

JO ST

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.**

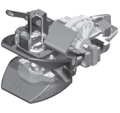
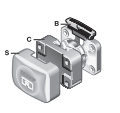
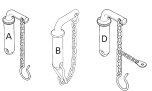
I Per tutti i prodotti illustrati ci **riserviamo il diritto di apportare modifiche tecniche.**

E Respecto a todos los productos indicados se **reservan modificaciones técnicas.**

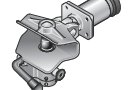
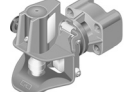
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Anhängekupplungen • Towing hitches • Crochets d'attelage • Ganci di Traino • Enganches para remolque

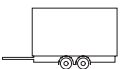
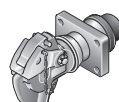
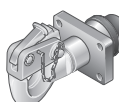
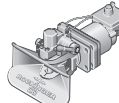
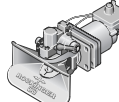
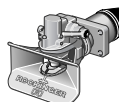
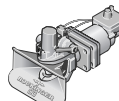
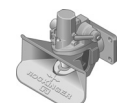
D Serie GB Series F Série I Serie E Serie	Genehmigung Homologation Omologation Omologazione Homologación	Beschreibung Anhängekupplung Description towing hitch Description crochet d'attelage Descrizione ganci di traino Descripción enganche para remolque	für Zugösen for towing eyes pour anneaux per occhioni di traino para puntas de lanza	  	Seite Page Page Página
RO*40 E 	94/20/CE	Vollautomatische Anhängekupplung Fully automatic towing hitch Crochet d'attelage entièrement autom. Gancio di traino automatico Enganche para remolque total. autom.	ø 40 mm	  	10
RO*40 CH 	94/20/CE	Vollautomatische Anhängekupplung Fully automatic towing hitch Crochet d'attelage entièrement autom. Gancio di traino automatico Enganche para remolque total. autom.	ø 40 mm	  	12
RO*42 	ABG	Vertikalgelenk, Off-Road Vertical articulating, Off-Road Articulation verticale, Off-Road Campana snodata, Off-Road Articulación vertical, Off-Road	ø 40 mm	  	14
RO*50 BNA 	94/20/CE	für BNA-Ringzugösen BNA ring towing eyes pour anneau torique de traction BNA per occhioni BNA para punta de lanza de anillo-BNA	ø 68 mm	  	16
RO*50 flex 	94/20/CE	Schwerlast, Off-Road Heavy duty, Off-Road Lourdes charges, Off-Road Traini eccezionali, Off-Road Carga pesada, Off-Road	ø 50 mm	  	18
RO*56 / 561 	94/20/CE	Schwerlast, Vertikalgelenk Heavy duty, vertical articulating Lourdes charges, articulation verticale Traini eccezionali, campana snodata Carga pesada, articulación vertical	ø 50 mm	  	20
RO*57 	94/20/CE	Standard Standard Standard Standard Estándar	ø 57,5 mm	  	22
RO*57 flex 	94/20/CE	Off-Road Off-Road Off-Road Off-Road Off-Road	ø 57,5 mm	  	24
RO*100 	94/20/CE	VARIOBLOC VARIOBLOC VARIOBLOC VARIOBLOC VARIOBLOC		  	26
RO*200 	ABG	Zugkugelnkupplung Hitch heads Crochet à boule Gancio per accoppiamento Enganche esférico		  	29
RO*205 / 207 / 208 / 230 	EWG	Abschleppkupplung Manual towing hitch Chapes de remorquage Ganci di manovra Enganches para remolcar		  	30

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

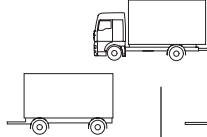
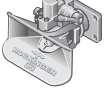
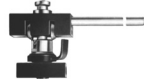
D Serie GB Series F Série I Serie E Serie	Genehmigung Homologation Omologation Omologazione Homologación	Beschreibung Anhängerkupplung Description towing hitch Description crochet d'attelage Descrizione ganci di traino Descripción enganche para remolque	für Zugösen for towing eyes pour anneaux per occhioni di traino para puntas de lanza			Seite Page Page Página Página
RO*225 / 227 	94/20/CE	UNIMOG UNIMOG UNIMOG UNIMOG UNIMOG	ø 40 mm	x	x	33
RO*226 	94/20/CE	Off-Road, Vertikalgelenk Off-Road, vertical articulating Off-Road, articulation verticale Off-Road, campana snodata Off-Road, articulación vertical	ø 40 mm	x	x	35
RO*231 		Hakenkupplung mit Flansch Hook trailer hitch with flange Accouplement à crochet avec bride Gancio a uncino con flangia Enganche de gancho con brida	ø 40/76 mm	x	x	37
RO*232 	94/20/CE	Hakenkupplung, gefedert Hook trailer hitch with buffers Accouplement à crochet à ressorts Gancio a uncino molleggiato Enganche de gancho con almohadillas	ø 40/76 mm CH	x	x	39
RO*240 	94/20/CE	Drehbar, Transporter Rotable, light trucks Tournant, véhicules utilitaires Girevole, motrici leggere Giratorio, furgonetas	ø 40 mm	x	x	41
RO*243 	94/20/CE	Kompakt, Transporter Compact, light trucks Compact, véhicules utilitaires Compatto, motrici leggere Compacto, furgonetas	ø 40 mm	x	x	43
RO*244-2 	ABG	Kompakt, Flurförderzeuge Compact, industrial trucks Compact, chariots de manutention Compatto, dibiti a movimentazione Compacto, vehículos industriales	ø 35/40 mm	x		45
RO*245 		Kompakt, innerbetrieblicher Transport Compact, internal transport Compact, transport inter-usine Compatto, movimentazione interne Compacto, transporte interno	ø 35/40 mm	x	x	46
RO*253 		Drehbar, Transporter Rotable, light trucks Tournant, véhicules utilitaires Girevole, motrici leggere Giratorio, furgonetas	ø 40 mm CH	x	x	49
RO*256 	94/20/CE	Transporter, gefedert Light trucks with buffers Véhicules utilitaires à ressorts Motrici leggere molleggiato Furgonetas con almohadillas	ø 40 mm	x	x	51
RO*263 		Standard CH Standard CH Standard CH Standard CH Estándar CH	ø 40 mm	x		53



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

D GB F I E Serie Series Série Serie Serie	Genehmigung Homologation Omologation Omologazione Homologación	Beschreibung Anhängerkupplung Description towing hitch Description crochet d'attelage Descrizione ganci di traino Descripción enganche para remolque	für Zugösen for towing eyes pour anneaux per occhioni di traino para puntas de lanza	  	Seite Page Page Página Página
RO*283 		Hakenkupplung, gefedert Hook trailer hitch with buffers Accouplement à crochet à ressorts Gancio a uncino molleggiato Enganche de gancho con almohadillas	ø 76 mm	✕ ✕	55
RO*285 		Hakenkupplung, gefedert Hook trailer hitch with buffers Accouplement à crochet à ressorts Gancio a uncino molleggiato Enganche de gancho con almohadillas	ø 76 mm	✕ ✕	57
RO*290 		Schienengebundene Arbeitsmaschinen Rail vehicles Machines-outils sur rails Macchine di lavoro su rotaia Máquinas de trabajo sobre carriles	ø 40 mm	✕	59
RO*400-1 	94/20/CE	Standard Standard Standard Standard Estándar	ø 40 mm	✕ ✕	61
RO*430 	94/20/CE	Comfort, spielfrei Comfort, slack-free Confort, sans jeu Comfort, senza gioco Confort, exento de juego	ø 40 mm	✕ ✕	63
RO*433 	94/20/CE	Comfort, spielfrei Comfort, slack-free Confort, sans jeu Comfort, senza gioco Confort, exento de juego	ø 40 mm CH	✕ ✕	65
RO*500 	94/20/CE	Standard Standard Standard Standard Estándar	ø 50 mm	✕ ✕	67
RO*500 G 65 	94/20/CE	Schwere Starrdeichseln Heavy rigid trailer Timons rigides lourdes Timoni rigidi pesanti Lanzas rígidas pesadas	ø 50 mm	✕ ✕	69
RO*530 	94/20/CE	Comfort, spielfrei Comfort, slack-free Confort, sans jeu Comfort, senza gioco Confort, exento de juego	ø 50 mm	✕ ✕	71
RO*560 	94/20/CE	mit Flansch with flange avec bride con flangia con brida	ø 50 mm	✕ ✕	73
RO*700 	94/20/CE	Standard Standard Standard Standard Estándar	ø 50 mm	✕ ✕	75

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

D Serie GB Series F Série I Serie E Serie	Genehmigung Homologation Omologation Omologazione Homologación	Beschreibung Description Description Descrizione Descripción	für Zugösen for towing eyes pour anneaux per occhioni di traino para puntas de lanza			Seite Page Page Página Página
RO*841 (460) 	94/20/CE	mit Flansch with flange avec bride con flangia con brida	ø 40 mm	x	x	78
RO*KU 80 	94/20/CE	Kugelkupplungssystem Ball Coupling System Système d'attelage à boule Sistema gancio a sfera Sistema de enganches esféricos	ø 80 mm	x	x	80
RO*480 / 483 / 580 	94/20/CE	Adapterkupplungen, selbsttätig Adapter hitches, automatic Crochets d'adaptation, automatiques Adattatori, automatici Enganches adaptadores, automáticos	ø 40/50 mm	x		82
	94/20/CE	Zugösen Towing eyes Anneaux de remorquage Occhioni di traino Puntas de lanza	ø 40/50/57,5 mm	x	x	84
		Prüflehren Wear gauges Calibres de contrôle Calibri Patrones de comprobación				87
		Werkzeuge Tools Outils Attrezzi Herramientas				87

	Ersatzteile Spare parts Pièces de rechange Ricambi Piezas de recambio	Fernanzeige, In-cab status indicator, Affichage à distance, Teleindicación, Segnalatore; RO*244-1*; RO*260*; RO*372*; RO*400 C*; RO*715 A*; RO*715 E* * Auslaufmodell • Discontinued model • Modèle de fin de série • Modello in via di esaurimento • Modelo de expiración	88
	Zubehör Accessories Accessoires Accessori Accesorios	Aufrüstsätze • Upgrade kits • Kits d'adaptation • Kit complementari • Juegos de equipamiento posterior Schraubensätze • Screw sets • Kits de vis • Kit di viti • Juegos de tornillos	95 98

	Berechnung Calculation Calcul Calcolo Cálculo		99
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Verwendete Piktogramme • Used pictographs • Pictogrammes utilisés • Pittogrammi utilizzati • Pictogramas empleados

D Icon GB Series F Série I Serie E Serie	Beschreibung Description Description Descrizione Descripción
	Handhebelposition Hand lever position Position du levier à main Posizione della leva manuale Posición de la palanca de mano
	Kupplungsgröße Hitch size Dimension du crochet Dimensioni del gancio Tamaño del enganche
	Lochbild Hole pattern Schéma de perçage Interassi dei fori di fissaggio Disposición de agujeros
	Zentralachsanhänger Central axis trailers Remorques à essieu central Rimorchi con asse centrale Remolques con eje central
	Achslast Axle load Charge sur l'essieu Carico dell'asse Tracción delantera
	D-Wert VARIOBLOC D-value VARIOBLOC Valeur D VARIOBLOC Valore D VARIOBLOC Valor D VARIOBLOC
	Dc-Wert VARIOBLOC Dc-value VARIOBLOC Valeur Dc VARIOBLOC Valore Dc VARIOBLOC Valor Dc VARIOBLOC
	Starrdeichselanhänger Central-axle trailer Remorque fixe Rimorchio a timone rigido Remolque de barra de tracción fija
	Gelenkdeichselanhänger Drawbar trailer Remorque articulée Rimorchio con timone snodato Remolque de barra de tracción articulada
	Zugfahrzeug Truck Poids du véhicule tracteur Motrice Vehículo tractor
	Position langes Fangmaul Long jaw position Position pavillon long Posizione bocca di aggancio lunga Posición boca de enganche larga
	VARIOBLOC VARIOBLOC VARIOBLOC VARIOBLOC VARIOBLOC

D Icon GB Series F Série I Serie E Serie	Beschreibung Description Description Descrizione Descripción
	Kupplungskugel Hitch ball Boule d'attelage Gancio a sfera Enganche de bola
	Kupplungsbolzen Hitch pin Boulon d'accouplement Perno Perno de acoplamiento
	Steckbolzen Insert hitch pin Axe embrochable Perno Perno enchufable
	Zugöse Towing eye Anneau de remorquage Occhione di traino Punta de lanza
	Zugöse ø Towing eye ø Anneau de remorquage ø Occhione di traino ø Punta de lanza ø
	Anschraubplatte Plate of bolting Platine à boulonner Piastra di fissaggio Plancha roscable
	Gewicht Weight Poids Peso Peso
	Seitenanschlag RO*57 Protection stop RO*57 Taquet latéral RO*57 Guida di appoggio RO*57 Tope lateral RO*57
	Fernanzeige In-cab status indicator Affichage à distance Segnalatore apertura/chiusura Teleindicación
	Fernbedienung Remote control Commande à distance Telecomando Control remoto
	Klemmlänge: K Grip: K Longueur de serrage: K Lunghezza di serraggio: K Longitud de apriete: K
	Menge Quantity Quantité Quantità Cantidad



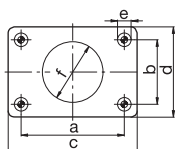
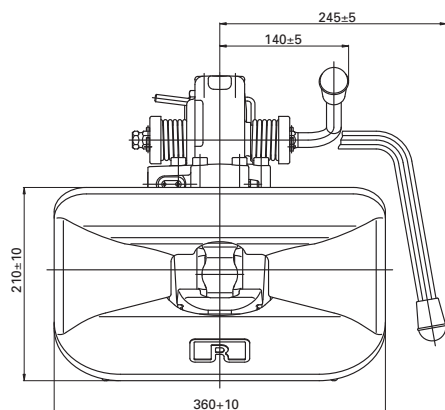
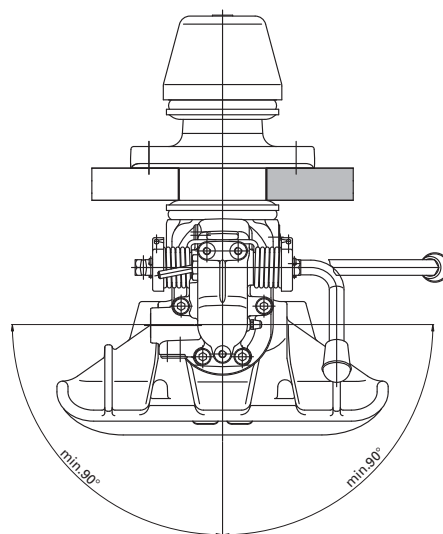
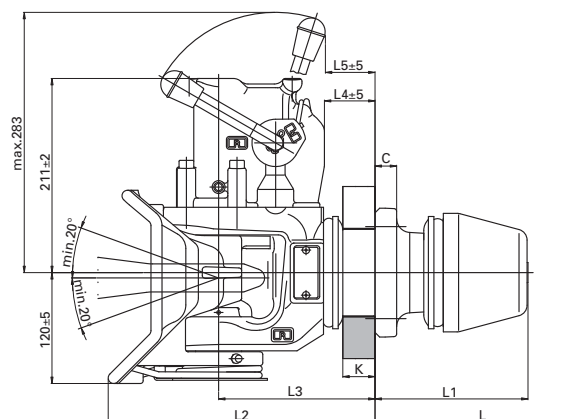
D Icon GB Series F Série I Serie E Serie	Beschreibung Description Description Descrizione Descripción
	Zugfahrzeug, Schiene Truck, rail Poids du véhicule tracteur, rail Motrice, guida Vehículo tractor, carril
	Befestigungslager Attachment bearing Palier de fixation Cuscinetto di fissaggio Cojinetes de sujeción
	Befestigungssatz Mounting kit Kit de fixation Kit di fissaggio Conjunto de fijación
	Anziehdrehmoment Torque Couple de serrage Coppia di serraggio Par de apriete

RO★40 E

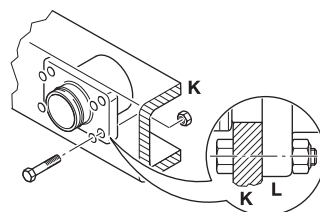
- D** Vollautomatische Anhängerkupplung
- GB** Fully automatic towing hitch
- F** Crochet d'attelage entièrement automatique
- I** Gancio di traino automatico
- E** Enganche para remolque totalmente automático



a = 40 mm
DIN 74054
94/20/CE
(Class S)



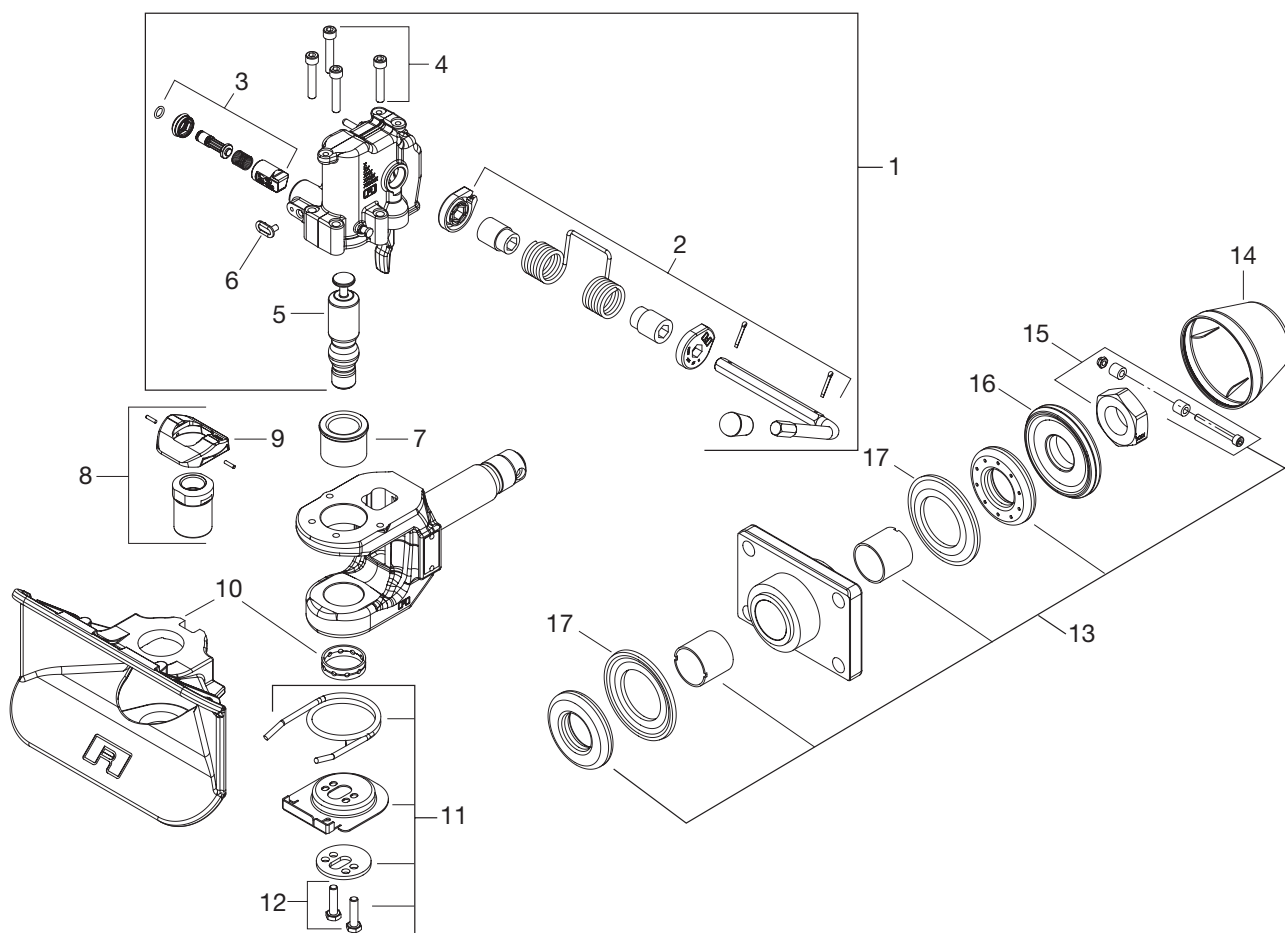
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135	120,0	55,0	155,0	90,0	15,0	74,0
145	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

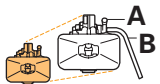


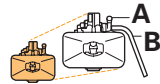
	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	K (mm)	C (mm)	Lm (mm)
135	147,0	286,0	166,0	51,0	50,0	11,0-32,0	22,0	180,0
145	166,0	290,0	170,0	55,0	54,0	11,0-35,0	23,5	230,0
150	166,0	290,0	170,0	55,0	54,0	11,0-35,0	23,5	230,0

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

	C	A	B	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1	
RO410A36500	135	120 x 55	70	70,0	70,0	700	24,0	30,0	00-1607	
RO410B36500	135	120 x 55	70	70,0	70,0	700	24,0	30,0	00-1607	
RO410A46500	145	140 x 80	100	90,5	90,5	1000	36,0	33,0	00-1601	
RO410B46500	145	140 x 80	100	90,5	90,5	1000	36,0	33,0	00-1601	
RO410A51500	150	160 x 100	168	90,5	90,5	1000	50,0	33,0	00-1600	
RO410B51500	150	160 x 100	168	90,5	90,5	1000	50,0	33,0	00-1600	



