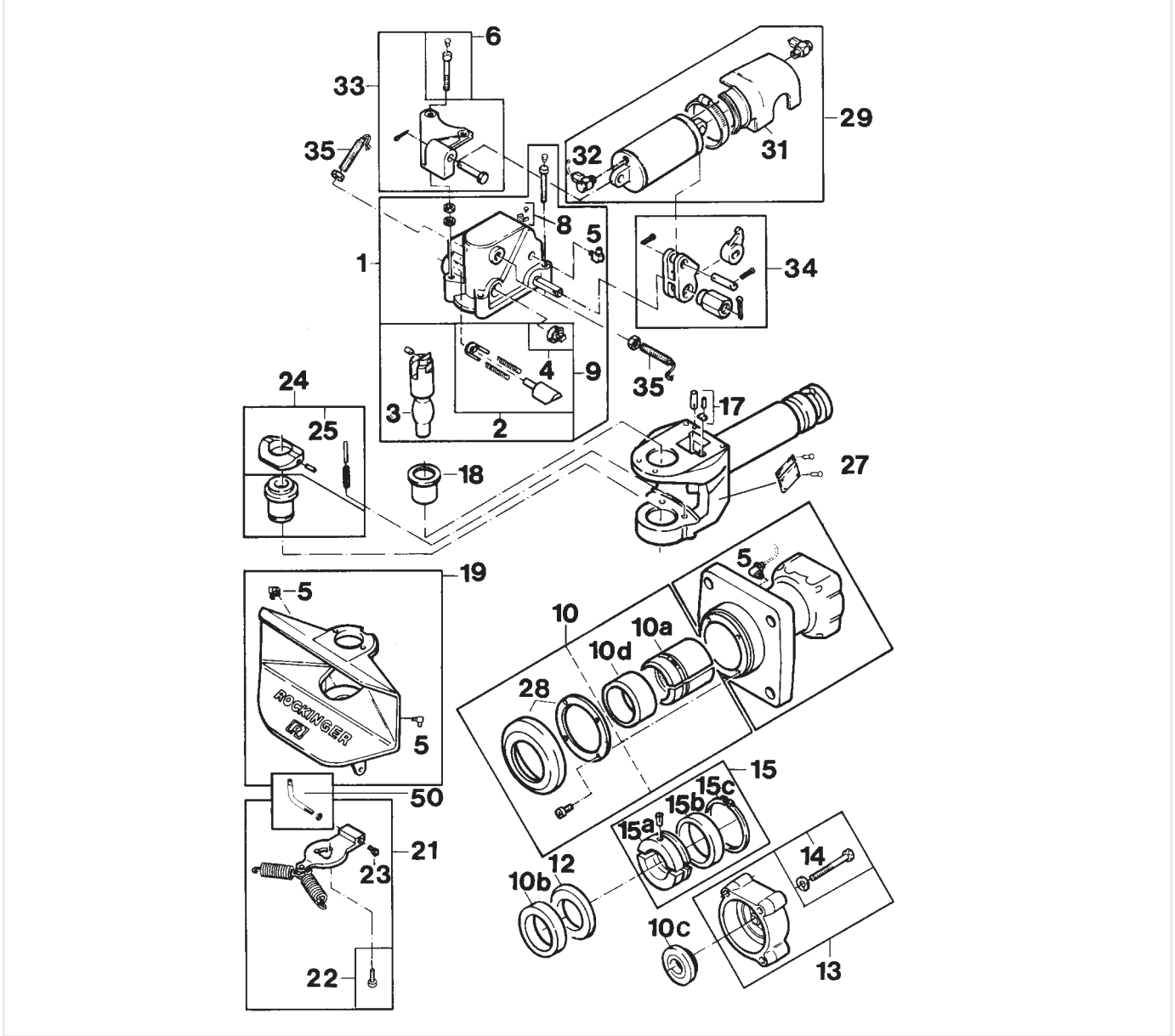
| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   | ROxxxAxxxx  | 70816 | 1   |
| 02   |   | 70991 | 1   |
| 03   |   | 70009 | 1   |
| 05   |   | 70196 | 5   |
| 06   |   | 57275 | 1   |
| 07   |   | 25104 | 1   |
| 08   |   | 70197 | 1   |
| 09   |   | 70992 | 1   |
| 10   |   | 70994 | 1   |
| 12   |   | 59042 | 1   |
| 13   |   | 70088 | 1   |
| 14   |   | 70014 | 1   |

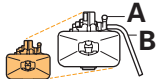

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 15   |  | 70089 | 1   |
| 17   |  | 70073 | 1   |
| 18   |  | 53367 | 1   |
| 19   |  | 70204 | 1   |
| 21   |  | 70995 | 1   |
| 22   |  | 70996 | 1   |
| 23   |  | 25230 | 1   |
| 24   |  | 70169 | 1   |
| 25   |  | 70170 | 1   |
| 29   |  | 25273 | 1   |
| 30   |  | 70202 | 1   |

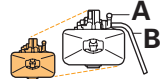



# RO★715 E

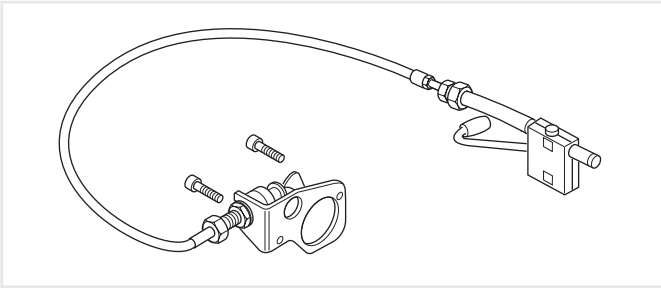
Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio  
 Auslaufmodell • Discontinued model • Modèle de fin de série • Modello in via di esaurimento • Modelo de expiración