Pos.		ROE	
1	A	71330A	1
	B	71330B	1
2	A	71644A	1
	B	71644B	1
3		71643	1
4		30396	1
5		47121	1
6		25558	1
7		53565	1
8		71692	1
9		53389	1
10		46128	1

Pos.		ROE	
11		71331	1
12		30486	1
13	G135	71639	1
14	G135	71640	1
	G145/150	25254	1
15	G135	25347	1
	G145/150	71641	1
16	G135	71642	1
	G145/150	12623	1
17	G135	12636	1
	G145/150	44130	2
		44134	2

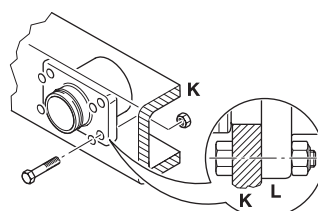
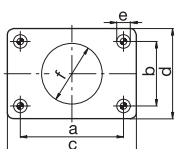
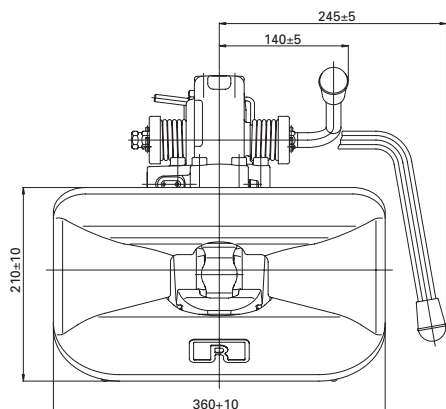
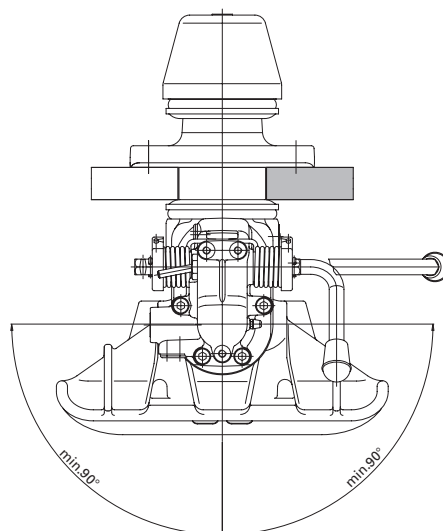
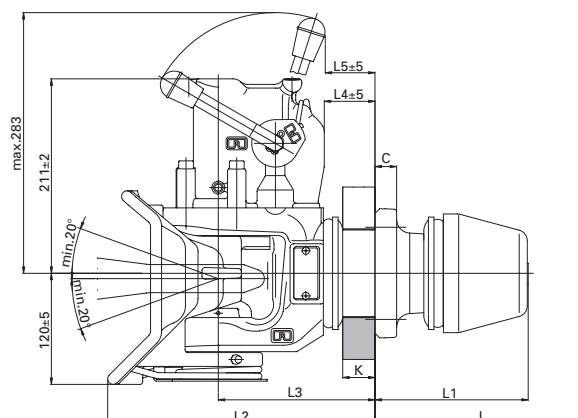
RO★40 CH

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- E** Enganche para remolque totalmente automático



a = 40 mm
DIN 74054, 94/20/CE (Class S)

a = 50 mm
DIN 74053, 94/20/CE (Class D)

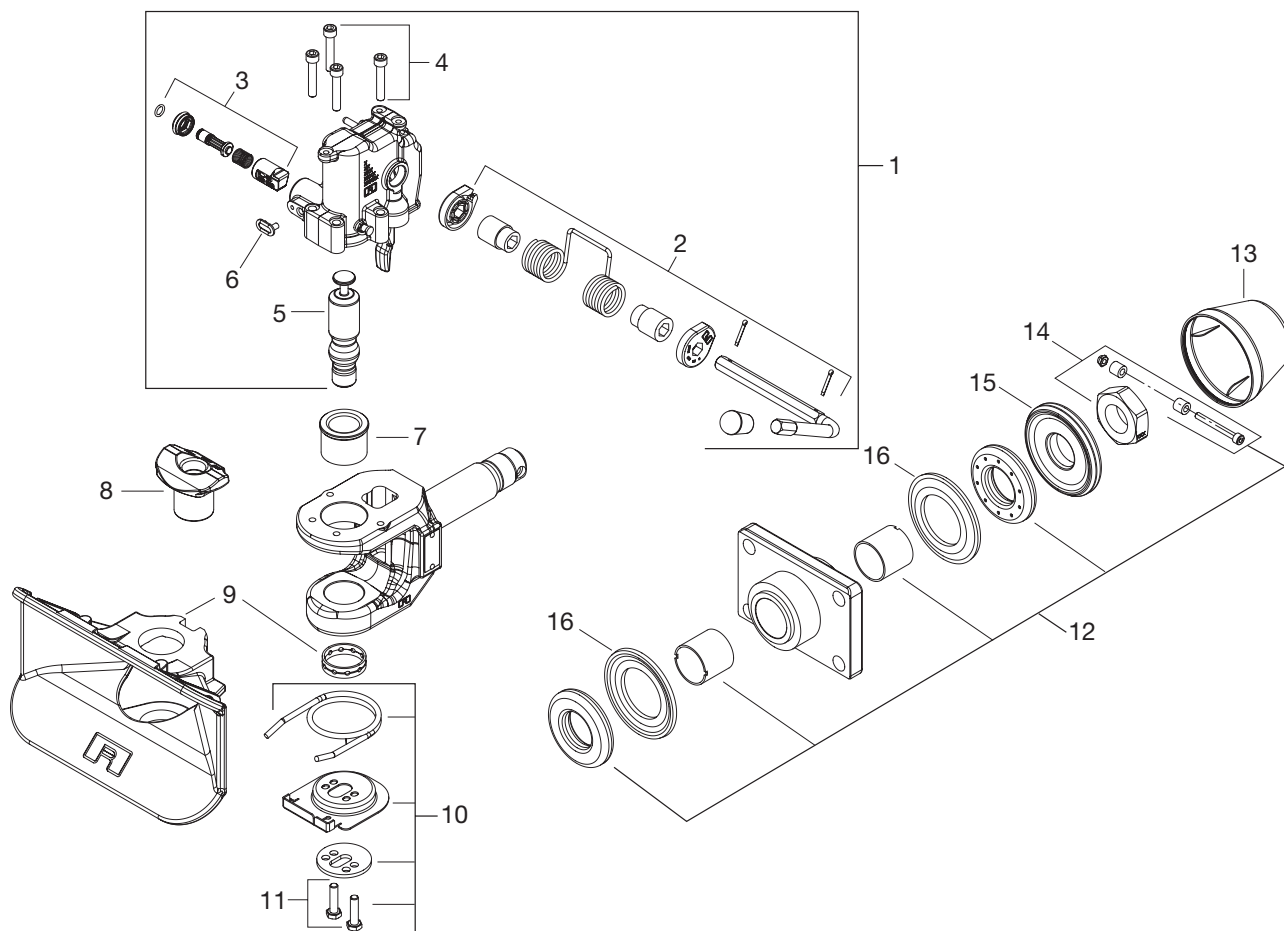


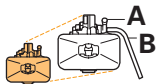
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
135	120,0	55,0	155,0	90,0	15,0	74,0
145	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

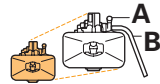
	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	K (mm)	C (mm)	Lm (mm)
135	147,0	286,0	166,0	51,0	50,0	11,0-32,0	22,0	180,0
145	166,0	290,0	170,0	55,0	54,0	11,0-35,0	23,5	230,0
150	166,0	290,0	170,0	55,0	54,0	11,0-35,0	23,5	230,0

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

									e1		
		(mm)		D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)			
R0413A36500	135	120 x 55	70	70,0	700	24,0	30,0	00-1605			
R0413B36500	135	120 x 55	70	70,0	700	24,0	30,0	00-1605			
R0413A46500	145	140 x 80	100	91,5	1000	36,0	33,0	00-1604			
R0413B46500	145	140 x 80	100	91,5	1000	36,0	33,0	00-1604			
R0413A51500	150	160 x 100	168	91,5	1000	36,0	33,0	00-1603			
R0413B51500	150	160 x 100	168	91,5	1000	36,0	33,0	00-1603			

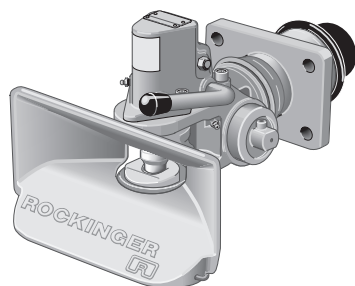


Pos.		ROE	
01	A	71330A	1
	B	71330B	1
02	A	71644A	1
	B	71644B	1
03		71643	1
04		30396	1
05		47121	1
06		25558	1
07		53565	1
08		53566	1
09		46129	1
10		71331	1

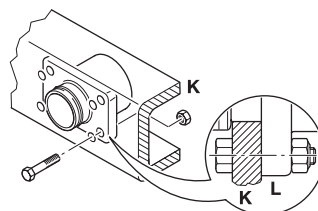
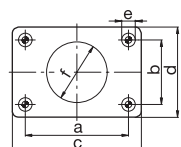
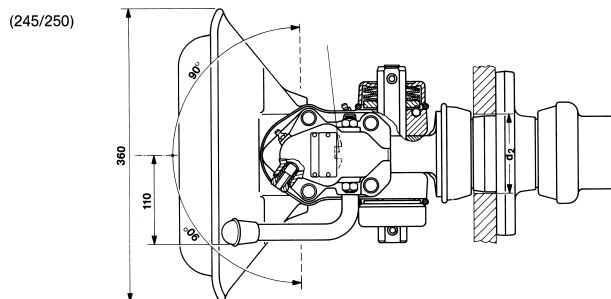
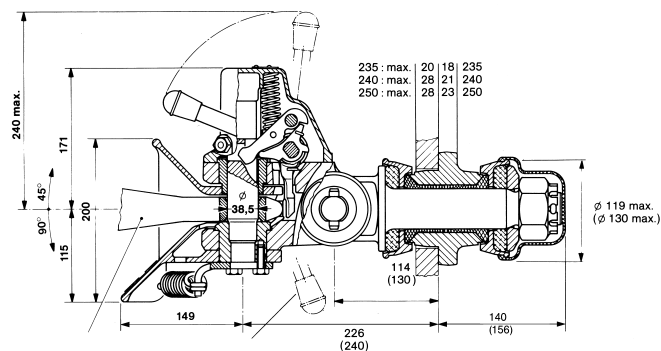
Pos.		ROE	
11		30486	1
12		71639	1
	G145/G150	71640	1
13		25254	1
	G145/G150	25347	1
14		71641	1
	G145/G150	71642	1
15		12623	1
	G135	12636	1
16		44130	2
	G145/G150	44134	2

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

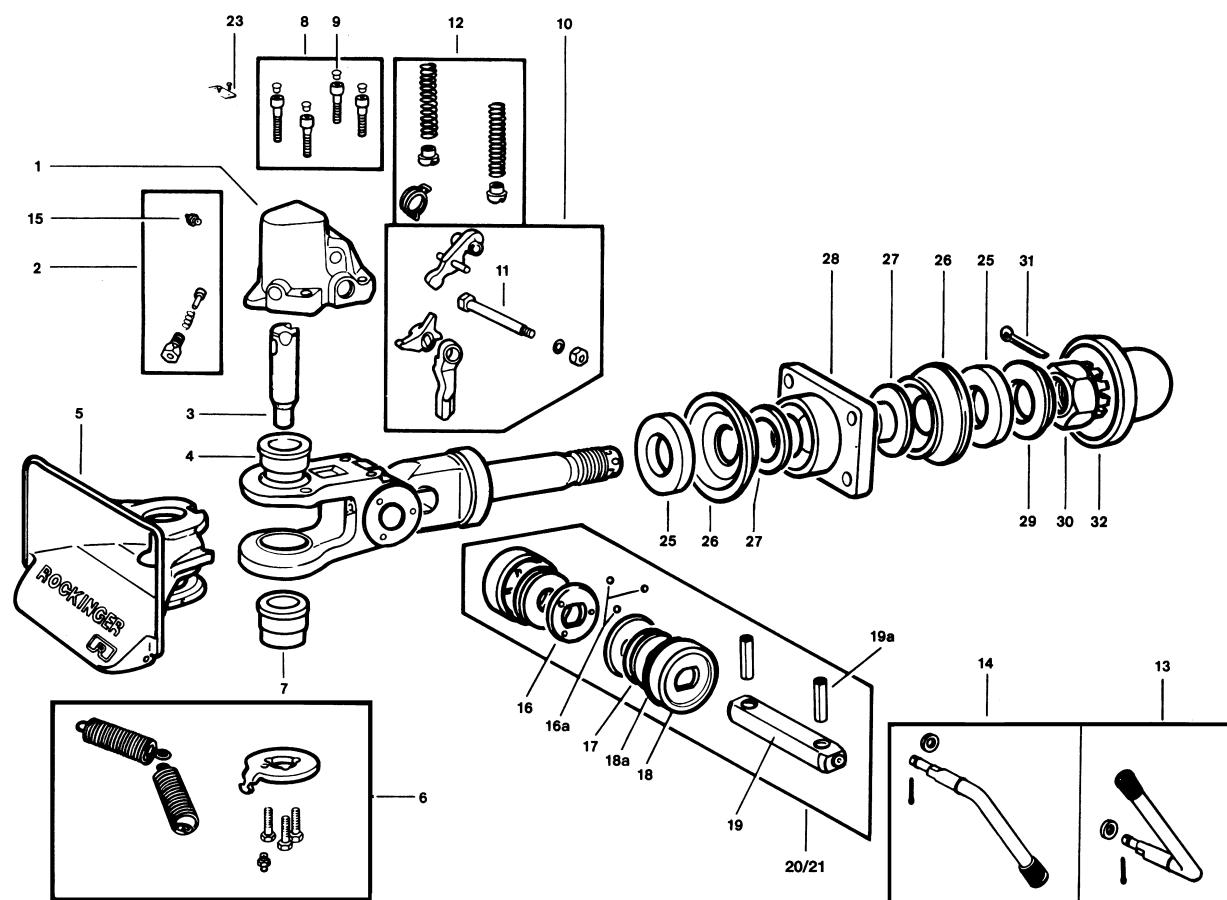


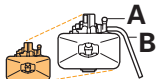
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
235	120,0	55,0	155,0	90,0	15,0	74,0
245	140,0	80,0	180,0	120,0	17,0	84,0
250	160,0	100,0	200,0	140,0	21,0	94,0

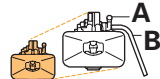
	K (mm)	K (mm)
235	20	max. 20
245	28	max. 28
250	28	max. 28

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

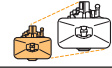
			 (mm)	 D (kN)	 S (kg)	 C (t)	 (kg)	ABG M
RO42G235	A	235	120 x 55	70	50	1,3	31,5	4431
RO42G235A	B	235	120 x 55	70	50	1,3	31,5	4431
RO42G240	A	245	140 x 80	100	50	1,3	35,5	4432
RO42G250	A	250	160 x 100	120	50	1,3	37,5	4433
RO42G250A	B	250	160 x 100	120	50	1,3	37,5	4433



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

Pos.		ROE	
17		39022	8
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

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

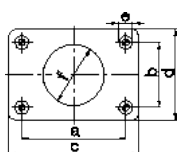
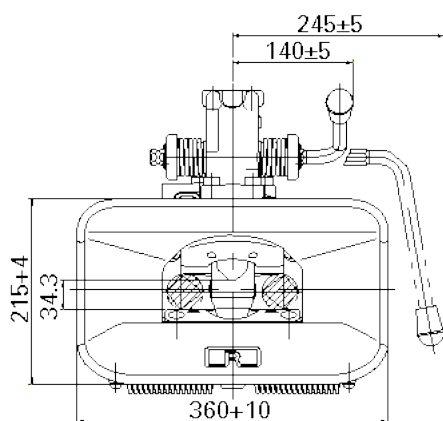
Pos.	ROE	
25, 27, 31	67472	235
25, 27, 31	67471	245, 250

RO★50 BNA

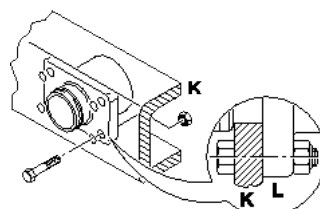
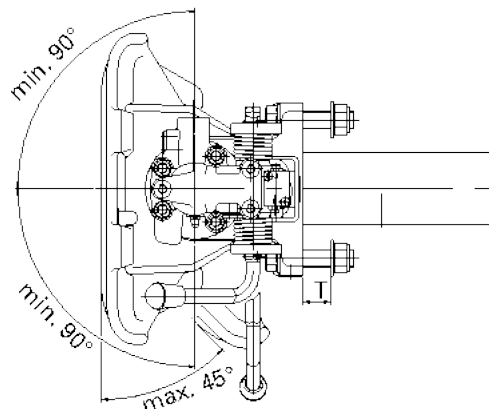
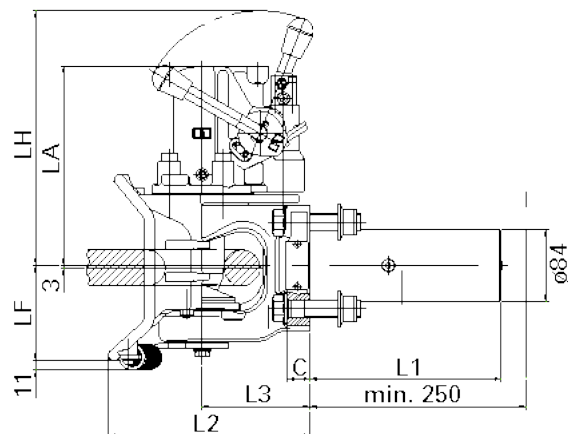
- D** 68 mm Anhängerkupplung für BNA-Ringzugösen
- GB** 68 mm towing hitch for BNA ring towing eyes
- F** Crochet d'attelage 68 mm pour anneau torique de traction BNA
- I** Gancio di traino 68 mm per occhioni BNA
- E** Enganche para remolque de 68 mm para punta de lanza en forma de anillo-BNA



a = 68 mm
NF R 41-102
Ringzugöse • towing eye •
anneau de remorquage • occhione
torico • argolla de tracción anular



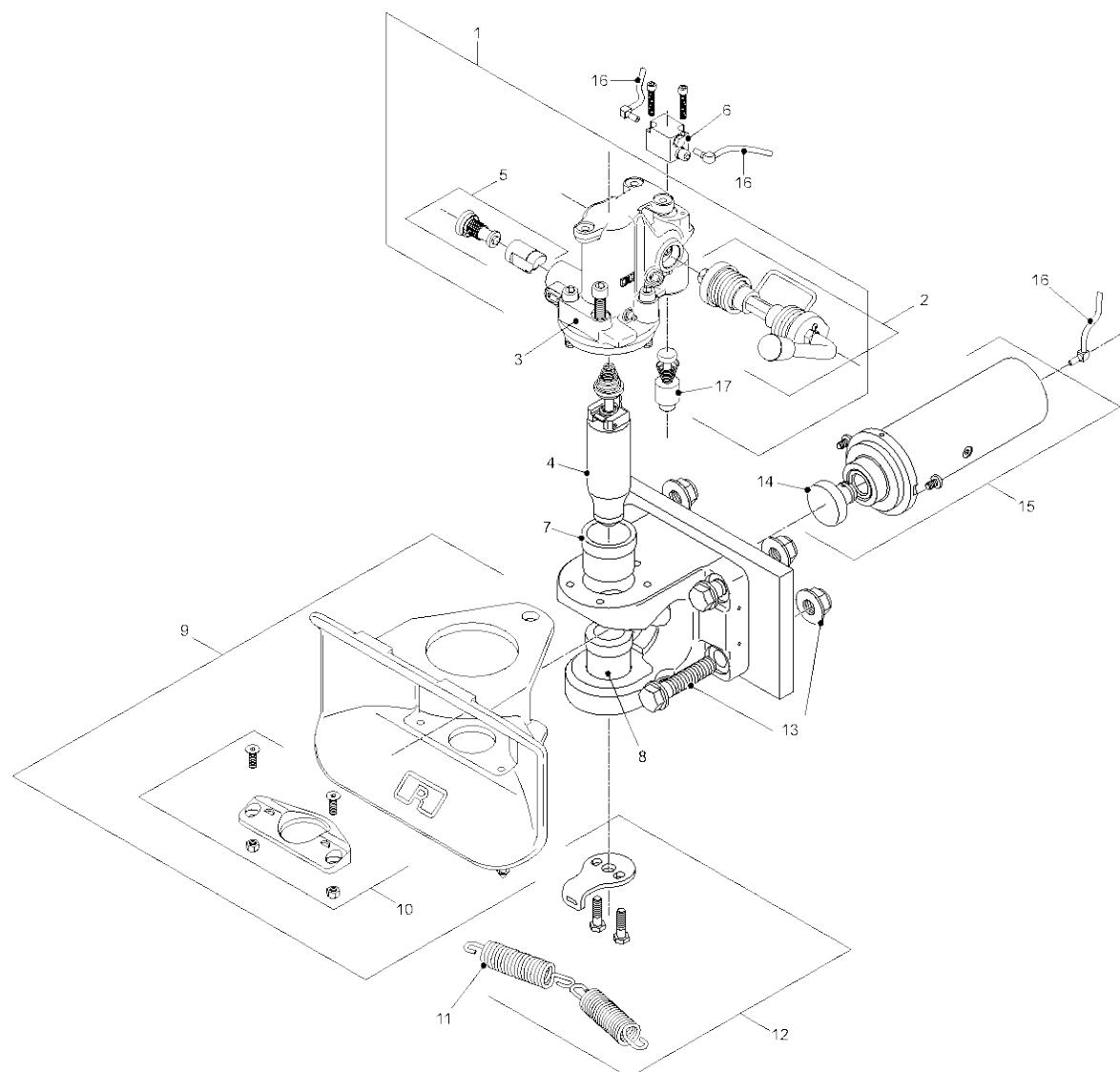
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
U6	160,0	100,0	200,0	140,0	21,0	94,0