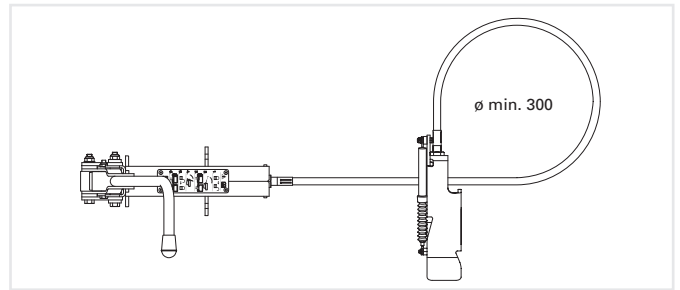
| Pos. |  | ROE   |  |
|------|---|-------|---|
| 01   |   | 70815 | 1   |
| 02   |   | 70991 | 1   |
| 03   |   | 47063 | 1   |
| 04   |   | 70198 | 1   |
| 05   |   | 70196 | 5   |
| 06   |   | 70115 | 1   |
| 08   |   | 70197 | 1   |
| 09   |   | 70993 | 1   |
| 10   |   | 70994 | 1   |
| 12   |   | 59042 | 1   |
| 13   |   | 70088 | 1   |
| 14   |   | 70014 | 1   |
| 15   |   | 70089 | 1   |
| 17   |   | 70073 | 1   |

| Pos. |  | ROE   |  |
|------|--|-------|---|
| 18   |  | 53367 | 1   |
| 19   |  | 70204 | 1   |
| 21   |  | 70995 | 1   |
| 22   |  | 70996 | 1   |
| 23   |  | 25230 | 1   |
| 24   |  | 70169 | 1   |
| 25   |  | 70170 | 1   |
| 28   |  | 25273 | 1   |
| 29   |  | 70102 | 1   |
| 31   |  | 25241 | 1   |
| 32   |  | 90105 | 1   |
| 33   |  | 70103 | 1   |
| 34   |  | 70104 | 1   |
| 50   |  | 70202 | 1   |

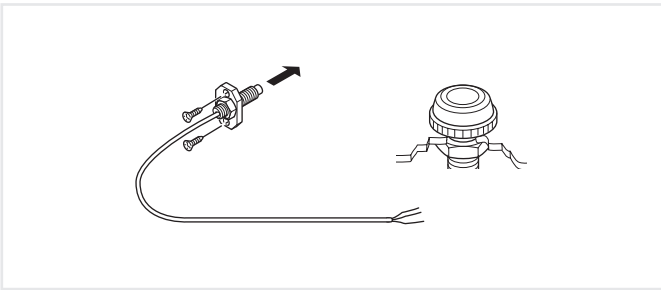
## Aufrüstsätze • Upgrade kits • Kits d'adaptation • Kit complementari • Juegos de equipamiento posterior



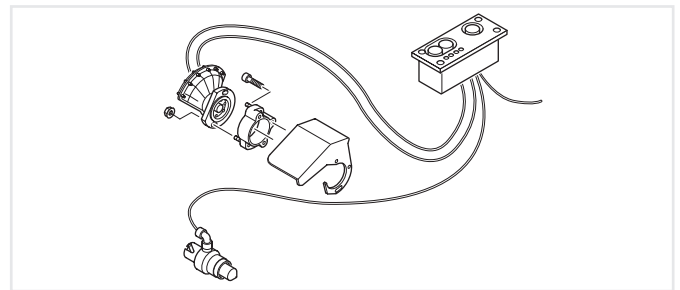
Mechanische Fernbedienung **70962** • Mechanical remote operation **70962** •  
Commande à distance mécanique **70962** • Apertura meccanica a distanza  
**70962** • Telemando mecánico **70962**



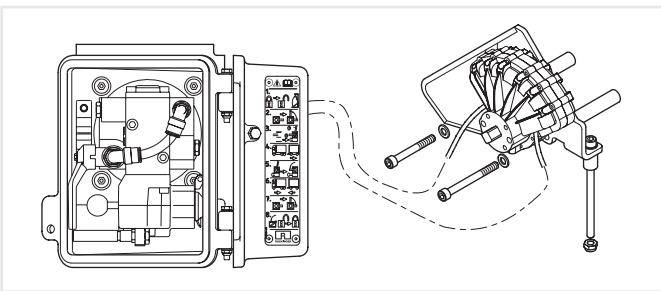
Mechanische Fernbedienung kraftunterstützend **71469FA** (nur für RO\*400,  
RO\*500) • Mechanical remote operation power assisted **71469FA** (only for  
RO\*400, RO\*500) • Commande à distance mécanique à transmission de force  
**71469FA** (uniquement pour RO\*400, RO\*500) • Apertura meccanica a  
distanza a trasmissione di forza **71469FA** (solo per RO\*400, RO\*500) •  
Telemando mecánico con transmisión de fuerza **71469FA** (solamente para  
RO\*500, RO\*500)



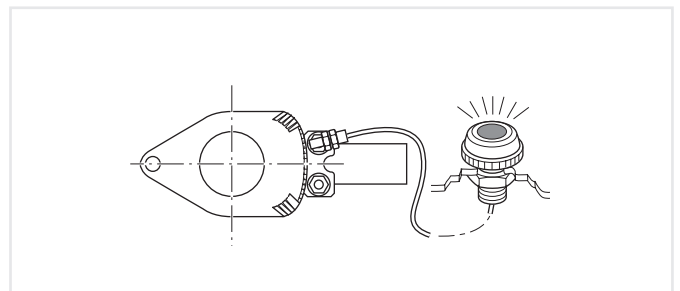
Elektrische Fernanzeige **70936** • In-cab status indicator **70936** • Affichage à  
distance électrique **70936** • Segnalatore elettrico apertura/chiusura **70936** •  
Teleindicación eléctrica **70936**



Elektropneumatische Fernbedienung **70844** • Electropneumatic remote  
operation **70844** • Commande à distance électropneumatique **70844** •  
Apertura elettropneumatica a distanza **70844** • Telemando electroneumático  
**70844**



Pneumatische Fernbedienungen RO\*57: **71167**: RO\*57 C2 (Comfort: kraft-  
öffnend/-schließend) • Pneumatic remote operation RO\*57: **71167**: RO\*57 C2  
(Comfort: power actuating to open and close) • Commandes pneumatiques à  
distances RO\*57: **71167**: RO\*57 C2 (Comfort: ouverture et fermeture par pres-  
sion) • Comando a distanza pneumatico RO\*57: **71167**: RO\*57 C2  
(Comfort: Forza di azionamento in apertura e chiusura) • El mando a distancia  
neumático RO\*57: **71167**: RO\*57 C2 (Comfort: con fuerza de apoyo a la apertu-  
ra y cierre)