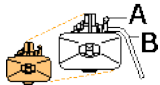


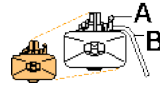
	LH (mm)	LA (mm)	LF (mm)	L1 (mm)	L2 (mm)	L3 (mm)	C (mm)	T (mm)
U6	295,0	231,0	110,0	234,0	234,0	125,0	26,0	32,0

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

		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1		
590A61001	U6	160x100	200	140	1000	75	40	00-1614		
590A61001	U6	160x100	200	140	2500	50	40	00-1614		
590B61001	U6	160x100	200	140	1000	75	40,5	00-1614		
590B61001	U6	160x100	200	140	2500	50	40,5	00-1614		
590A61401	U6	160x100	200	140	1000	75	46	00-1614	X	X
590A61401	U6	160x100	200	140	2500	50	46	00-1614	X	X

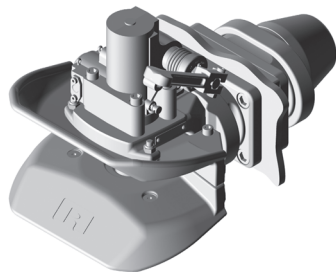


Pos.		ROE	
01	ROxxxAxxxxx	71443A	1
01	ROxxxBxxxxx	71443B	1
02	ROxxxAxxxxx	71644A	1
02	ROxxxBxxxxx	71644B1	1
03		30458	1
04		47127	1
05		71697	1
06		71610	1
07		53596	1
08		53597	1

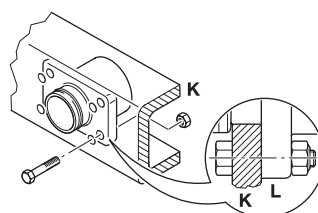
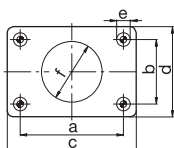
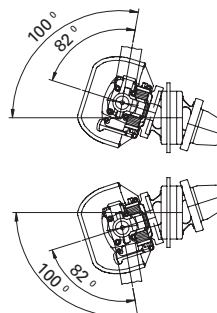
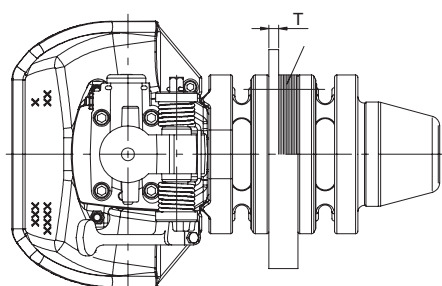
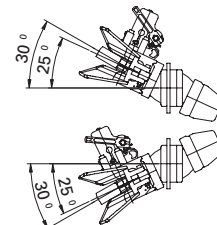
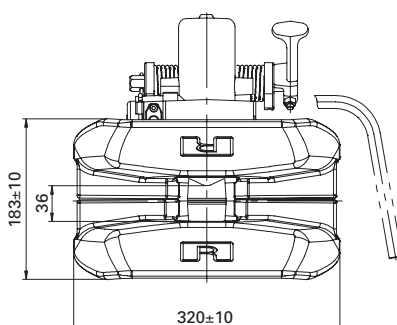
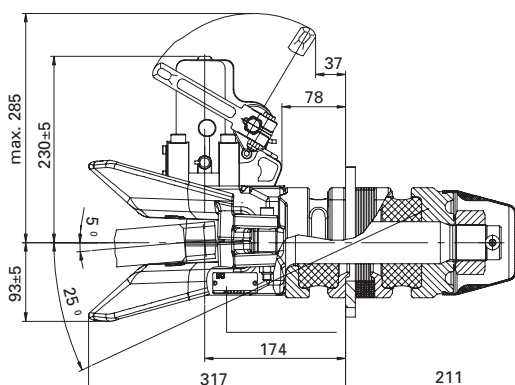
Pos.		ROE	
09		46143	1
10		12642	1
11		55008	1
12		59454	1
13		71589	1
14		52568	1
15		71637	1
16		71380	1
17		52549	1

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

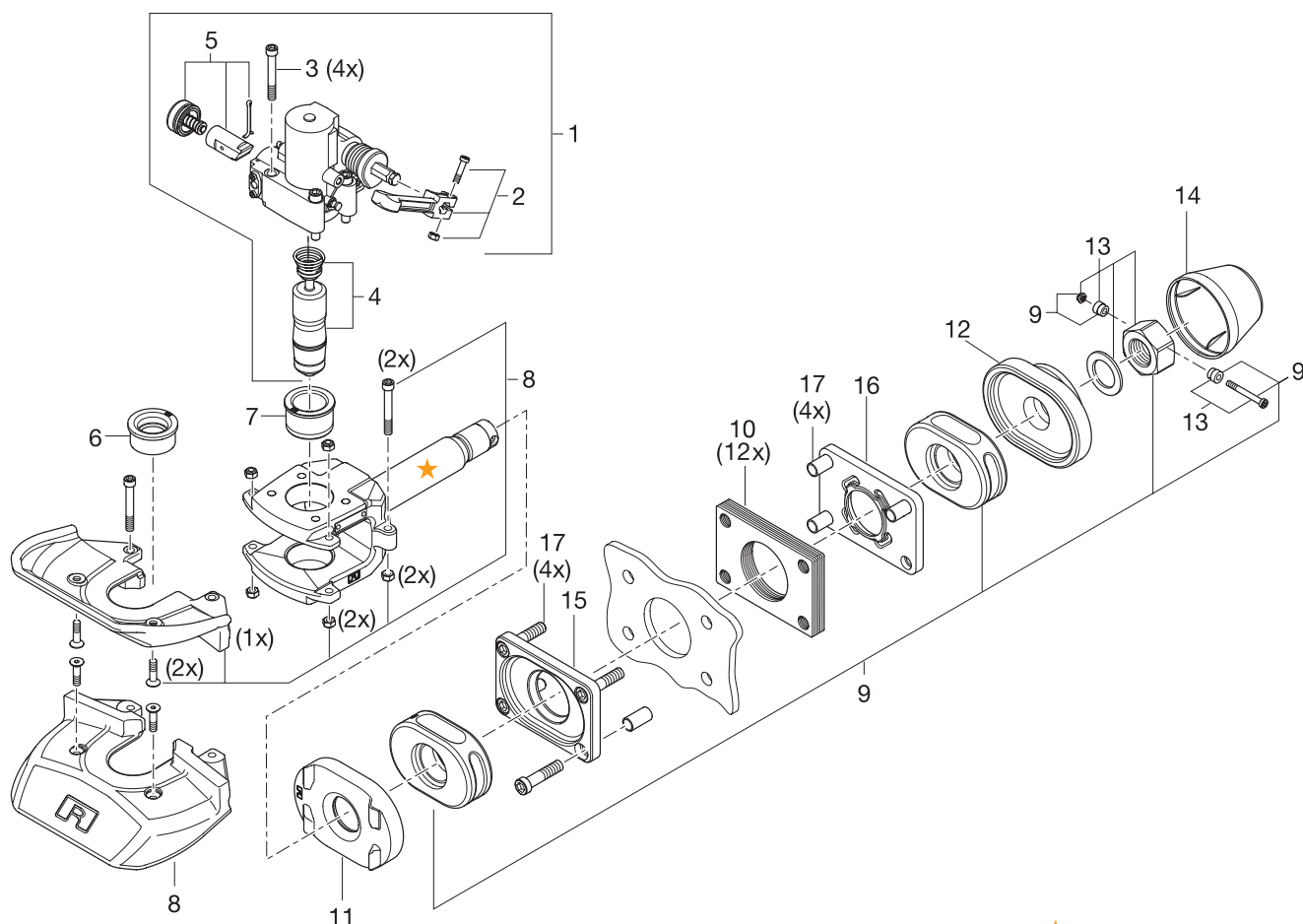


	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160.0	100.0	200.0	140.0	21.0	94.0

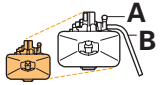
		
K (mm)	K (mm)	K (mm)
6	-	max. 35

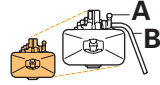
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

							e1		
R0506 A 61500	6	160 x 100	260			57	00-1360		
R0506 B 61500	6	160 x 100	260			57	00-1360		
R0506 C 61540	6	160 x 100	260			66	00-1360	x	x
R0506 C 61500	6	160 x 100	260			57	00-1360		
R0506 D 61500	6	160 x 100	260			57	00-1360		



★ 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

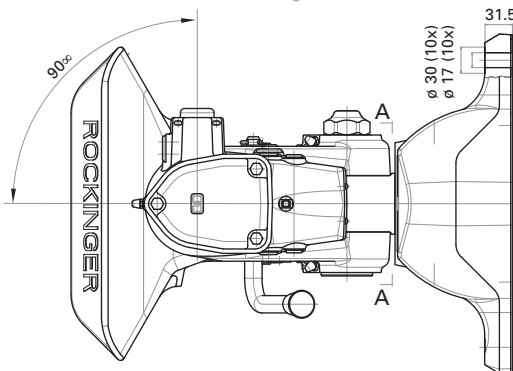
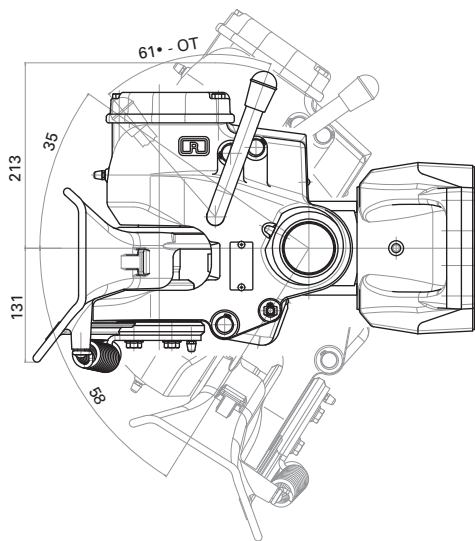
Pos.		ROE	
09		71266	1
10		15690	1
11		12615	1
12		43480	1
13		56122	1
14		25347	1
15		43478	1
16		43479	1
17		30399	4

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

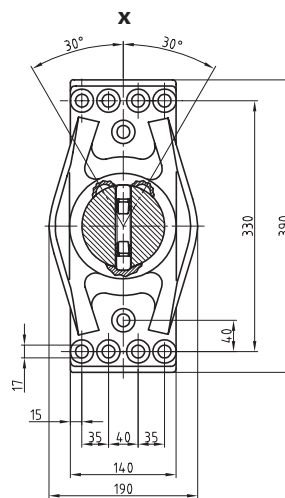
- D** Schwerlastkupplung mit Vertikalgelenk
- GB** Heavy duty hitch with vertical articulating hitch head
- F** Crochet d'attelage pour lourdes charges à articulation verticale
- I** Gancio per traini eccezionali con campana snodata
- E** Enganche de carga pesada con articulación vertical



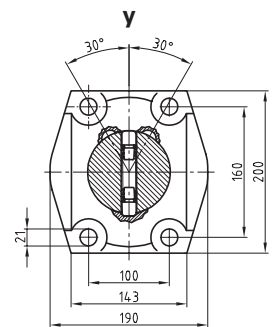
a = 50 mm
 nur Schwerlastzugöse
 only heavy duty towing eye
 uniquement anneau de remorquage pour lourdes charges
 solo occhione di traino eccezionali
 sólo punta de lanza para cargas pesadas
 ROE57005



RO*56 E (561 E)



RO*56 E



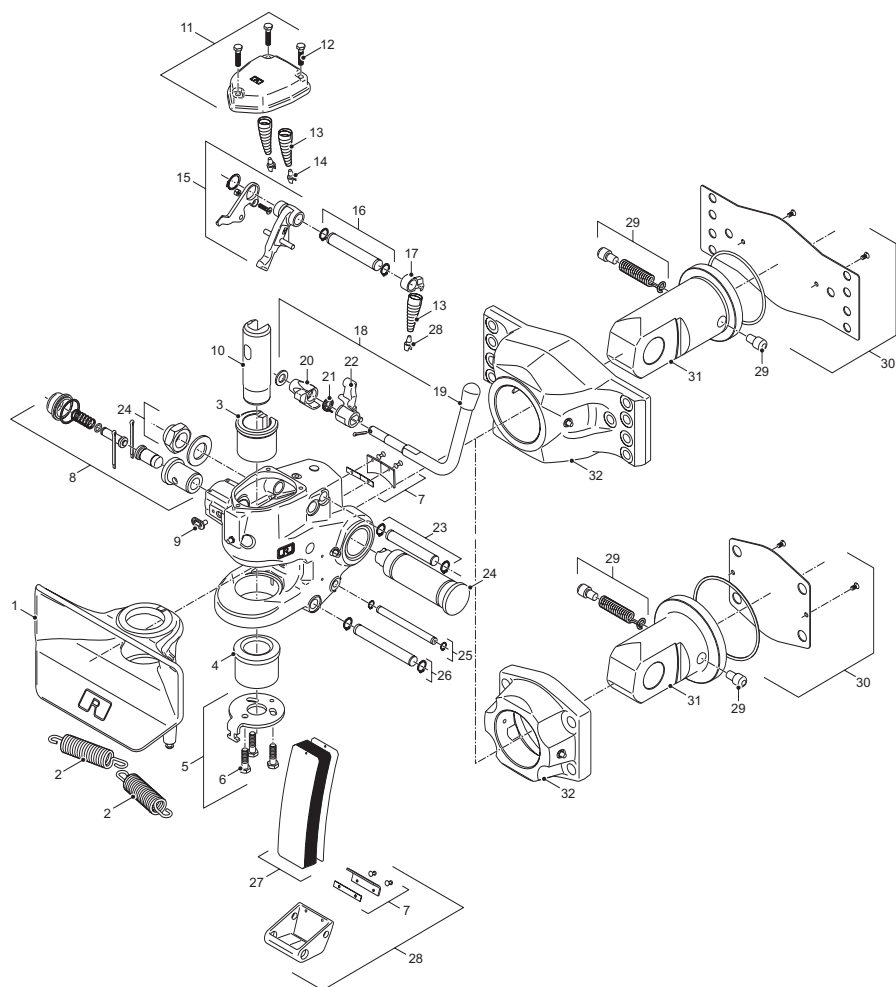
RO*561 E

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

								e1
			(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 E / 561 - 50 mm (e1-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		53643	1
04		53642	1
05		59453	1
06		30441	1
07		25010	2
08		52575	1
09		25558	2
10		47139	1
11		45484	1
13		55024	3
14		13005	1
15		51228	1
16		52002	1
17		65010	1

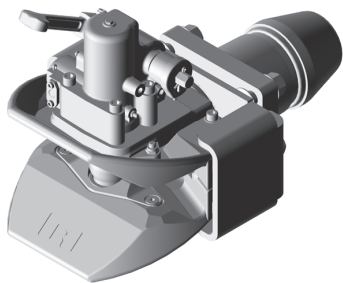
Pos.		ROE	
18		50092	1
19		25104	1
20		51012	1
21		55025	1
22		51013	1
23		52011	1
24		52578	1
25		52010	1
26		52009	1
27		55026	1
28		65066	1
29		52014	1
30		54274	1
		54276	
31		42016	1
		42014	1
32		siehe Reparatursatz	

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

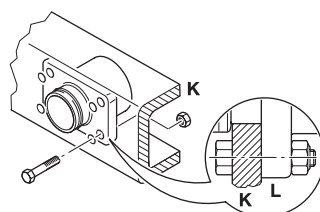
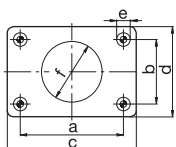
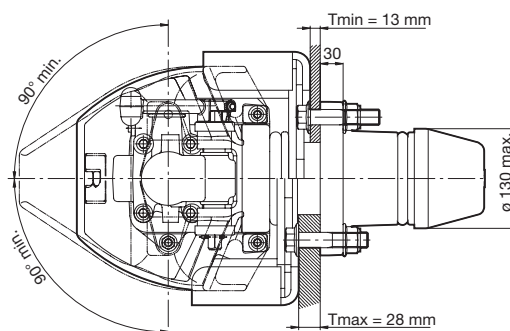
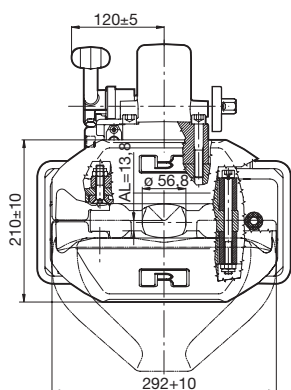
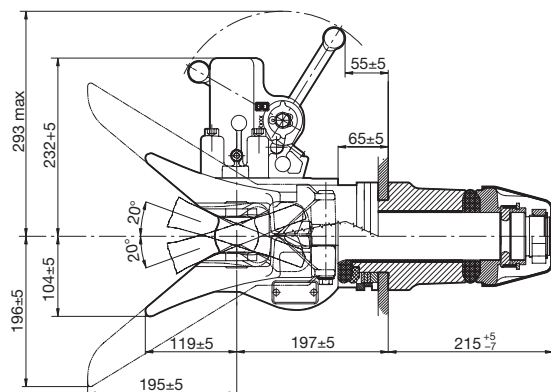
Pos.	ROE	
03, 04, 10, 21, 24, 25, 27, 29, 30, 31, 32	71746	56 / A66
03, 04, 10, 21, 24, 25, 27, 29, 30, 31, 32	71745	56 / A80

RO*57 - 57 mm

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



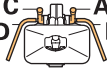
a = 57,5 mm
Schwedische Norm
Swedish standard
Norme suédoise
Normativa svedese
Norma sueca

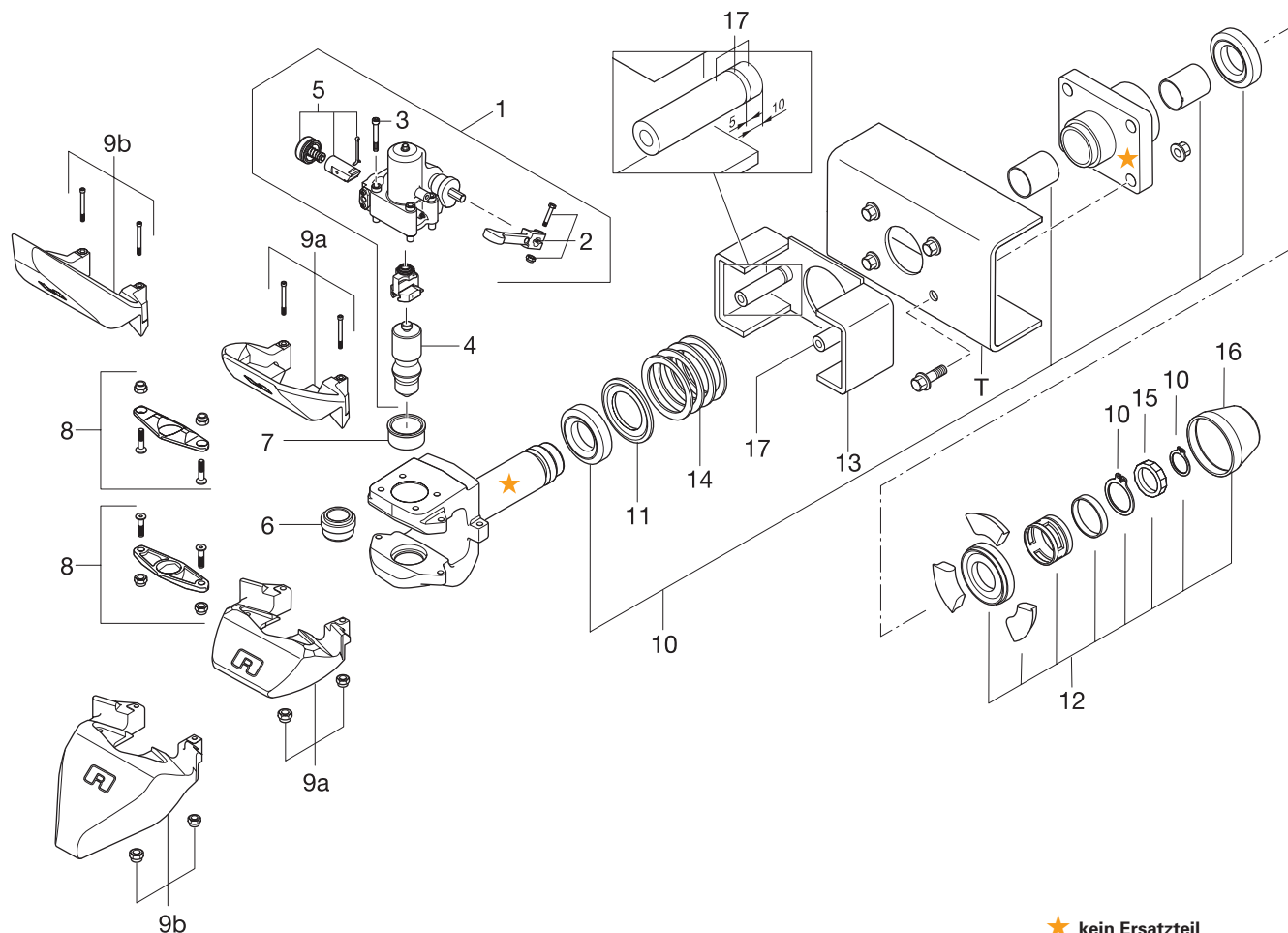


	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160.0	100.0	200.0	140.0	21.0	94.0

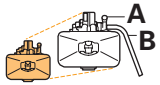
		
K (mm)	K (mm)	K (mm)
6	13-28	max. 28

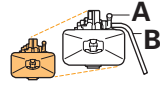
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

	 (mm)	 D (kN)	 Dc (kN)	 S (kg) V (kN)	 Av	e1	 (kg)				 b a
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				a
570C6156C	160 x 100	300	145	1000 95	18	00-1361	69	x	x		a
570C6157C	160 x 100	300	145	1000 95	18	00-1361	75	x	x		a, b



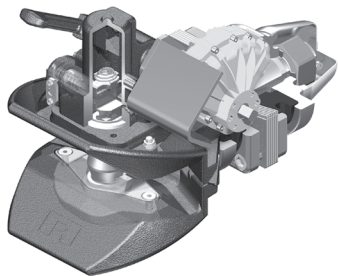
★ kein Ersatzteil
no spare part
non pièce de rechange
no ricambio
no es pieza de recambio

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		30229	1
04		47116	1
05		71153	1
06		53544	1
07		53543	1
08		71154	2

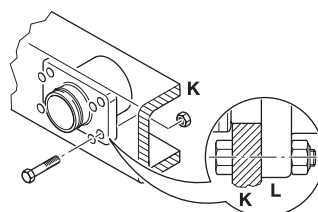
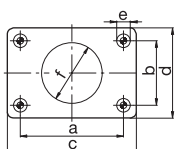
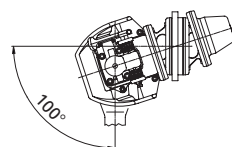
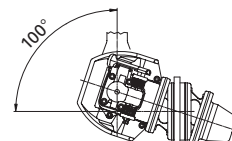
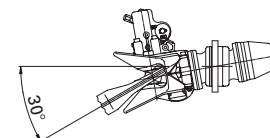
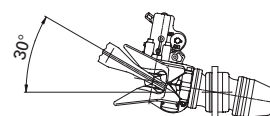
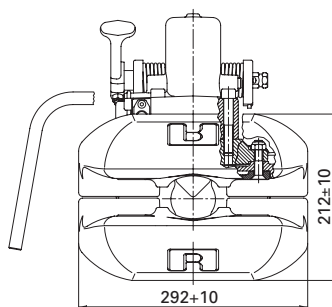
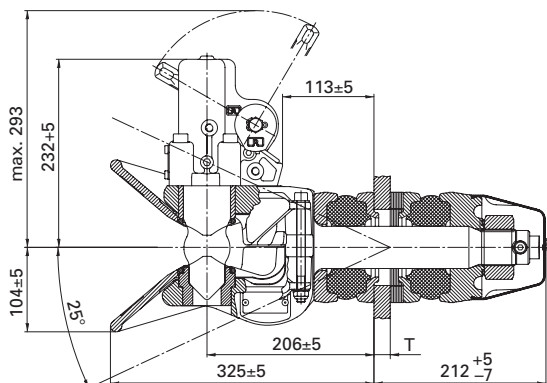
Pos.		ROE	
09a		71161	2
09b		71162	2
10		71155	1
11		44177	1
12		71156	1
13	14, 17	71157	1
14		71158	1
15		56120	1
16		25347	1
17		71211	1

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

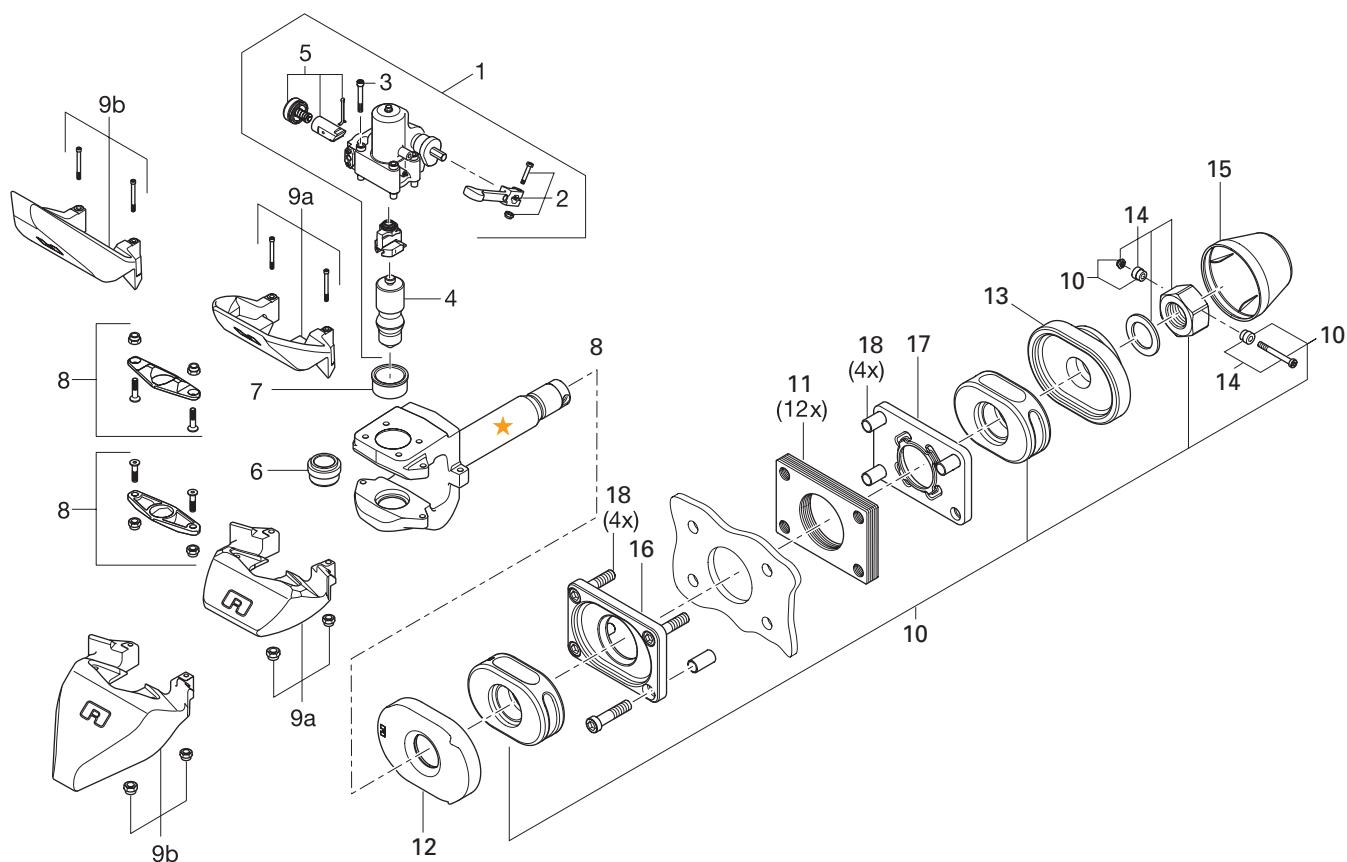


	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160,0	100,0	200,0	140,0	21,0	94,0

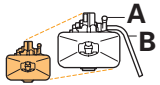
	K (mm)	K (mm)
6	-	max. 35

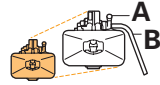
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

		 (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V (kN)	 (kg)	e1		
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

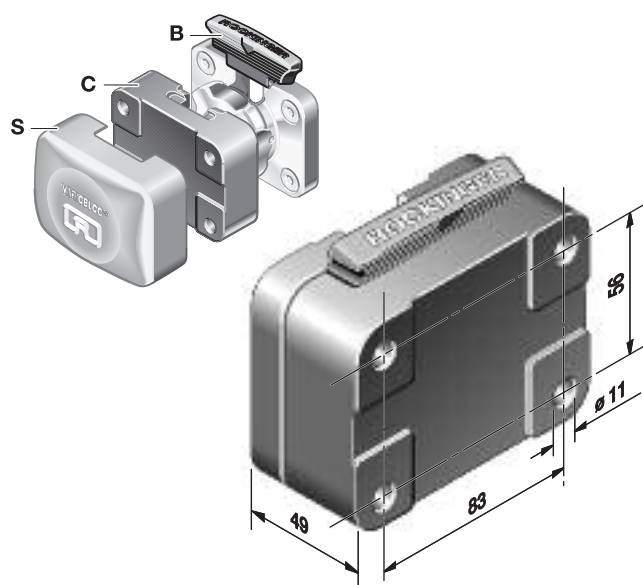


★ kein Ersatzteil
no spare part
non pièce de rechange
no ricambio
no es pieza de recambio

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

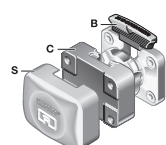
Pos.		ROE	
09a		71161	1
09b		71162	1
10		71266	1
11		15690	1
12		12615	1
13		43480	1
14		56122	1
15		25347	1
16		43478	1
17		43479	1
18		30399	4

RO★100, VARIOBLOC

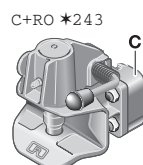


- D** Multifunktionales Wechselsystem für Transporter, Geländewagen, Busse in Verbindung mit Bolzen-, Hakenkuppelung, Kupplungskugel; geeignet für Hecktragesysteme und Arbeitsgeräte.
- GB** Multifunctional alternating system for transporter, cross-country vehicles and buses, in connection with pin hitch, 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.

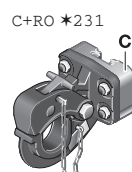
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos



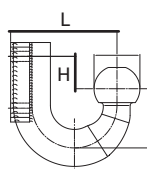
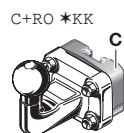
	 (mm)	 D (kN)	 Dc (kN)	 S (kg)	V (kN)	 (kg)	e1
ROE100A01001	83 x 56	30	30	250	12,0	2,7	00-0044
ROE100A02001	85 x 45	30	18	200	9,6	2,7	00-0044



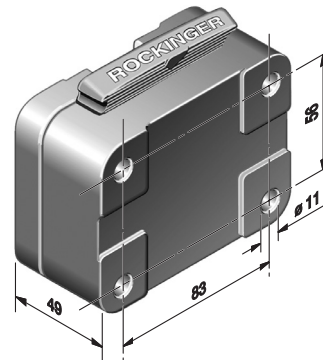
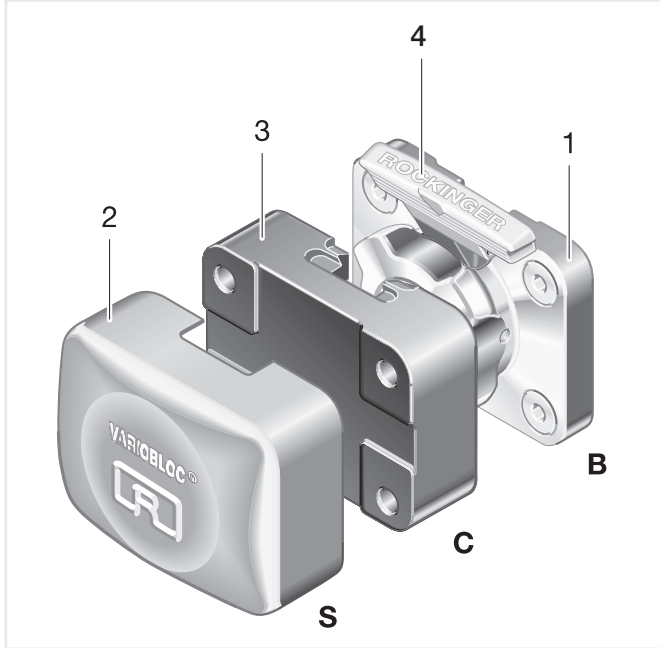
	 (mm)	 D (kN)	 Dc (kN)	 S (kg)	V (kN)	 (kg)	e1
ROE100C01511	83 x 56	30	18	250	12,0	4,1	00-0031
	83 x 56	30	30	250	8,4	4,1	



	 (mm)	 D (kN)	 Dc (kN)	 S (kg)	V (kN)	 (kg)	e1
ROE100C01521	83 x 56	25	22	250	12,0	3,3	

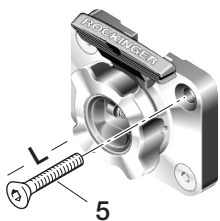


	 (mm)	 D (kN)	 S (kg)	H	L	 (kg)	e1
ROE100C01531	83 x 56	22,5	275	-34	115	3,9	00-2462
ROE100C01541	83 x 56	24,8	300	20	104	3,9	00-2358
ROE100C01551	83 x 56	22,1	270	-90	114	4,2	00-2124
ROE100C01561	83 x 56	19,0	200	-34	133	4,1	00-2462



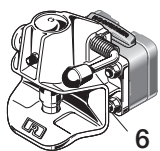
Pos.		ROE	
01	83,0 x 56,0 mm	100B01000	1
01	85,0 x 45,0 mm	100B02000	1
02		25344	1
03	83,0 x 56,0 mm	100C01000	1
03	85,0 x 45,0 mm	100C02000	1
04		70761	1

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



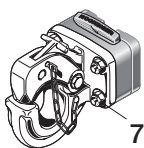
Pos.	L	ROE	
05	40 mm	70759	1
05	50 mm, 30 mm	70756	1
05	55 mm	70570	1
05	60 mm	70558	1
05	110 mm	70754	1
05	130 mm	70805	1

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



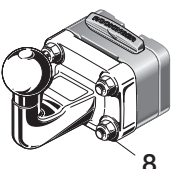
Pos.	L	ROE	
06	50 mm	70755	1

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

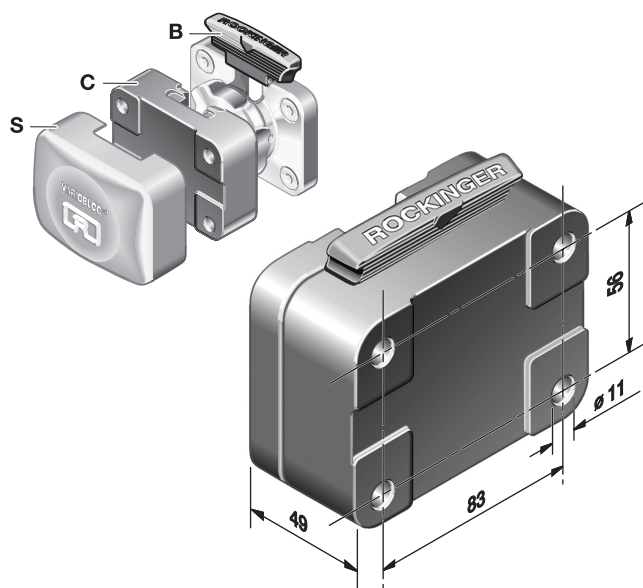
Hakenkupplung 231 auf Wechselplatte • Hook
trailer hitch 231 on the quick-change plate •
Accouplement à crochet 231 sur plaque mobile •
Gancio a uncino 243 su piastra intercambiabile •
Enganche de gancho 243 en placa intermedia



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 Kugelkupplungen von Fremdherstellern

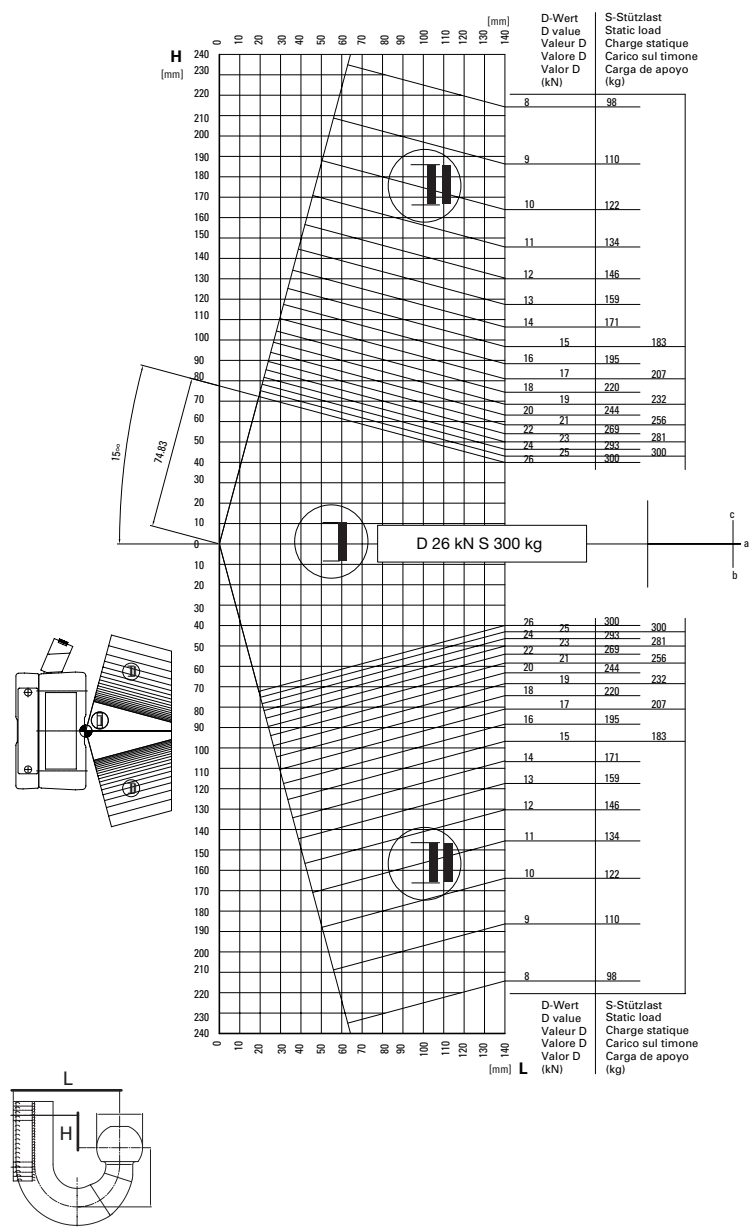
GB In combination with ball hitches from other manufacturers

F Pour les crochets à boule d'autres fabricants

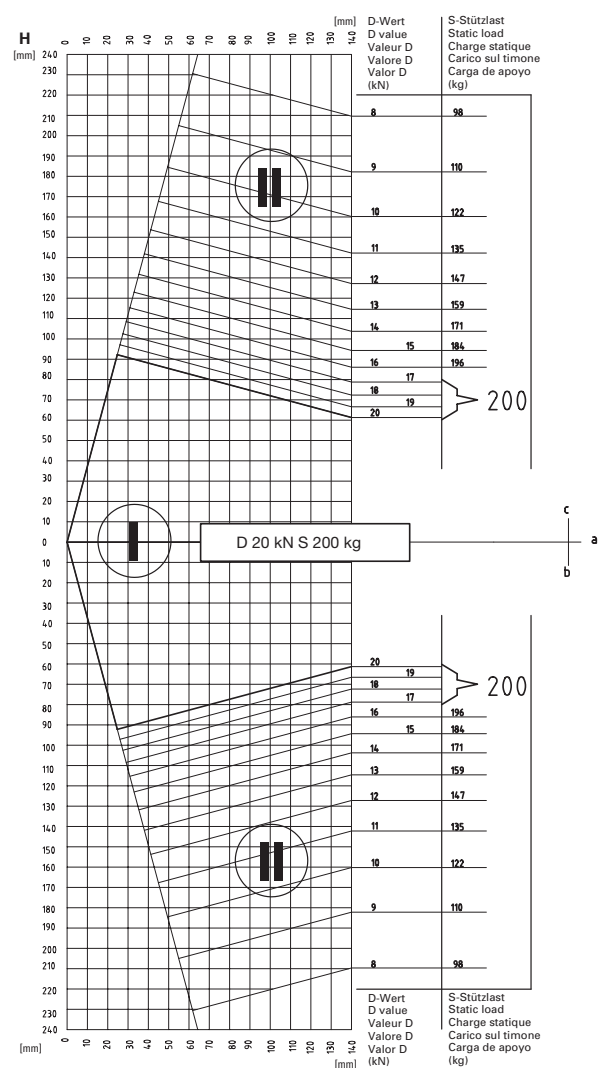
I Assieme a ganci a sfere di altre case produttrici