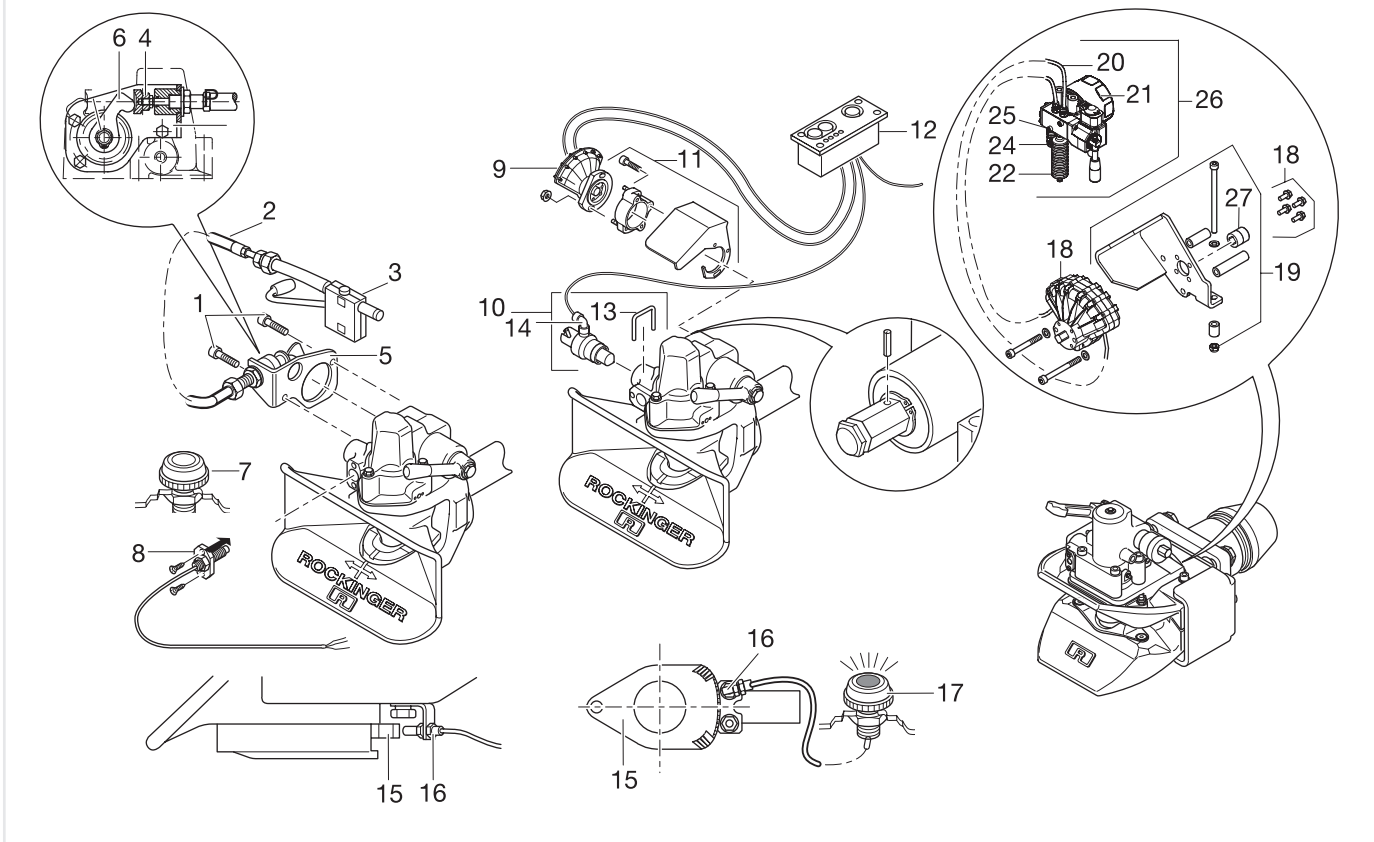



Schwenkwinkel-Warnanzeige **70935** (nur für RO\*500, RO\*530, RO\*560) •  
Drawbar turn angle warning system **70935** (only for RO\*500, RO\*530,  
RO\*560) • Voyant d'angle de rotation **70935** (uniquement pour RO\*500,  
RO\*530, RO\*560) • Indicazione di pericolo angolo di inclinazione **70935**  
(solo per RO\*500, RO\*530, RO\*560) • Indicador de advertencia de ángulo  
de giro **70935** RO\*500, RO\*530, RO\*560)


RO\*50flex: **71242**: RO\*PC 50flex C (Comfort) • RO\*50flex: **71242**: RO\*PC  
50flex C (Comfort) • RO\*50flex: **71242**: RO\*PC 50flex C (Comfort) • RO\*50flex:  
**71242**: RO\*PC 50flex C (Comfort) • RO\*50flex: **71242**: RO\*PC 50flex C (Com-  
fort)

RO\*500: **71270**: RO\*PC 5 C (Comfort) • RO\*500: **71270**: RO\*PC 5 C (Comfort) •  
RO\*500: **71270**: RO\*PC 5 C (Comfort) • RO\*500: **71270**: RO\*PC 5 C (Comfort) •  
RO\*500: **71270**: RO\*PC 5 C (Comfort)

Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio








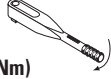
| Pos.         | ROE   |  |
|--------------|-------|---|
| <b>70962</b> |       |   |
| 01           | 70728 | 1   |
| 02           | 57323 | 1   |
| 05           | 70984 | 1   |
| 06           | 70830 | 1   |
| 18           | 13228 | 2   |
| <b>70936</b> |       |   |
| 07           | 90292 | 1   |
| 08           | 70986 | 1   |
| <b>70844</b> |       |   |
| 09           | 71076 | 1   |
| 10           | 71077 | 1   |
| 11           | 71078 | 1   |
| 12           | 90299 | 1   |
| 13           | 35070 | 1   |
| 14           | 90353 | 1   |
| <b>70935</b> |       |   |
| 15           | 70982 | 1   |
| 16           | 70983 | 1   |
| 17           | 90293 | 1   |

| Pos.         | ROE      |  |
|--------------|----------|---|
| <b>71167</b> |          |   |
| 18           | 71264    | 1   |
| 19           | 71254    | 1   |
| 20           | 25514    | 1   |
| 21           | 90376    | 1   |
| 22           | 25525    | 1   |
| 23           | 90377    | 1   |
| 24           | 90378    | 1   |
| 25           | 90379    | 1   |
| 26           | 71420 *  | 1   |
| 26           | 71541 ** | 1   |
| 27           | 65726    | 1   |

\* RO\*500  
 \*\* RO\*57, RO\*57 flex

## Schraubensätze • Screw sets • Kits de vis • Kit di viti • Juegos de tornillos

- D** Schraubensätze für die Befestigung der Kupplung an der Traverse  
**GB** Screw sets for the fastening of the hitch on the crossbar  
**F** Kits de vis pour fixation du crochet d'attelage sur la traverse  
**I** Kit di viti per il fissaggio del gancio sulla traversa  
**E** Juegos de tornillos para la fijación del enganche al travesaño

|  |  |  | <br>K (mm) | <br>K (max. mm) | <br>(Nm) |       |
|---|---|---|---|---|---|-------|
| 225G110   | M 14  | 8.8   | 22  | 22  | 135   | 58094 |
| 227G110   | M 10  | 8.8   | 11-15   | 11-15   | 49  | 57126 |
| 231A05  | M 12  | 10.9  | 17  | 17  | 125   | 70941 |
| 231A0553  | M 12  | 8.8   | 17  | 17  | 85  | 70949 |
| 231A11  | M 10  | 10.9  | 20  | 20  | 72  | 70942 |
| 231A1153  | M 10  | 8.8   | 20  | 20  | 49  | 70923 |
| 232A04  | M 12  | 10.9  | 24  | 24  | 125   | 70879 |
| 232A0453  | M 12  | 8.8   | 24  | 24  | 85  | 70873 |
| 232A06  | M 12  | 10.9  | 18  | 18  | 125   | 70880 |
| 232A0653  | M 12  | 8.8   | 18  | 18  | 85  | 70874 |
| 232A11  | M 10  | 10.9  | 27  | 27  | 72  | 70878 |
| 232A1153  | M 10  | 8.8   | 27  | 27  | 49  | 70875 |
| 240B04  | M 12  | 10.9  | 24  | 24  | 125   | 70879 |
| 240B0453  | M 12  | 8.8   | 24  | 24  | 85  | 70873 |
| 240B06  | M 12  | 10.9  | 18  | 18  | 125   | 70880 |
| 240B0653  | M 12  | 8.8   | 18  | 18  | 85  | 70874 |
| 240B11  | M 10  | 10.9  | 27  | 27  | 72  | 70878 |
| 240B1153  | M 10  | 8.8   | 27  | 27  | 49  | 70875 |
| 245   | M 16  | 8.8   | 26  | 26  | 210   | 58096 |
| 253B04  | M 12  | 10.9  | 24  | 24  | 125   | 70879 |
| 253B0453  | M 12  | 8.8   | 24  | 24  | 85  | 70873 |
| 253B06  | M 12  | 10.9  | 18  | 18  | 125   | 70880 |
| 253B0653  | M 12  | 8.8   | 18  | 18  | 85  | 70874 |
| 253B11  | M 10  | 10.9  | 27  | 27  | 72  | 70878 |
| 253B1153  | M 10  | 8.8   | 27  | 27  | 49  | 70875 |
| 256A11 / B11  | M 10  | 10.9  | 20  | 20  | 72  | 57237 |
| 256A35 / B35  | M 14  | 10.9  | 20  | 20  | 135   | 58094 |
| 260G135   | M 14  | 8.8   | 20  | 20  | 135   | 58094 |
| 260G145   | M 16  | 8.8   | 28  | 28  | 210   | 58096 |
| 260G150   | M 20  | 8.8   | 28  | 28  | 410   | 58097 |
| 263G135   | M 14  | 8.8   | 20  | 20  | 135   | 58094 |
| 263G140   | M 16  | 8.8   | 28  | 28  | 210   | 58096 |
| 263G150   | M 20  | 8.8   | 28  | 28  | 410   | 58097 |
| 283A35  | M 14  | 8.8   | 20  | 20  | 135   | 58094 |
| 283A45  | M 16  | 8.8   | 28  | 28  | 210   | 70952 |
| 283A50  | M 20  | 8.8   | 28  | 28  | 410   | 70509 |
| 39U135  | M 14  | 8.8   | 22  | 22  | 135   | 58094 |
| 39U140  | M 16  | 8.8   | 24  | 24  | 210   | 58096 |
| 39U150  | M 20  | 8.8   | 19  | 19  | 410   | 58097 |
| 400G135   | M 14  | 8.8   | 11-32   | 32  | 135   | 70970 |
| 400G145   | M 16  | 8.8   | 11-35   | 35  | 210   | 70952 |
| 400G150   | M 20  | 8.8   | 11-35   | 35  | 410   | 70971 |
| 42G235  | M 14  | 8.8   | 20  | 20  | 135   | 58094 |
| 42G240  | M 16  | 8.8   | 28  | 28  | 210   | 58096 |
| 42G250  | M 20  | 8.8   | 28  | 28  | 410   | 58097 |
| 430G145   | M 16  | 8.8   | 11-28   | 28  | 210   | 70251 |
| 430G150   | M 20  | 8.8   | 11-28   | 28  | 410   | 70252 |
| 433G145   | M 16  | 8.8   | 11-28   | 28  | 210   | 70251 |
| 433G150   | M 20  | 8.8   | 11-28   | 28  | 410   | 70252 |
| 460U135   | M 14  | 8.8   | 18  | 18  | 135   | 70970 |
| 460U145   | M 16  | 8.8   | 33  | 33  | 210   | 70952 |
| 460U150   | M 20  | 8.8   | 28  | 28  | 410   | 70971 |
| 500G3   | M 14  | 8.8   | 11-32   | 32  | 135   | 70970 |
| 500G4   | M 16  | 8.8   | 11-35   | 35  | 210   | 70952 |
| 500G5   | M 20  | 8.8   | 11-35   | 35  | 410   | 70509 |
| 500G61  | M 20  | 8.8   | 11-32   | 32  | 410   | 70509 |
| 500G62  | M 20  | 8.8   | 11-35   | 35  | 410   | 70509 |
| 500G63  | M 20  | 8.8   | 28-35   | 35  | 410   | 70762 |
| 500G64  | M 20  | 10.9  | 20-22   | 22  | 580   | 70969 |
| 530G6   | M 20  | 8.8   | 11-28   | 28  | 410   | 70252 |
| 700G61  | M 20  | 8.8   | 22-28   | 28  | 410   | 58097 |
| 700G62  | M 20  | 8.8   | 28-35   | 35  | 410   | 58097 |