E En combinaci3n con enganches esf3ricos de fabricantes ajenos

ISO 83 x 56

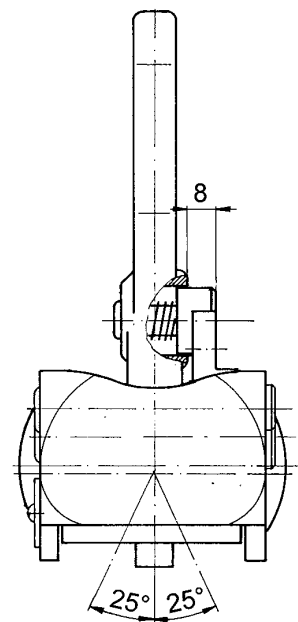
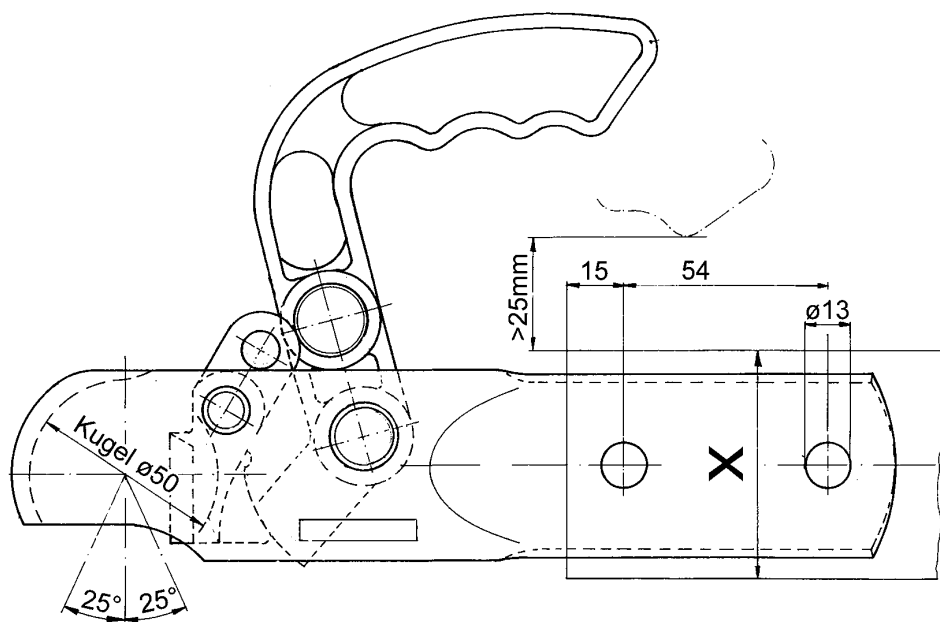
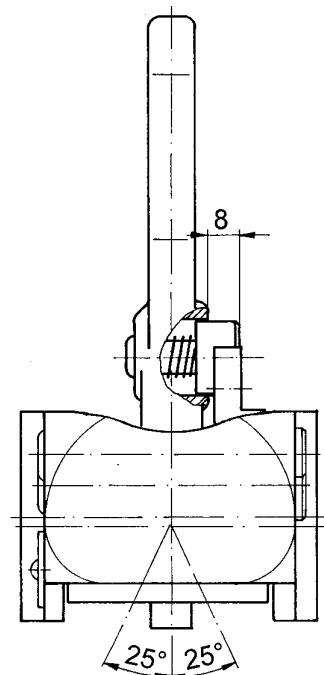
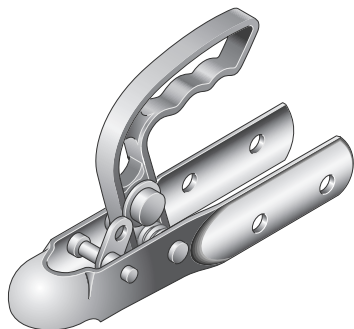


ISO 85 x 45



RO★200

- D** Zugkugelnkupplung 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

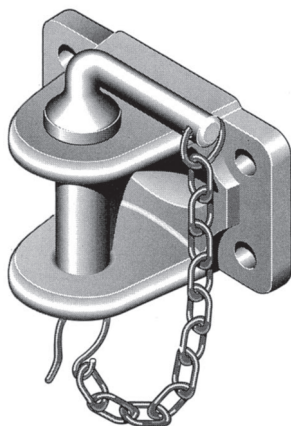


Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

	X (mm)	S (kg)	C (kg)	 ø (mm)	 (kg)	ABG 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.**

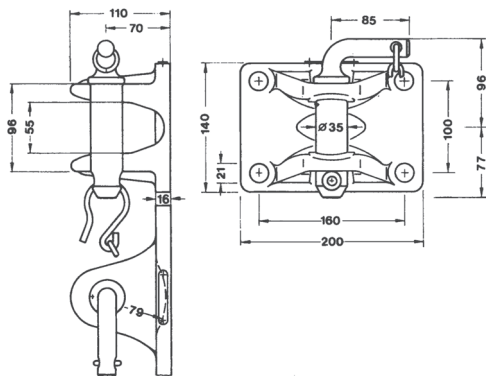
I Avviso ufficiale: I ganci di manovra non sono soggetti ad omologazione. Vengono impiegati limitatamente allo scopo di trainare veicoli non funzionanti e in casi eccezionali anche a scopo di manovra. Non è ammesso il loro impiego per la **marcia con rimorchio.**

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.**

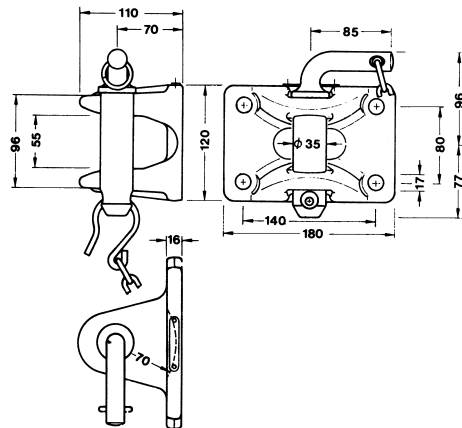
RO★205 / 207 / 208 / 230

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

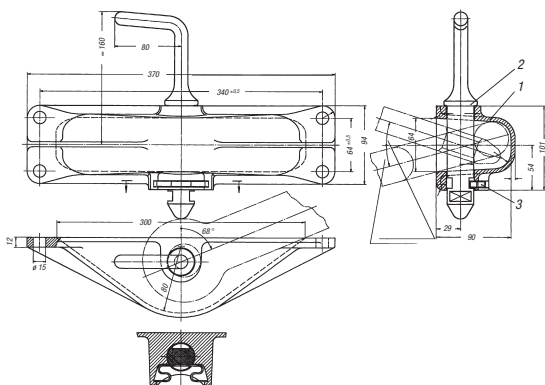
RO★205



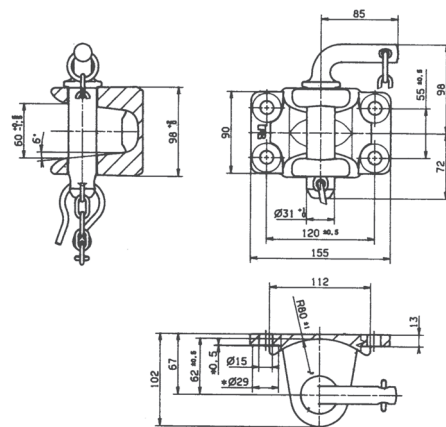
RO★207



RO★208



RO★230

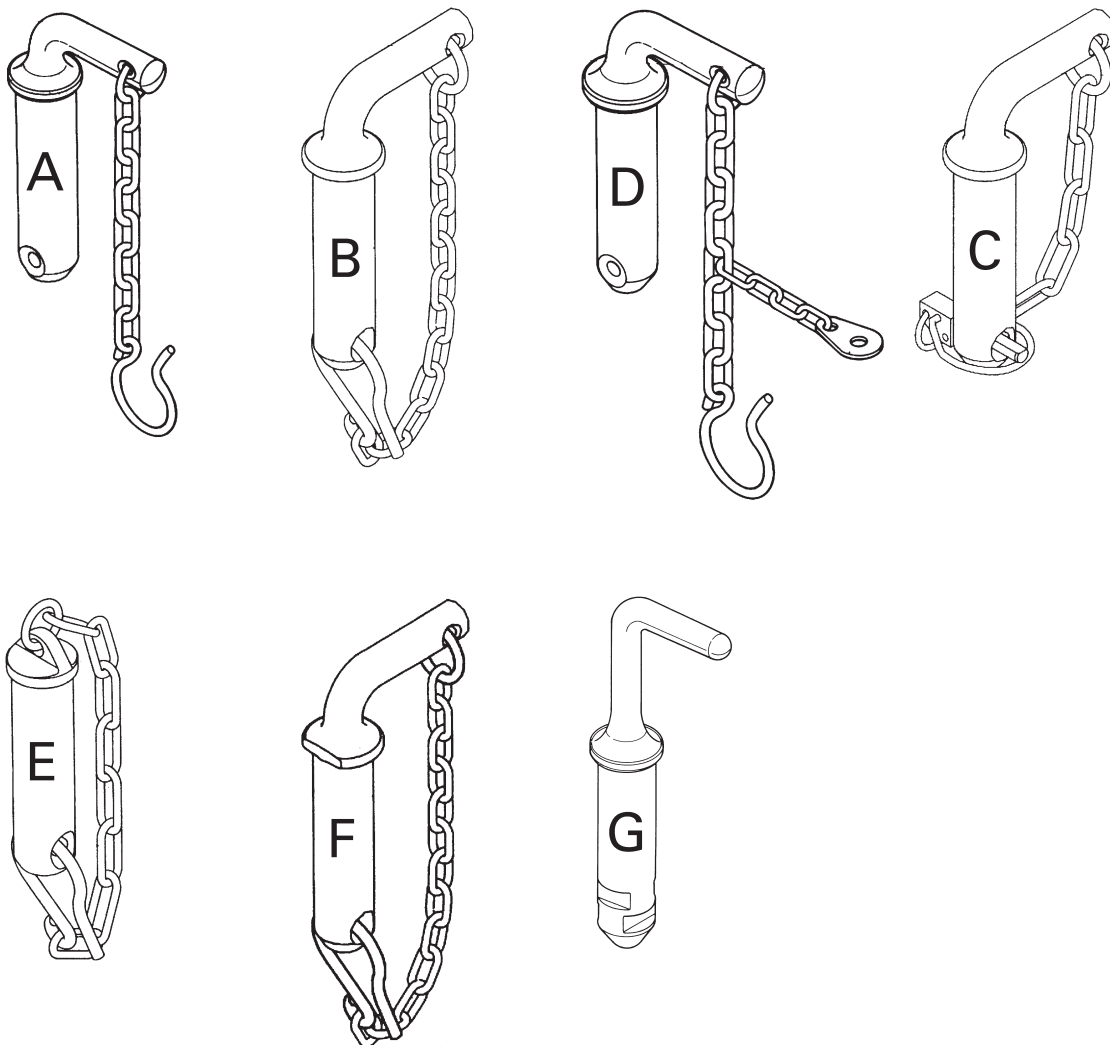


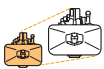
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

	 (mm)	 Pos.	 ø (mm)	 (t)	 (t)	EWG		 (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

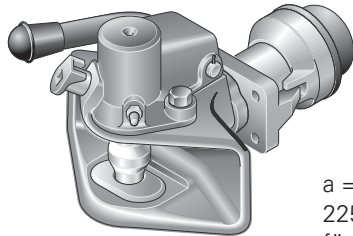
Ersatzteile • Spare parts • Pièces de rechange • Ricambi • Piezas de recambio



		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

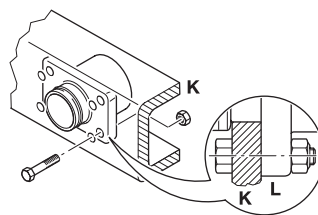
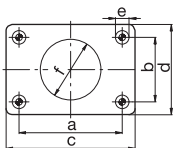
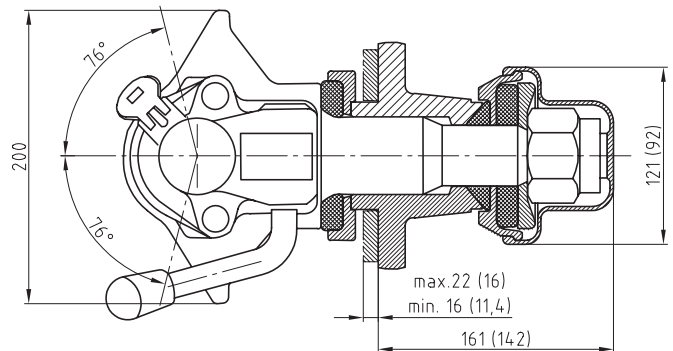
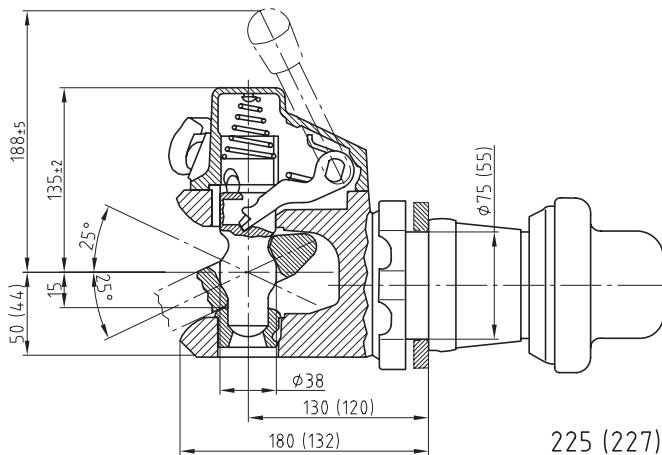
RO★225 / 227 - 40 mm

- 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 occhio 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

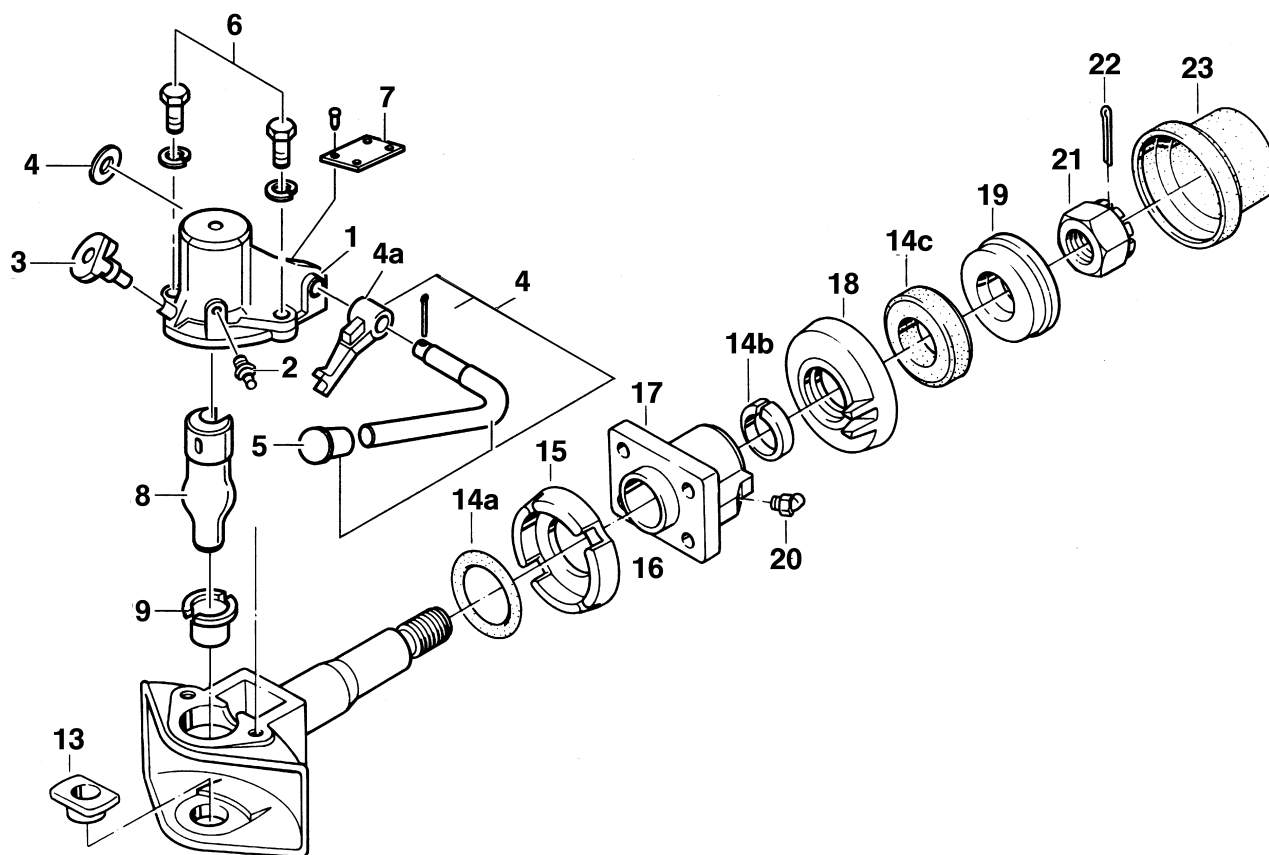


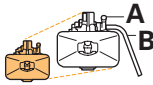
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
225	120,0	55,0	155,0	90,0	15,0	75,0
227	83,0	56,0	110,0	85,0	10,5	55,0

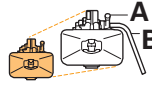
	K (mm)	K (mm)
225	max. 22	max. 22
227	11-16	11-16

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

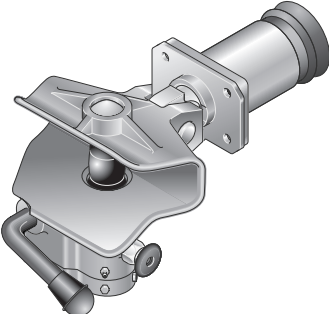
										e1
	C	A	B	D	Dc	S	V	C	(kg)	
RO225G110	A	112	120 x 55	85	68,4	1500	24,0		17,4	00-0050
RO225G110A	A	112	120 x 55	85	68,4	1500		10	17,4	
RO227G110J	C	111	83 x 56	66	66,0	1250	14,0		12,4	00-0049
RO227G110Q	C	111	83 x 56	66	66.0	1250		5	12.4	



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

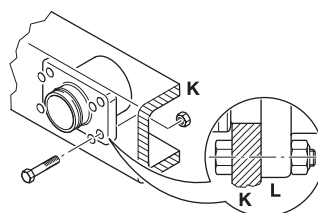
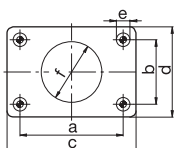
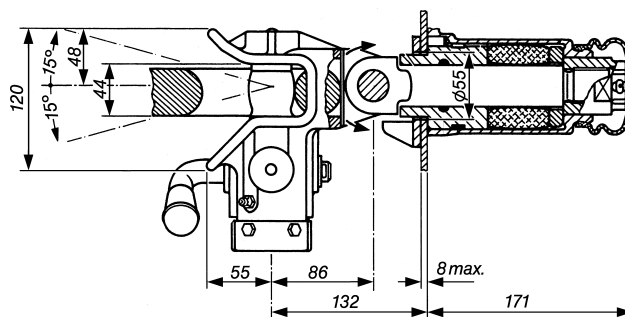
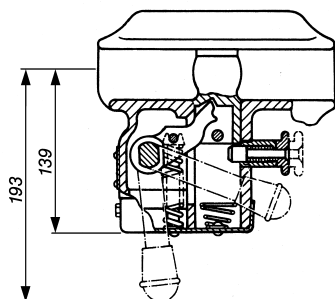
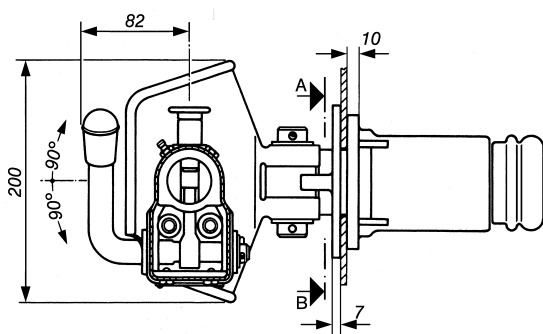
RO★226 - 40 mm / 76 mm

- D** Schlechtweggekupplung
 - 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
- 

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



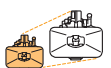
- D** für Fahrzeuge mit Spezialaufbau, z. B. Feuerwehrfahrzeuge, geländegängig, mit Vertikalgelenk
- GB** for vehicles with special body construction, e. g. fire-engines, for cross-country operation, vertical articulating hitch head
- F** pour véhicules à carrosserie spéciale, par ex. véhicules de pompiers, 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

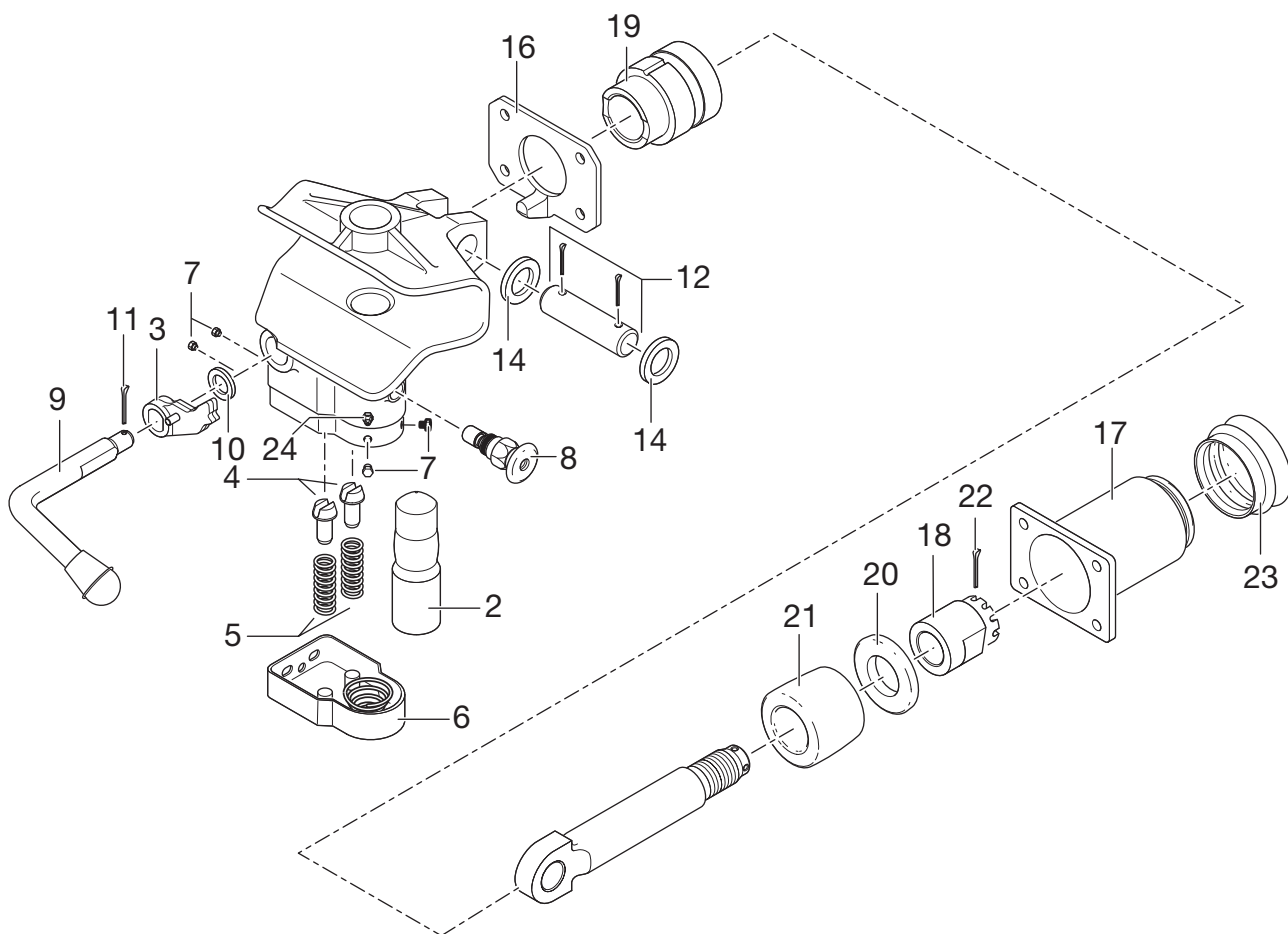


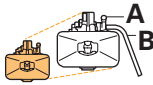
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
210	83,0	56,0	125,0	83,0	10,5	55,0

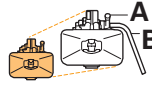
	K (mm)	K (mm)
210	7	7

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

									e1
	B	210	83 x 56 (mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	00-0799
RO226G210A				66	18,5	50	5,0	13,0	

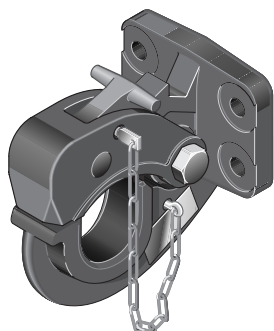


Pos.		ROE	
02		47006	1
03		51017	1
04		13001	2
05		55029	2
06		65005	1
07		70331	1
08		66017	1
09		50083	1
10		33011	1
11		35013	1
12		65090	1

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

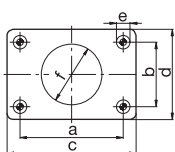
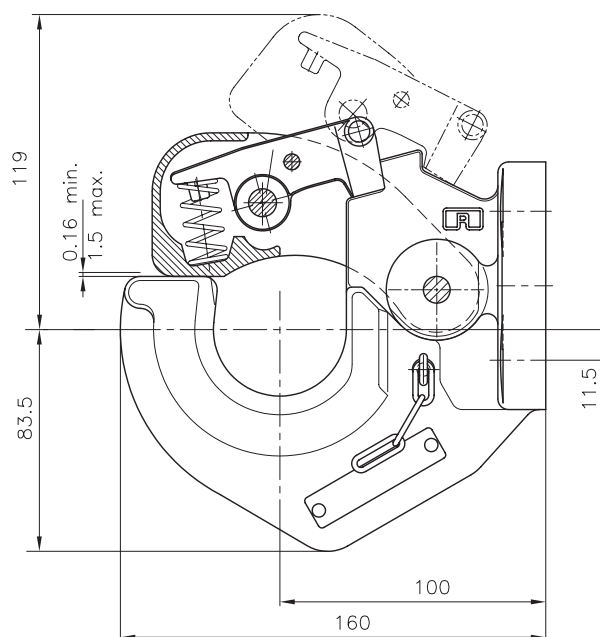
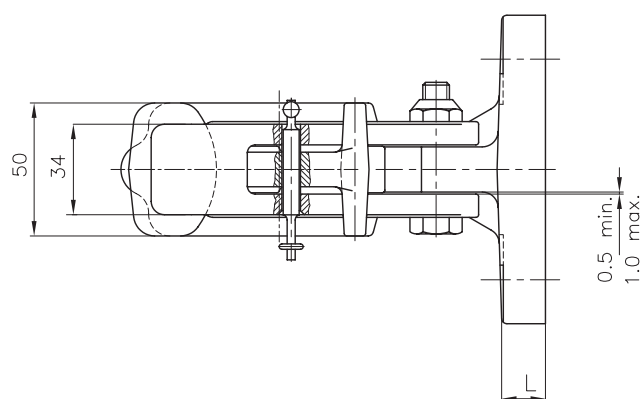
RO★231 - 76 mm / 40 mm

- 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

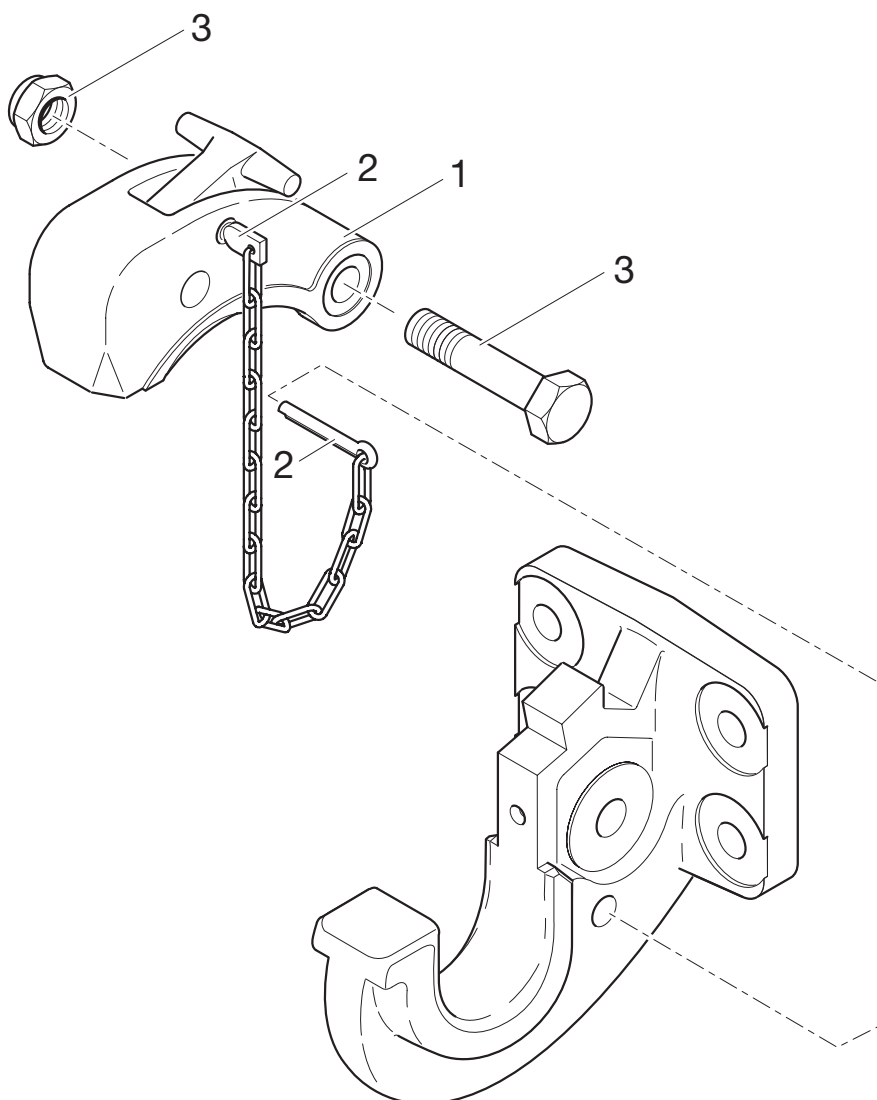
231xx53
a = 40 mm, DIN 74054, 94/20/CE,
für Zugöse CH
for towing eye CH
pour anneau de remorquage CH
per occhio di traino CH
para punta de lanza CH

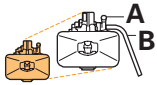


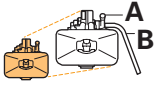
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	L (mm)
05	86,0	45,0	116,0	85,0	13,0	16
11	83,0	56,0	116,0	85,0	10,5	16

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

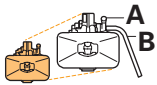
		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)
RO231A05000	05	86 x 45	25	22	250	14,4	5,0
RO231A05090	05	86 x 45	25	22	250	14,4	5,0
RO231A05530	05	86 x 45	20	18	150	9,6	3,6
RO231A11000	11	83 x 56	25	22	250	14,4	5,0
RO231A11530	11	83 x 56	20	18	150	9,6	3,6



Pos.		ROE	
01		70862	1
02		65112	1

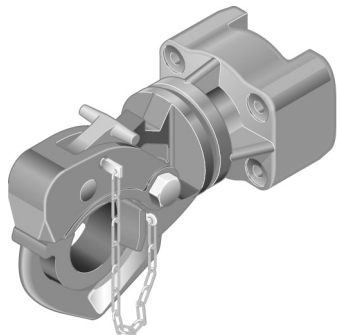
Pos.		ROE	
03		70863	1

Befestigungssätze • 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

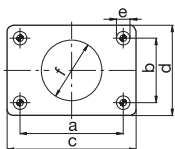
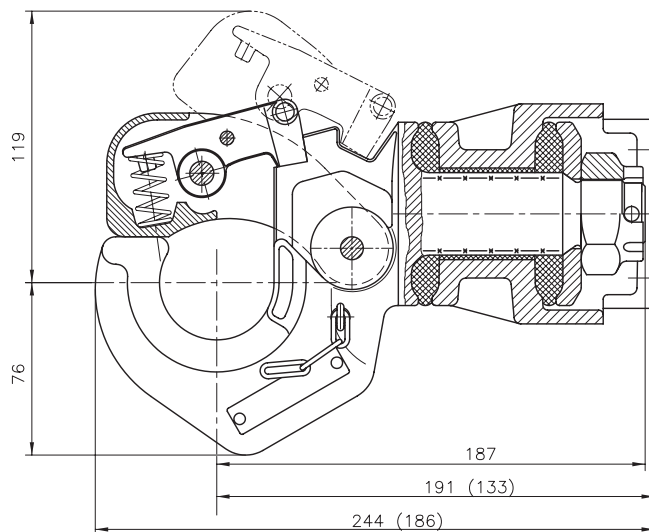
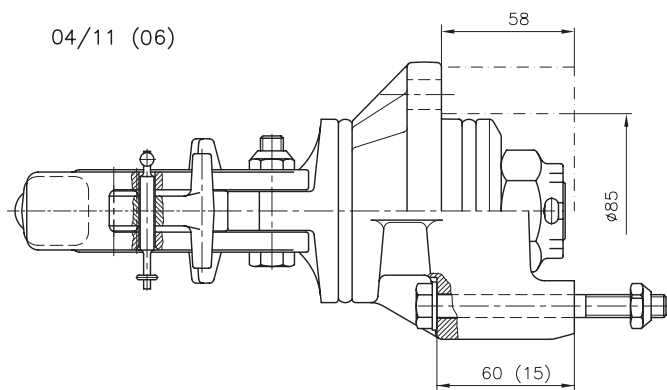
- D** Drehbare Hakenkupplung
- GB** Rotable hook trailer hitch
- F** Accouplement à crochet tournant
- I** Gancio a uncino per motrici leggere
- E** Enganche de gancho para furgonetas



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 occhione di traino CH
para punta de lanza CH

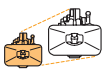


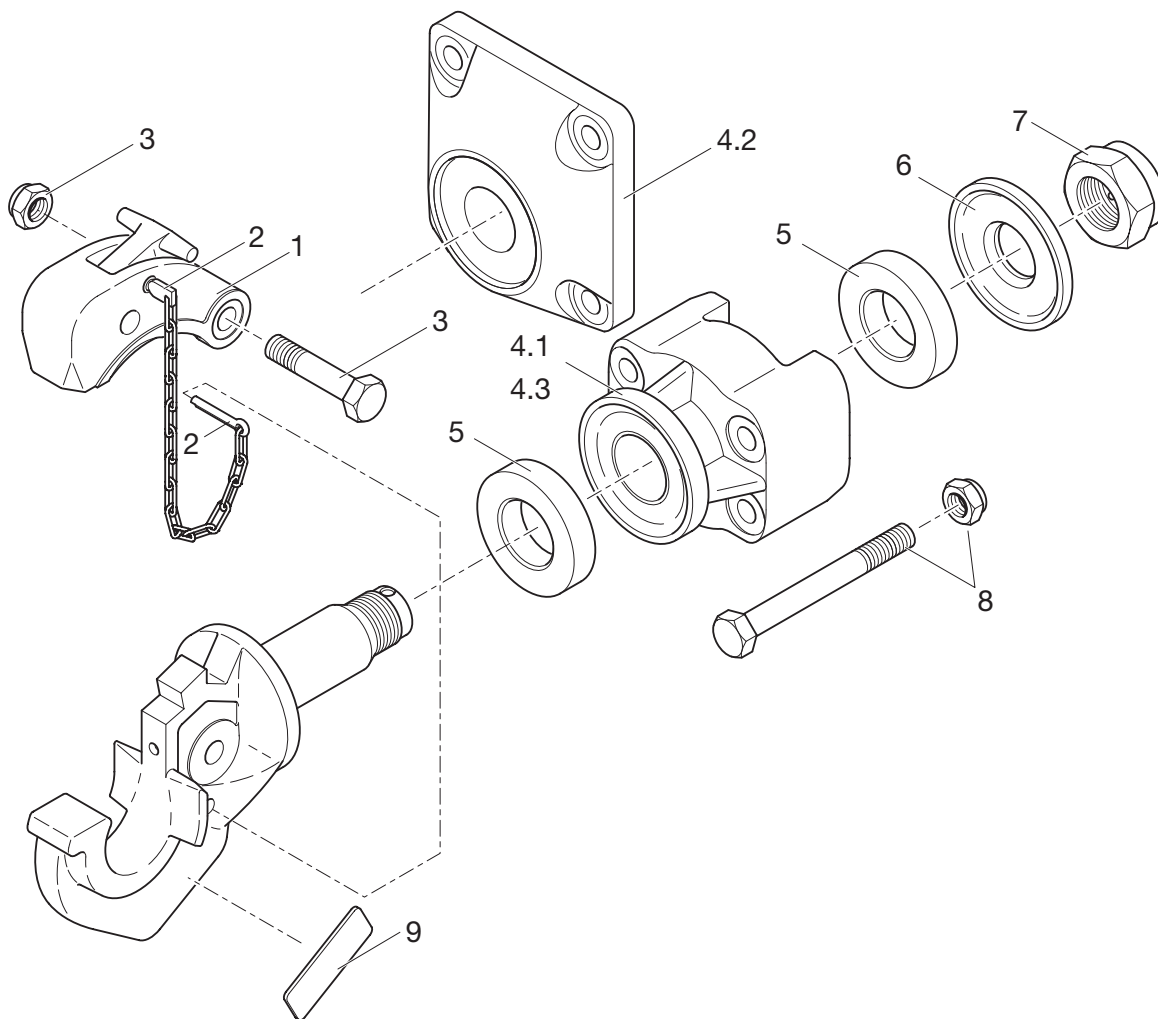
04/11 (06)

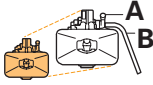


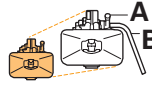
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
04	85,0	45,0	112,0	96,0	13,0
11	83,0	56,0	112,0	96,0	10,5
06	101,6	101,6	130,0	130,0	13,0

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

									
		 (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V (kN)	C (t)	 (kg)	e1
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

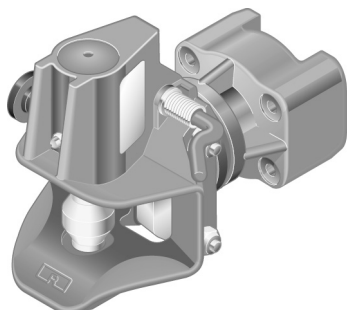


Pos.		ROE	
01		70862	1
02		65112	1
03		70863	1
04.1	R0232A04	70869	1
04.2	R0232A06	70870	1
04.3	R0232A11	70871	1
05		70864	1
06		59262	1

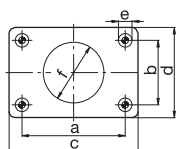
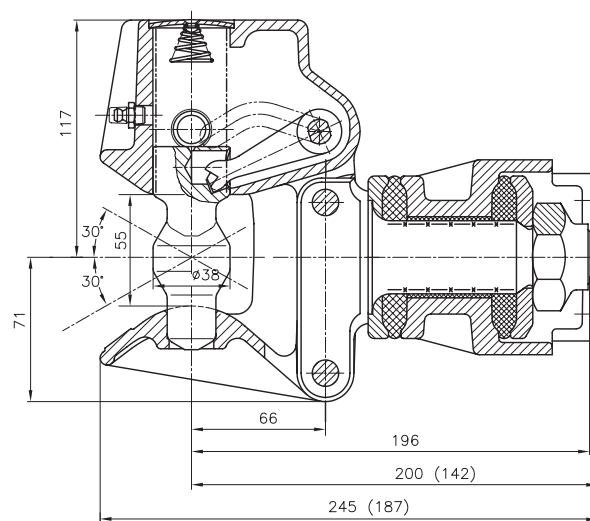
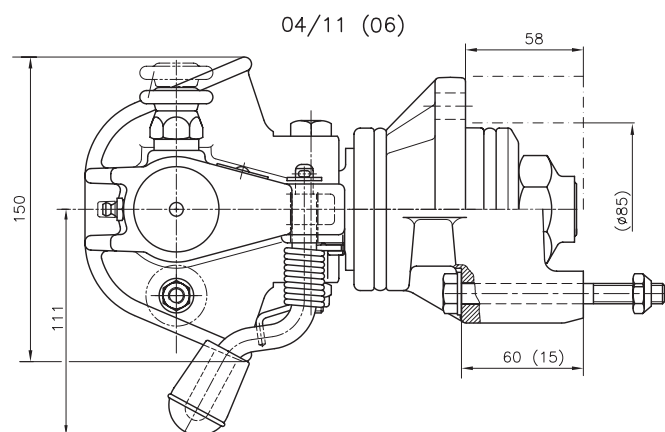
Pos.		ROE	
07		56124	1
08	232A0400x	70879	1
08	232A0453x	70873	1
08	232A0600x	70880	1
08	232A0653x	70874	1
08	232A1100x	70878	1
08	232A1153x	70875	1