## D Berechnung Auswahl von Kupplung und Zugöse

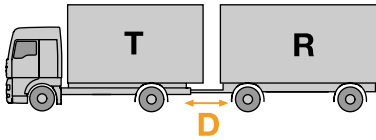
### Größe von Kupplung und Zugöse

- Lochbild in der Traverse des Zugfahrzeuges
- Lochbild des Kupplungsflansches
- Bolzengröße der Kupplung

### Kenngößen

- Kenngößen der Kupplung
- Kenngößen von Zugfahrzeug und Anhänger (siehe Fahrzeugschein)
- Kenngößen der Zugöse

#### Zugfahrzeug und Gelenkdeichselanhänger: Der D-Wert



- Theoretische Deichselkraft zwischen Zugfahrzeug und Anhänger, rechnerischer Vergleichswert von Kräften zwischen sich bewegenden Massen
- Der D-Wert lässt sich nur aus dem zulässigen Gesamtgewicht **beider** Größen ermitteln (Zugfahrzeug **und** Gelenkdeichselanhänger).
- Berechnung des D-Wertes (kN):

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

T : Gesamtgewicht des Zugfahrzeuges in t  
R : Gesamtgewicht des Gelenkdeichselanhängers in t  
g : Erdbeschleunigung 9,81 m/s<sup>2</sup>

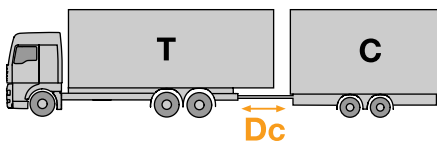
Der errechnete D-Wert darf **gleich** oder **kleiner** als der D-Wert von Kupplung bzw. Zugöse sein.  
Bei zulässiger Verwendung der Kupplung am Anhänger:

$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R<sub>1</sub>: Gesamtgewicht des Anhängers, an den die Kupplung angebaut ist (max. 24 t) R<sub>1</sub> ≥ R<sub>2</sub>

#### Zugfahrzeug und Starrdeichselanhänger: Der Dc-Wert

Gilt nur im Zusammenhang mit dem V-Wert



- Theoretische Deichselkraft zwischen Zugfahrzeug und Anhänger, rechnerischer Vergleichswert von Kräften zwischen sich bewegenden Massen

- Der Dc-Wert lässt sich nur aus dem zulässigen Gesamtgewicht **beider** Größen ermitteln (Zugfahrzeug **und** Starrdeichselanhänger).
- Berechnung des Dc-Wertes (kN)

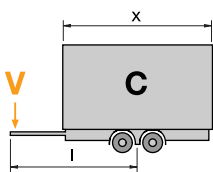
$$Dc \text{ (kN)} = g \cdot \frac{T \cdot C}{T + C}$$

T : Gesamtgewicht des Zugfahrzeuges in t  
C : Summe der Achslasten des Starrdeichselanhängers in t  
g : Erdbeschleunigung 9,81 m/s<sup>2</sup>

Der errechnete Dc-Wert darf **gleich** oder **kleiner** als der Dc-Wert von Kupplung bzw. Zugöse sein.

#### Starrdeichselanhänger: Der V-Wert

Gilt nur im Zusammenhang mit dem Dc-Wert



- Vertikale Belastung durch den Starrdeichselanhänger
- Abhängig von der Hinterachsfederung des Zugfahrzeuges
- Berechnung des V-Wertes (kN):

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

a : Vergleichsbeschleunigung im Kuppelpunkt in m/s<sup>2</sup>

a = 1,8 bei Fahrzeug mit Luft-Hinterachsfederung

a = 2,4 bei Fahrzeug mit anderer Federung

l : Theoretische Zugdeichsellänge in m

x : Länge der Ladefläche in m

x<sup>2</sup>/l<sup>2</sup> : mindestens 1,0

C : Summe der Achslasten des Starrdeichselanhängers in t

Der errechnete V-Wert darf **gleich** oder **kleiner** als der V-Wert von Kupplung bzw. Zugöse sein.

#### Starrdeichselanhänger: Die statische Stützlast S

Gilt nur im Zusammenhang mit dem V-Wert

- Vertikale Belastung durch den Starrdeichselanhänger am Kuppelpunkt
- Die maximal mögliche statische Stützlast hängt von der

Kupplungsgröße ab und beträgt 10 % der Gesamtmasse des Anhängers oder 1 000 kg (es gilt der kleinere Wert). Höhere Werte sind möglich.

- Die statische Stützlast sollte mindestens 4 % des Anhängergewichts betragen, um schädliche Negativstützlast zu vermeiden.



## GB Calculation Choice of hitch and towing eye

### Hitch and towing eye size

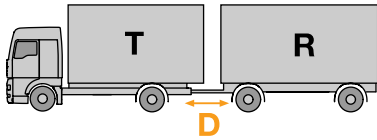
- Hole pattern in the crossbar of the towing vehicle
- Hole pattern in the hitch flange
- Pin size of the hitch

### Characteristic values

- Values of the hitch
- Values of towing vehicle and trailer (see vehicle registration certificate)
- Values of the towing eye

#### Truck and trailer:

##### D-value



- Theoretical horizontal force between towing vehicle and trailer
- The D-value can only be calculated with the permissible total weight of **both** truck **and** trailer
- Calculation of the D-value (kN):

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

T : total weight of the towing vehicle in t

R : total weight of the drawbar trailer in t

g : gravitation acceleration 9,81 m/s<sup>2</sup>

The calculated D-value can be **equal** to or **lower than** the D-value of the hitch and of the towing eye.

In case of mounting on a trailer is permitted:

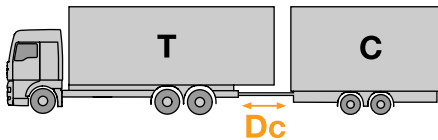
$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R<sub>1</sub>: total weight of trailer where the hitch is mounted (max. 24 t) R<sub>1</sub> ≥ R<sub>2</sub>

#### Towing vehicle and central-axle trailer:

##### Dc-value

Valid only in connection with the V-value



- Theoretical horizontal force between towing vehicle and trailer

- The Dc-value can only be calculated with the permissible total weight of **both** truck **and** trailer
- Calculation of the Dc-value (kN):

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

T : total weight of the towing vehicle in t

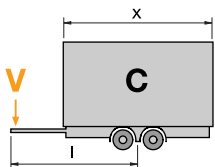
C : sum of the axle loads of the central-axle trailer in t

g : gravitation acceleration 9,81 m/s<sup>2</sup>

The calculated Dc-value can be **equal** to or **lower than** the Dc-value of the hitch and of the towing eye.