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



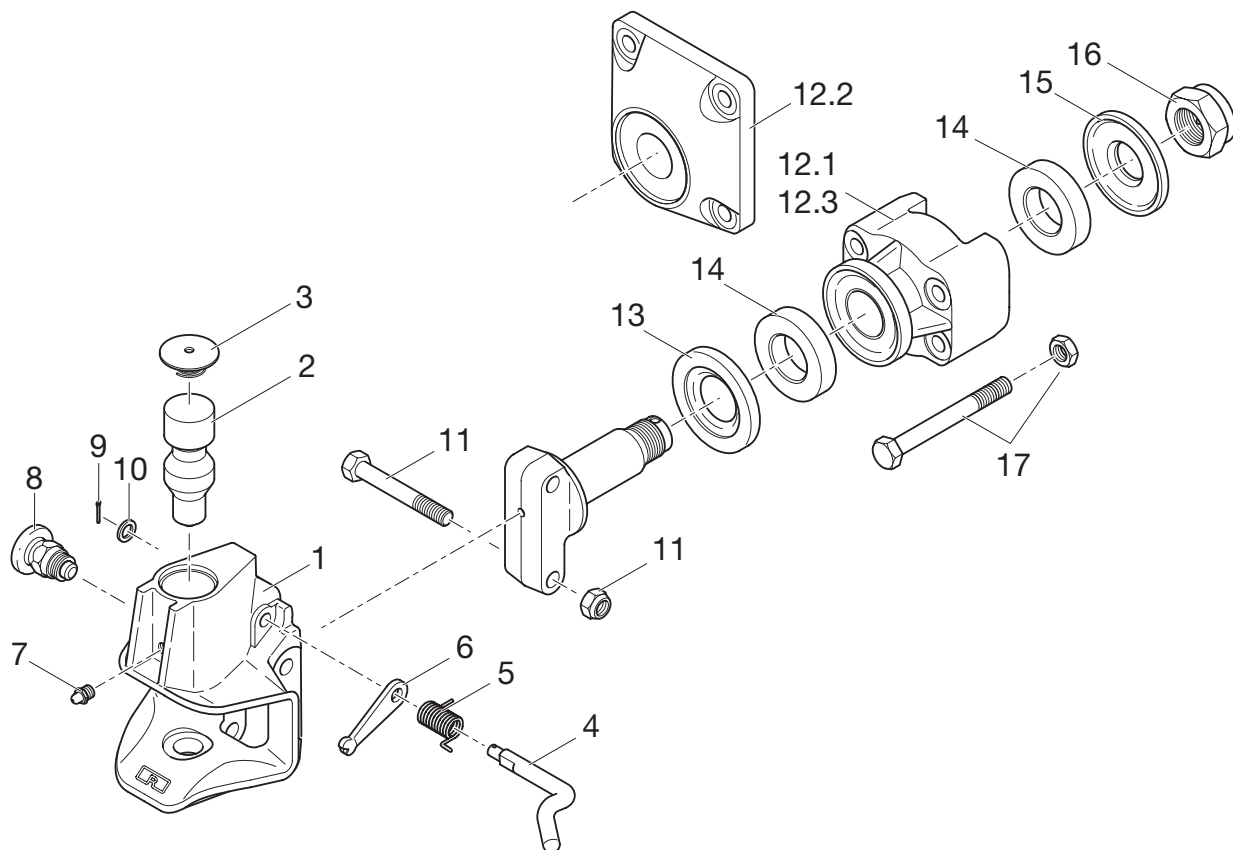
a = 40 mm
DIN 74054
94/20/CE

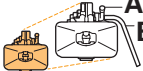


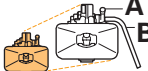
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
04	85,0	45,0	112,0	96,0	13,0
06	101,6	101,6	130,0	130,0	13,0
11	83,0	56,0	112,0	96,0	10,5

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	

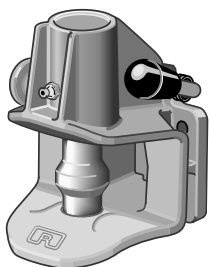


Pos.		ROE	
01	xxB04xx	240B04501	1
01	xxB04530	240B04511	1
01	xxB06x	240B06501	1
01	xxB06530	240B06511	1
01	xxB11xx	240B11501	1
01	xxB11530x	240B11511	1
02		47026	1
03		67411	1
04		70867	1
06	Kit (04, 05, 06, 09, 10)	70927	1
07		65018	1
08		70618	1
11		70868	1

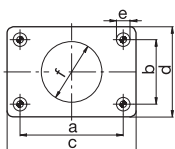
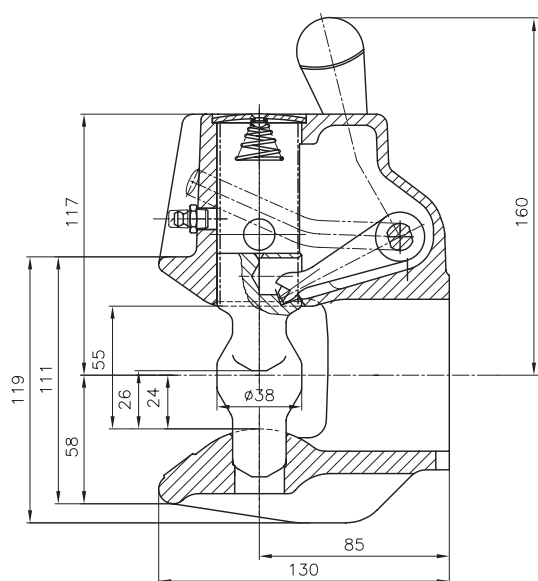
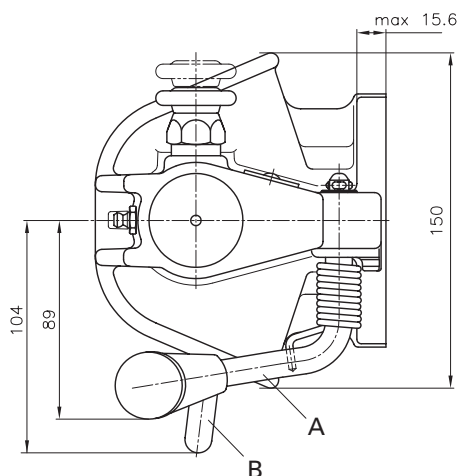
Pos.		ROE	
12.1	85,0 x 45,0 mm	70869	1
12.2	101,6 x 101,6 mm	70870	1
12.3	83,0 x 56,0 mm	70871	1
13		45131	1
14		70872	1
15		59262	1
16		56124	1
17	240B04000	70879	1
17	240B04530	70873	1
17	240B06000	70880	1
17	240B06530	70874	1
17	240B11000	70878	1
17	240B11530	70875	1

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



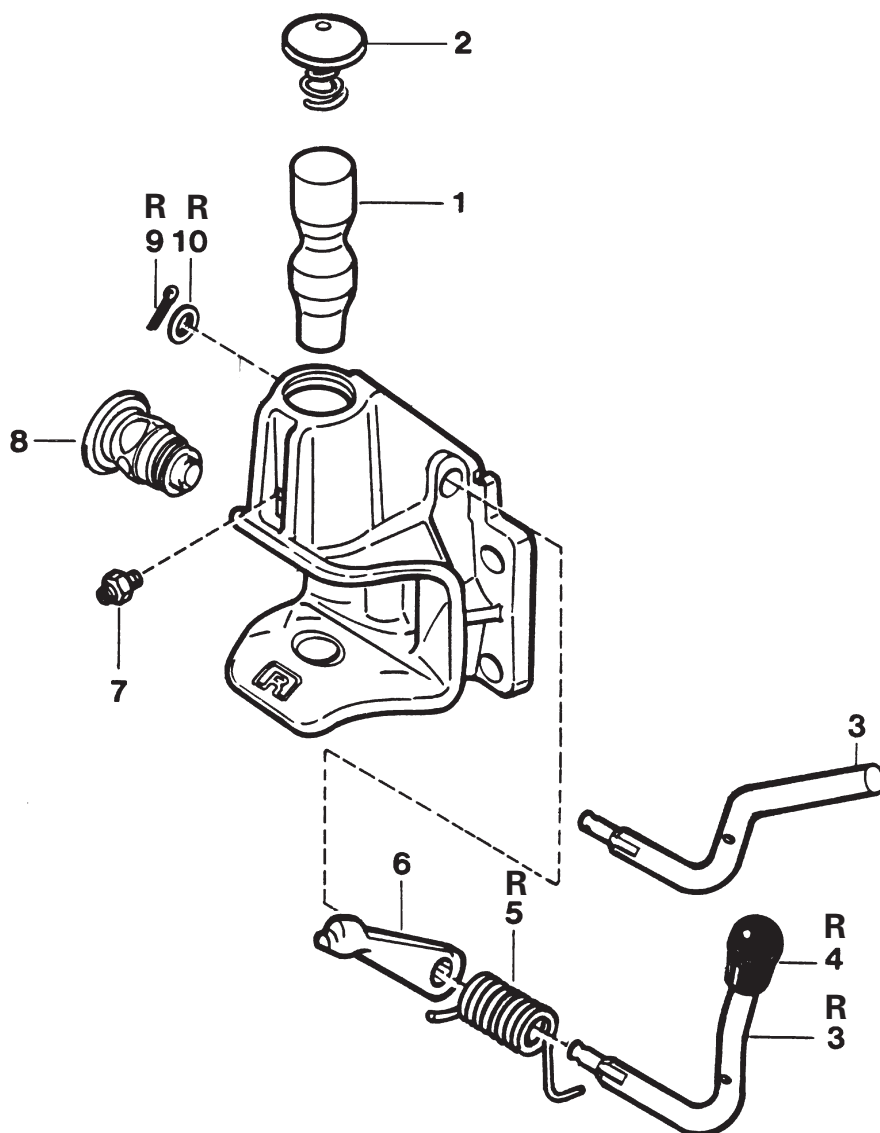
a = 40 mm
DIN 74054
94/20/CE



	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

			 (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V (kN)	 (kg)	e1
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

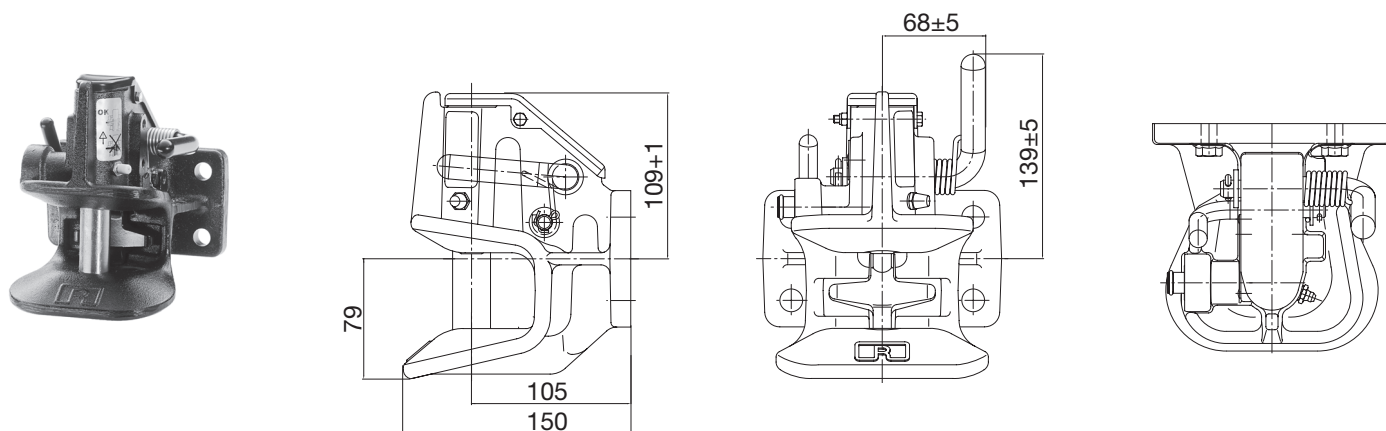


Pos.		ROE	
01		47026	1
02		67411	1
03	ROxxxBxxxx	70354	1
03	ROxxxAxxxx	70355	1

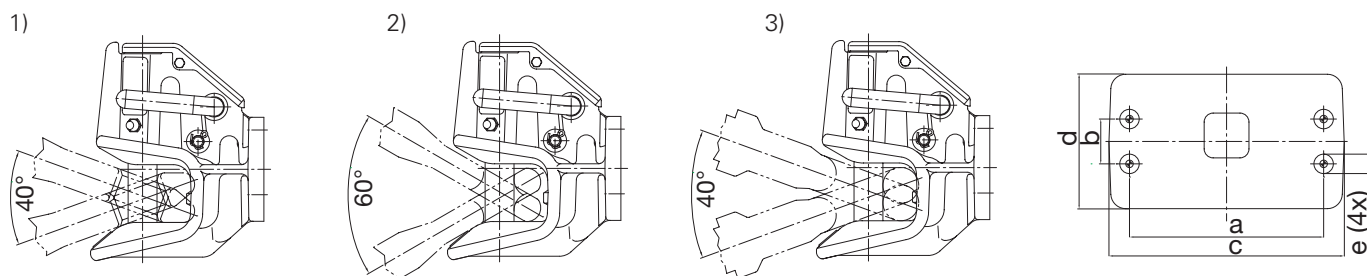
Pos.		ROE	
04		25106	1
06	Kit (03, 04, 05, 09, 10)	70927	1
07		65018	1
08		70618	1

RO★244-2 (EG-Version)

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

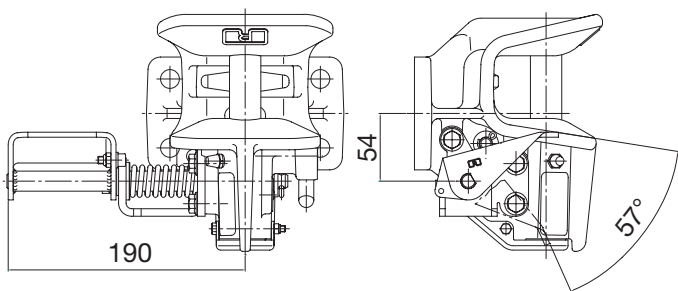


Für Zugöse, for drawbar eye, pour anneaux, per occhioni, para puntas:



RO244Lxxx2:

Mit Fußbetätigung, pedal release, à pédale, con pedale, mando per pedal



	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
07	130,0	30,0	155,0	90,0	13,0
115	83,0	56,0	155,0	90,0	10,5
135	120,0	55,0	155,0	90,0	15,0

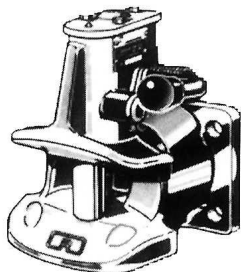
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

										
			(mm)							e1
				D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)		
RO244A07002	A	07	130x30	42	30	250	8,4	6		00-1803
RO244A11002	A	115	83x56	42	30	250	8,4	6		00-1803
RO244A35002	A	135	120x55	42	30	250	8,4	6		00-1803
RO244L07002	-	07	130x30	42	18	250	12	7		00-1803
RO244L35002	-	135	120x55	42	18	250	12	7		00-1803

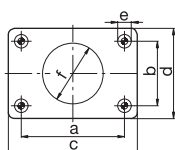
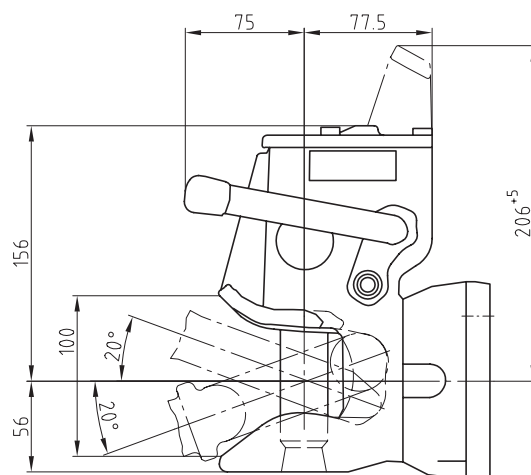
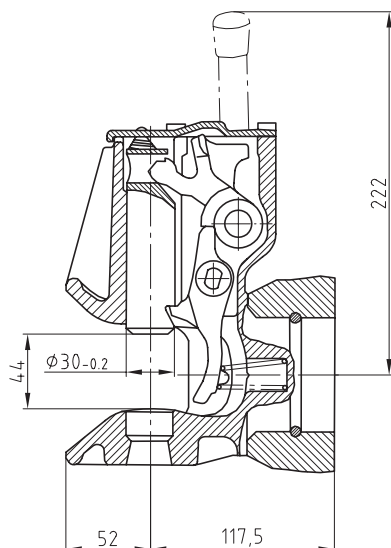
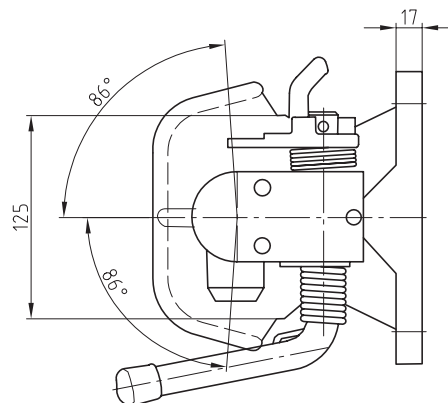
- 1) Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza (DIN 74054)
 2) Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza (DIN 8454)
 3) Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza (CUNA 438/40)

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 occhio di traino, para punta
 de lanza anular:
 a = 40 mm ø 21 mm
 a = 56 mm ø 36 mm



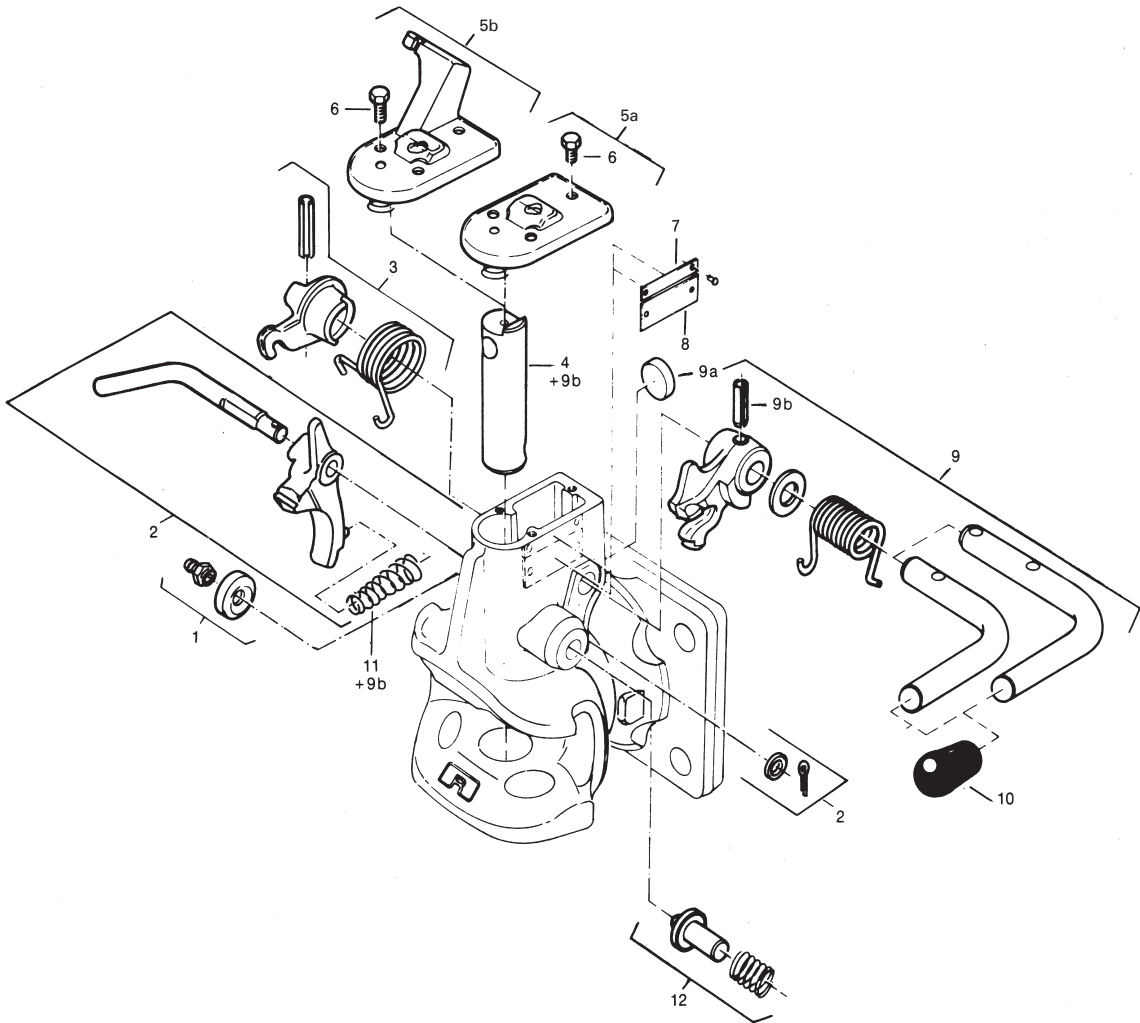
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
145	140,0	80,0	182,0	122,0	17,0

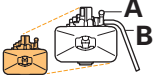
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

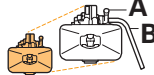
	C	A	B	D	E	F	G	H
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
RO245A45020	A	145	140 x 80	73,6	7 x 3,5	350	3,0	12,6
RO245A45320 ¹	A	145	140 x 80	68	5 x 23	350		16,7
RO245A45500 ²	A	145	140 x 80	73,6	7 x 3,5	350	3,0	12,6

¹ für Zugöse ROE70341, for towing eye ROE70341, pour anneau de remorquage ROE70341, per occhio di traino ROE70341, para punta de lanza ROE70341

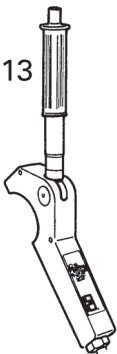
² für FB vorbereitet, prepared for FB, préparé pour FB, pronto per FB, preparado para FB (incl. ROE 70814)