#### Central-axle trailer: V-value

Valid only in connection with the Dc-value



- Vertical force for central-axle trailer
- Dependent on the rear axle suspension of the towing vehicle
- Calculation of the V-value (kN):

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

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

a = 1,8 for vehicles with air suspension

a = 2,4 for vehicles with other suspensions

l : theoretical drawbar length in meters

x : length of the loading area in meters

$x^2/l^2$  : at least 1,0

C : sum of the axle loads of the central-axle trailer in t

The calculated V-value can be **equal** to or **lower than** the V-value of the hitch and of the towing eye.

#### Central-axle trailer:

##### Static vertical load

Valid only in connection with the V-value

- Vertical load of the central-axle trailer on the hitch point
- The vertical load depends on the size of the hitch and the

maximum is 10 % of the gross weight of the trailer or 1 000 kg (whichever is less).

- When using a central-axle trailer the vertical load should amount to at 4 % of the trailer weight in order to prevent increased wear caused by bouncing of the towing eye.

$$\frac{T \cdot R}{T + R}$$

## E Calcul / Choix du crochet d'attelage et de l'anneau de remorquage

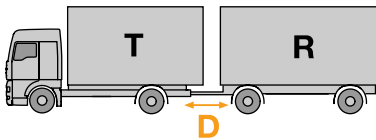
### Dimension du crochet d'attelage et de l'anneau de remorquage

- Schéma de perçage dans la traverse du véhicule tracteur
- Schéma de perçage de la bride d'accouplement
- Dimension des boulons du crochet d'attelage

### Valeurs caractéristiques

- Valeurs caractéristiques du crochet d'attelage
- Valeurs caractéristiques du véhicule tracteur et de la remorque (voir carte grise)
- Valeurs caractéristiques de l'anneau de remorquage

#### Véhicule tracteur et remorque articulée : la valeur D



- Effort théorique à la fourche d'attelage entre le véhicule tracteur et la remorque, valeur comparée théorique des efforts entre les masses mobiles
- La valeur D se détermine uniquement à partir du poids total admissible des **deux** éléments (véhicule tracteur et remorque articulée).
- Calcul de la valeur D (kN) :

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

T : poids total du véhicule tracteur en t

R : poids total de la remorque articulée en t

g : accélération due à la gravité 9,81 m/s<sup>2</sup>

La valeur D calculée peut être **égale ou inférieure** à la valeur D du crochet d'attelage ou de l'anneau de remorquage.

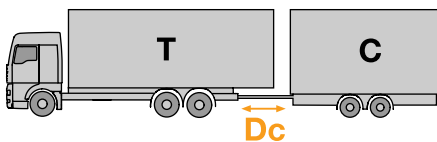
En cas d'autorisation d'utiliser le crochet d'attelage sur la remorque :

$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R<sub>1</sub> : poids total de la remorque à laquelle le crochet d'attelage est fixé (maxim. 24 t) R<sub>1</sub> ≥ R<sub>2</sub>

#### Véhicule tracteur et remorque fixe : la valeur Dc

Valable uniquement en lien avec la valeur V



- Effort théorique à la fourche d'attelage entre le véhicule tracteur et la remorque, valeur comparée théorique des efforts entre les masses mobiles

- La valeur Dc se détermine uniquement à partir du poids total admissible des **deux** éléments (véhicule tracteur et remorque fixe).
- Calcul de la valeur Dc (kN) :

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

T : poids total du véhicule tracteur en t

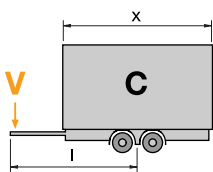
C : somme des charges de l'essieu de la remorque fixe en t

g : accélération due à la gravité 9,81 m/s<sup>2</sup>

La valeur Dc calculée peut être **égale ou inférieure** à la valeur Dc du crochet d'attelage ou de l'anneau de remorquage.

#### Remorque fixe : La valeur V

Valable uniquement en lien avec la valeur Dc



- Charge verticale due à la remorque à fourche d'attelage fixe
- Dépend de la suspension de l'essieu arrière du véhicule tracteur
- Calcul de la valeur V (kN) :

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

a : accélération de référence au point d'attelage en m/s<sup>2</sup>

a = 1,8 sur un véhicule à ressorts pneumatique sur l'essieu arrière

a = 2,4 sur un véhicule à ressorts autre

l : longueur théorique de la fourche d'attelage de remorque en m

x : longueur de la surface de chargement en m

x<sup>2</sup>/l<sup>2</sup> : au moins 1,0

C : somme des charges de l'essieu de la remorque fixe en t

La valeur V calculée peut être **égale ou inférieure** à la valeur V du crochet d'attelage ou de l'anneau de remorquage.

#### Remorque fixe : La charge statique de timon S

Valable uniquement en lien avec la valeur V

- Charge verticale due à la remorque fixe au point d'attelage
- La charge statique de timon maximale possible dépend de la dimension du crochet d'attelage et se monte à 10 % de la

masse totale de la remorque ou à 1 000 kg (plus petite des deux valeurs). Des valeurs plus importantes sont possibles.

- La charge statique de timon devrait être d'au moins 4 % du poids de la remorque pour éviter une charge statique de timon négative dommageable.

## ■ Calcolo Scelta del gancio e dell'occhione

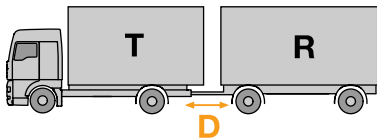
### Dimensioni del gancio e dell'occhione

- Interasse dei fori di fissaggio sulla traversa della motrice
- Interasse dei fori di fissaggio della flangia del gancio di traino
- Dimensioni del perno del gancio

### Parametri

- Parametri tecnici del gancio
- Parametri tecnici della motrice e del rimorchio (vedi libretto di circolazione)
- Parametri tecnici dell'occhione di traino

#### Motrice e rimorchio con timone snodato: valore D



- Indice di calcolo comparativo riferito alla forza teorica del timone che si sviluppa tra motrice e rimorchio, quindi fra masse in movimento
- Il valore D è calcolabile soltanto in riferimento al peso totale ammesso di **entrambe** le unità: motrice e rimorchio con timone snodato.
- Calcolo del valore D in (kN):

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

T : peso totale massimo ammesso della motrice in t

R : peso totale massimo in t ammesso del rimorchio con timone snodato

g : accelerazione di gravità 9,81 m/s<sup>2</sup>

Il valore D ottenuto può essere **uguale o inferiore** al valore D riferito al gancio di traino e all'occhione.

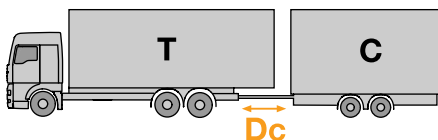
Per impieghi del gancio di traino ammessi al rimorchio:

$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R<sub>1</sub>: peso totale del rimorchio sul quale è applicato il gancio di traino (max. 24 t) R<sub>1</sub> ≥ R<sub>2</sub>

#### Motrice con rimorchio a timone rigido: valore Dc

valido solo abbinato al valore V



- Indice di calcolo comparativo riferito alla forza teorica del timone che si sviluppa tra motrice e rimorchio, quindi fra masse in movimento

- Il valore Dc è calcolabile soltanto in riferimento al peso totale ammesso di **entrambe** le unità: motrice e rimorchio con timone rigido.

- Calcolo del valore Dc in (kN):

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

T : peso totale massimo ammesso della motrice in t

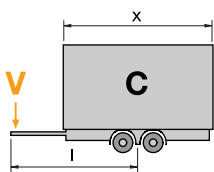
C : somma dei carichi assiali del rimorchio con timone rigido in t

g : accelerazione di gravità 9,81 m/s<sup>2</sup>

Il valore Dc ottenuto può essere **uguale o inferiore** al valore Dc riferito al gancio di traino e all'occhione.

#### Rimorchio a timone rigido: valore V

valido solo abbinato al valore Dc



- Carico verticale determinato dal rimorchio a timone rigido
- Dipendente dalla sospensione posteriore della motrice
- Calcolo del valore V in (kN):

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

a : accelerazione comparativa nel punto di agganciamento in m/s<sup>2</sup>

a = 1,8 per veicoli con sospensioni posteriori pneumatiche

a = 2,4 per veicoli con altro tipo di sospensioni

l : lunghezza teorica del timone di traino in m

x : lunghezza della superficie di carico in m

$x^2/l^2$  : almeno 1,0

C : somma dei carichi assiali del rimorchio con timone rigido in t

Il valore V ottenuto può essere **uguale o inferiore** al valore V riferito al gancio di traino e all'occhione.

#### Rimorchio a timone rigido: carico statico S

valido solo abbinato al valore V

- Carico verticale statico che il rimorchio trasmette sul punto di aggancio
- Il carico verticale statico massimo possibile dipende dalla

dimensione del gancio di traino e corrisponde al 10 % del carico complessivo del rimorchio, fino ad un max di 1.000 kg (è valido il valore inferiore). Per alcuni ganci di traino sono possibili valori superiori.

- Per evitare carichi verticali negativi, che potrebbero risultare dannosi, il carico statico dovrebbe raggiungere almeno il 4 % del peso del rimorchio.

$$\frac{T \cdot R}{T + R}$$

## E Cálculo

# Selección de enganche y punta de lanza

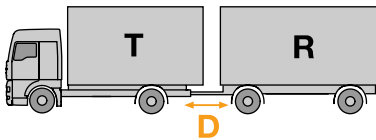
### Tamaño de enganche y punta de lanza

- Disposición de agujeros en el travesaño del vehículo tractor placa de enganchebrida de acoplamiento
- Tamaño de bulón del enganche

### Valores característicos

- Valores característicos del enganche
- Valores característicos del vehículo tractor y el remolque (véase el permiso de circulación)
- Valores característicos de la punta de lanza

#### Vehículo tractor y remolque de barra de tracción articulada: El Valor D



- Fuerza teórica sobre la lanza entre el vehículo tractor y el remolque, valor comparativo calculado de las fuerzas entre las masas en movimiento
- El valor D sólo se puede determinar a partir del peso máximo admisible de **ambos** valores vehículos (tractor **y** remolque con corona giratoria delantera).
- Cálculo del valor D (kN):

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

T : peso máximo del vehículo tractor en t

R : peso máximo del remolque con corona giratoria delantera en t

g : aceleración de la gravedad 9,81 m/s<sup>2</sup>

El valor D calculado puede ser **igual o menor** que el valor D del enganche o la punta de lanza.

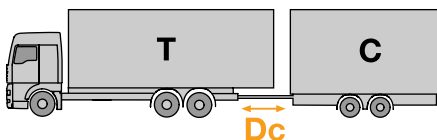
En caso de utilización admisible del enganche en el remolque:

$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R<sub>1</sub>: peso máximo del remolque en el que está montado el enganche (máx. 24 t) R<sub>1</sub> ≥ R<sub>2</sub>

#### Vehículo tractor y remolque de ejes centrales: El Valor Dc

sólo es válido en relación con el valor V



- Fuerza teórica sobre de lanza entre el vehículo tractor y el remolque, valor comparativo calculado de las fuerzas entre las masas en movimiento

• El valor Dc sólo se puede determinar a partir del peso máximo admisible de **ambos** valores vehículos (tractor **y** remolque de ejes centrales).

- Cálculo del valor Dc (kN):

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

T : peso máximo del vehículo tractor en t

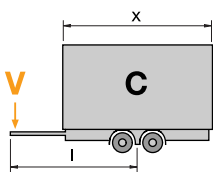
C : suma de las cargas de los ejes del remolque de ejes centrales en t

g : aceleración de la gravedad 9,81 m/s<sup>2</sup>

El valor Dc calculado puede ser **igual o menor** que el valor Dc del enganche o la punta de lanza.

#### Remolque de ejes centrales: El Valor V

sólo es válido en relación con el valor Dc



- Carga vertical ejercida por el remolque de ejes centrales fija
- En función de la suspensión del eje trasero del vehículo tractor
- Cálculo del valor V (kN):

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

a : aceleración de comparación en el punto de acoplamiento en m/s<sup>2</sup>

a = 1,8 en vehículo con suspensión neumática del eje trasero

a = 2,4 en vehículo con otra suspensión

l : longitud teórica de la barra de tracción en m

x : longitud de la superficie de carga en m

x<sup>2</sup>/l<sup>2</sup> : mínimo 1,0

C : suma de las cargas de los ejes del remolque de ejes centrales en t

El valor V calculado puede ser **igual o menor** que el valor V del enganche o la punta de lanza.

#### Remolque de ejes centrales: La carga de apoyo estática S

sólo es válido en relación con el valor V

- Carga vertical ejercida por el remolque de ejes centrales en el punto de acoplamiento

• La carga de apoyo estática máxima posible depende del tamaño del enganche y supone un 10 % de la masa total del remolque o 1.000 kg (se aplica el valor menor). Son posibles valores mayores.

• La carga de apoyo estática debería ser al menos el 4 % del peso remolcado para evitar una carga de apoyo negativa perjudicial.

# Produkte

## Products • Produits • Prodotti • Productos

### Landwirtschaftl. Kupplungen

Agricultural hitches  
Attelages agricoles  
Ganci agricoli  
Enganches para vehículos agrícolas

### VARIOBLOC

### Kugellenkränze

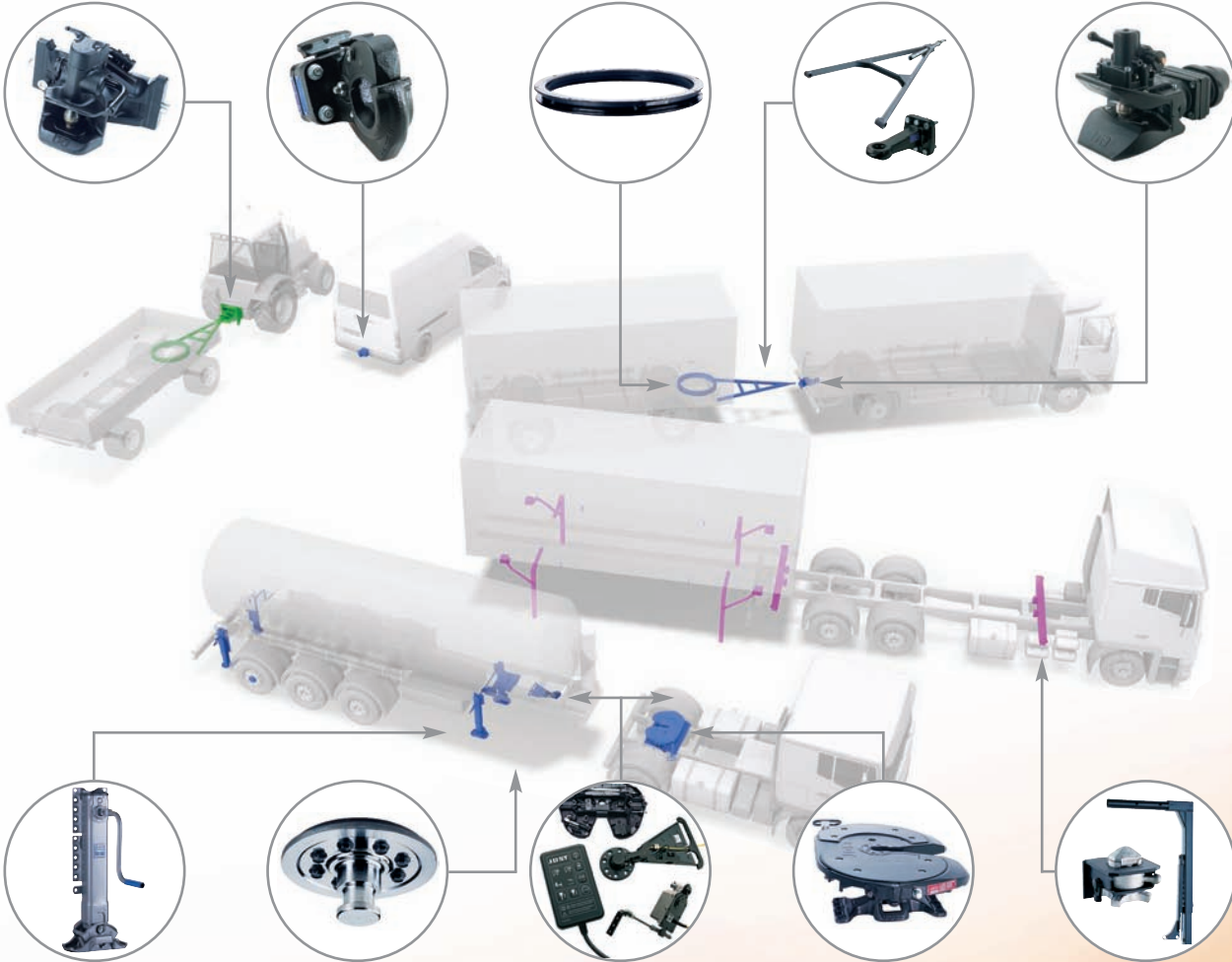
Ball bearing turntables  
Ronds d'avant-train à billes  
Ralle a sfera  
Corona giratoria

### Zuggabeln und Zugösen

Drawbars and towing eyes  
Flèche de remorque et anneaux de remorquage  
Forcelle e occhielli di traino  
Barras ahorquilladas de tracción y puntas de lanza

### Anhängerkupplungen

Towing hitches  
Crochets d'adaptation  
Ganci di traino  
Enganches para remolque



### Stützwinden Modul

Telescopic landing gear Modul  
Béquilles télescopiques Modul  
Sollevatori telescopici Modul  
Dispositivos de apoyo telescópicos Modul

### Königszapfen

King pins  
Pivots d'attelage  
Perni da articolazione  
King pin

### Systeme (Sensorkupplung, SKS, KKS)

Systems  
Systèmes  
Sisteme  
Sistemas

### Sattelkupplungen

Fifth wheel couplings  
Sellettes d'attelage  
Ralle a perno  
Quintas ruedas

### Containertechnik

Container equipment  
Produits pour porte-conteneurs  
Prodotti per container  
Técnica container