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

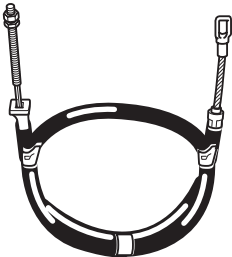
Pos.		ROE	
06		70248	1
09		70244	1
10		25173	1
11		70247	1
12		70242	1

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

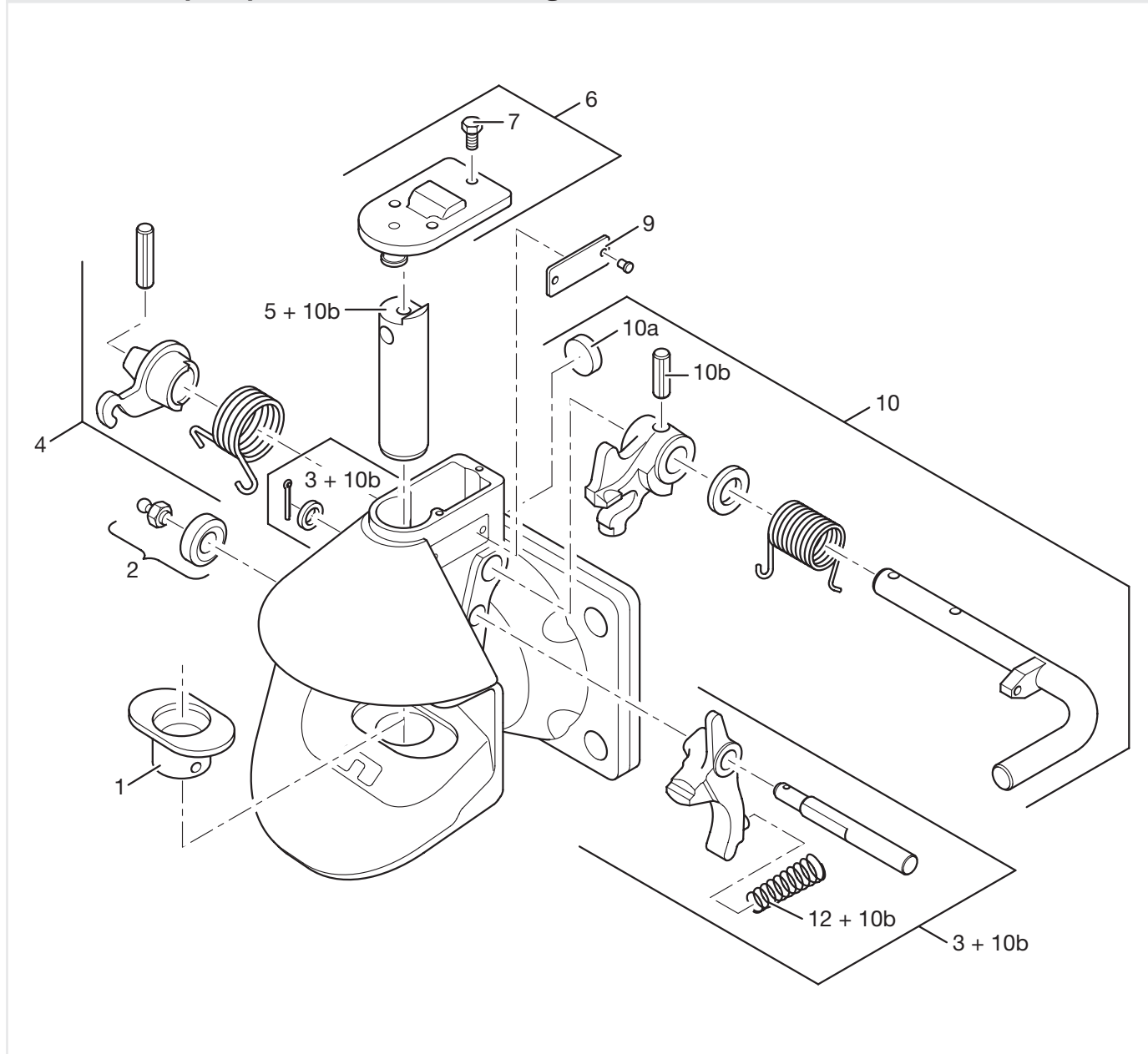
Bowdenzug • Bowden cable •
Câble Bowden • Tirante Bowden •
Cable Bowden

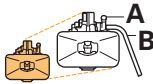


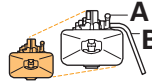
	L
57337	850
57338	950
57339	1000
57340	1250
57341	1500
57342	1600
57343	2000
57344	2500
57345	3000
57346	4000
57347	5000
57348	7000

RO★245 A 45320

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

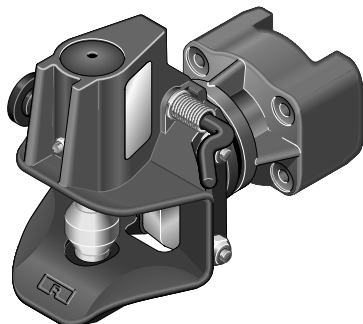


Pos.		ROE	
01		53325	1
02		67593	1
03		71056	1
04		65562	1
05		47073	1

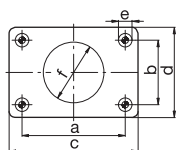
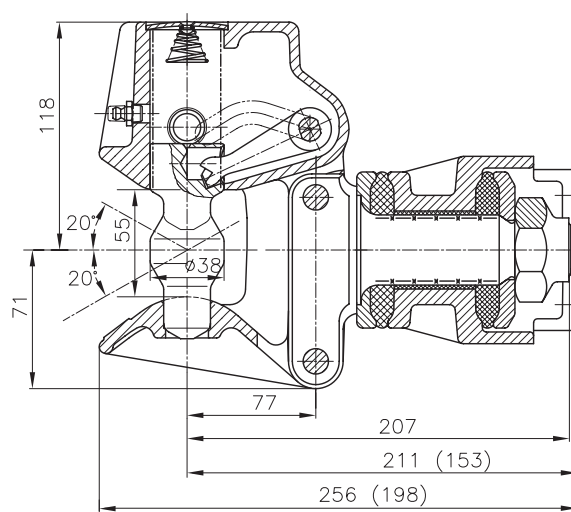
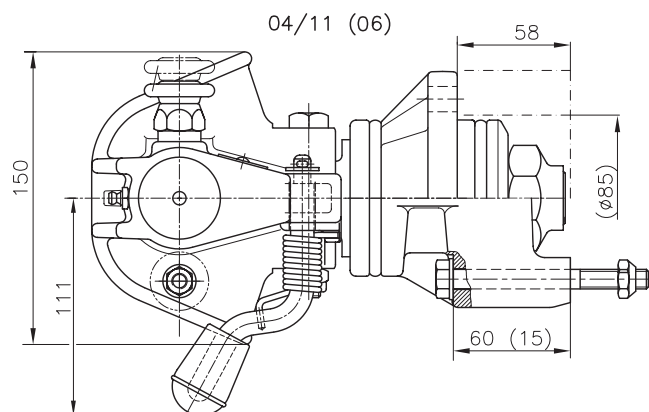
Pos.		ROE	
06		65561	1
07		70248	1
10		71057	1
12		70247	1

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



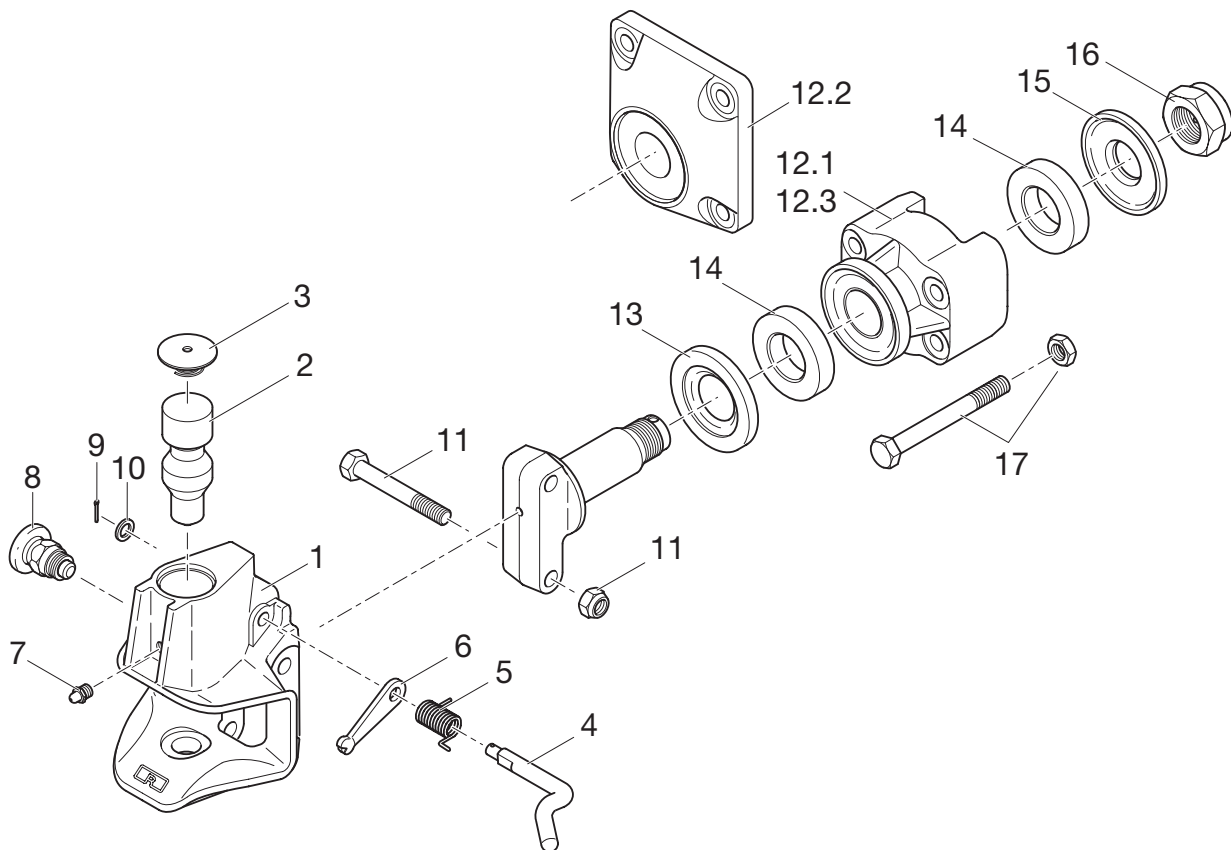
a = 40 mm
 DIN 74054, 94/20/CE
 für Zugöse CH
 for towing eye CH
 pour anneau de remorquage CH
 per occhione di traino CH
 para punta de lanza CH

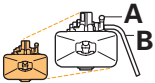


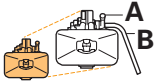
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
04	85,0	45,0	112,0	96,0	13,0
06	101,6	101,6	130,0	130,0	13,0
11	83,0	56,0	112,0	96,0	10,0

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

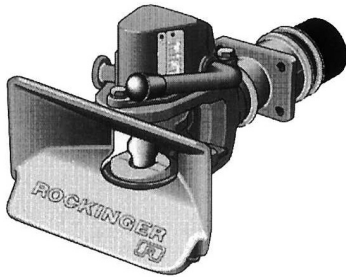


Pos.		ROE	
01	253B04001	253B04500	1
01	253B04531	253B04510	1
01	253B06001	253B06500	1
01	253B06531	253B06510	1
01	253B11001	253B11500	1
01	253B11531	253B11510	1
02		47097	1
03		67411	1
04		70867	1
06	Kit (04, 05, 06, 09, 10)	70926	1
07		65018	1
08		70618	1
11		70868	1

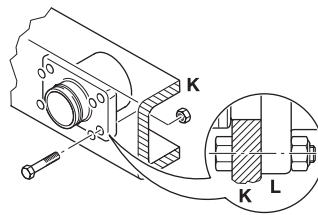
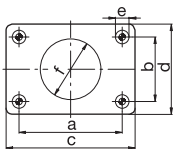
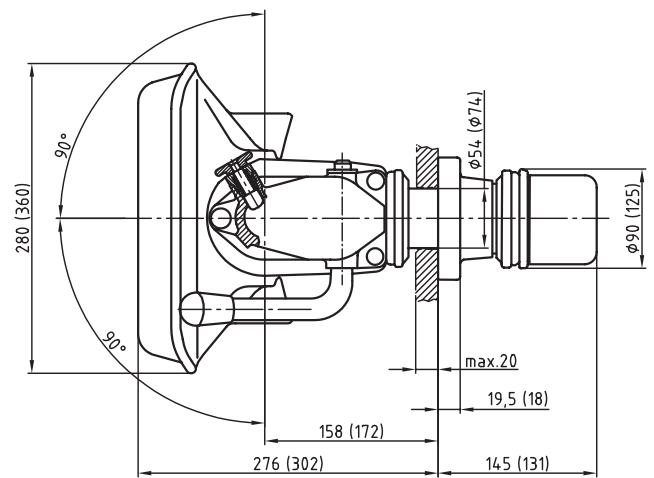
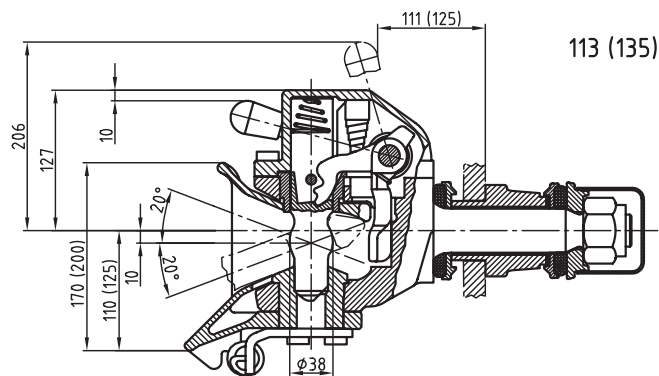
Pos.		ROE	
12.1	85,0 x 45,0 mm	70869	1
12.2	101,6 x 101,6 mm	70870	1
12.3	83,0 x 56,0 mm	70871	1
13		45131	1
14	Kit	70872	1
15		59262	1
16		56124	1
17	253B04000	70879	1
17	253B04530	70873	1
17	253B06000	70880	1
17	253B06530	70874	1
17	253B11000	70878	1
17	253B11530	70875	1

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

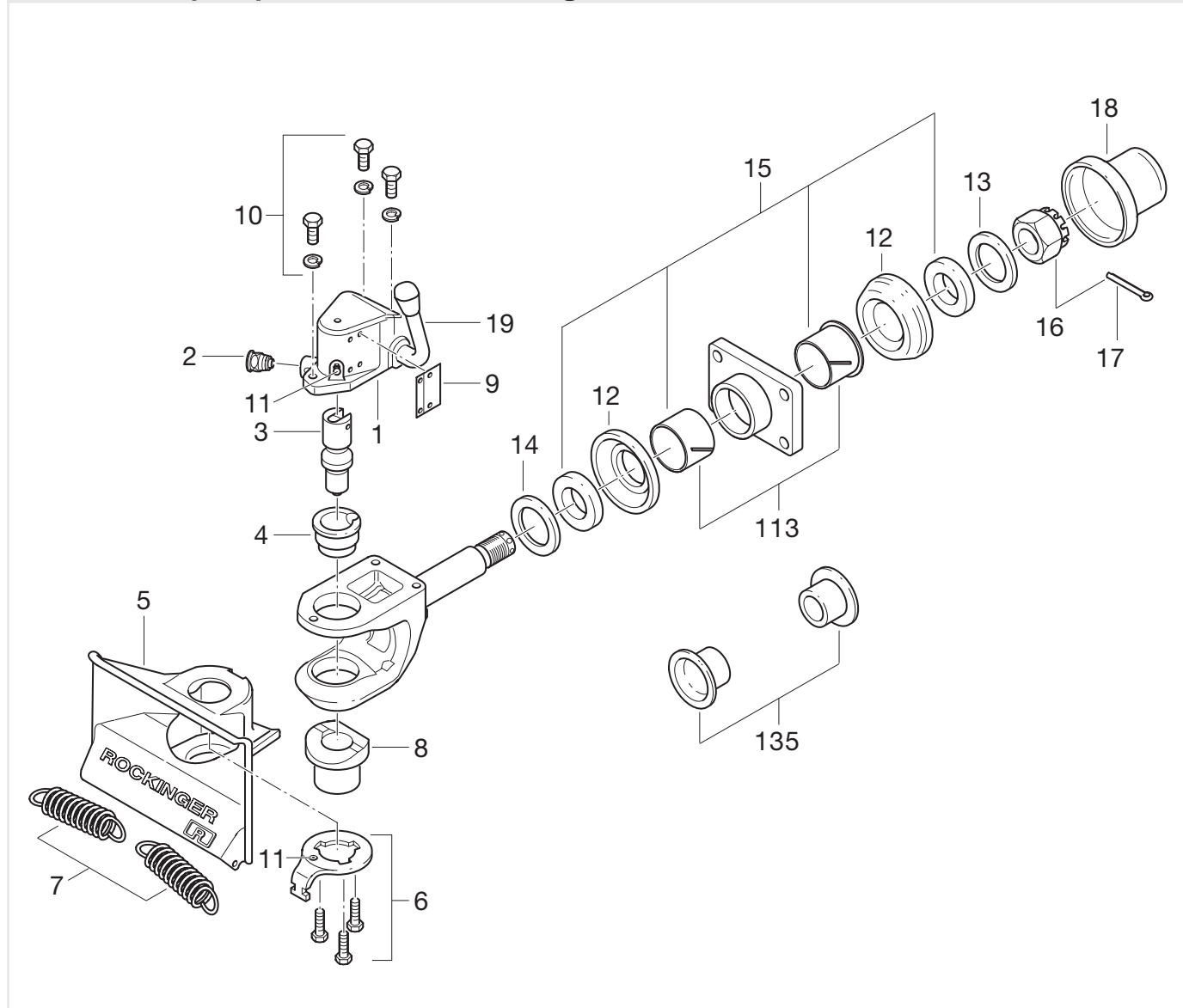


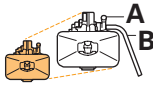
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
113	83,0	56,0	110,0	85,0	10,5	55,0
135	120,0	55,0	155,0	90,0	15,0	74,0

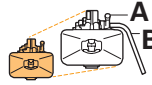
	 K (mm)	 K (mm)
113	20	20
135	20	20

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

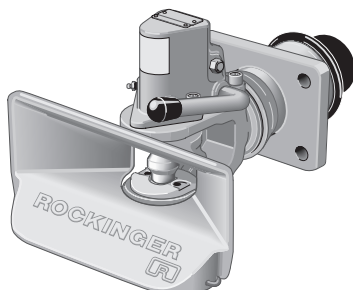


Pos.		ROE	
01	ROxxxAxxxx, 113	66824	1
01	ROxxxAxxxx, 135	70581	1
01	ROxxxBxxxx, 113	66825	1
01	ROxxxBxxxx, 135	70580	1
02	113	70352	1
02	135	70599	1
03		47007	1
04		53041	1
05	113	46074	1
05	135	46105	1
06	113	70228	1
06	135	70726	1
07	113	55008	1
07		55005	1
08		53055	1
10	135	70727	1

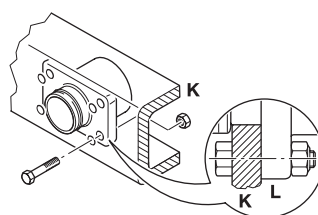
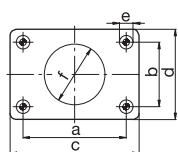
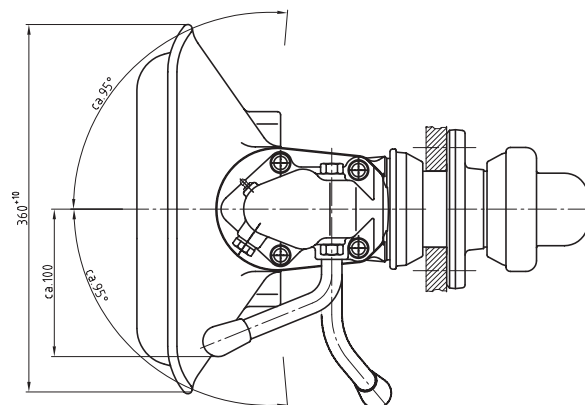
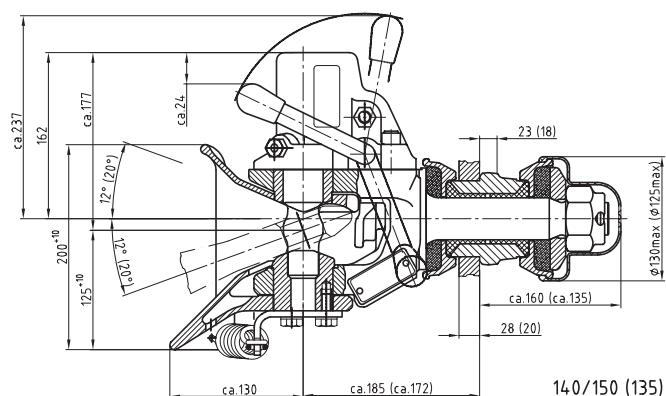
Pos.		ROE	
11		65018	1
11	113	65040	1
11	135	39179	1
12	113	44087	1
12	135	44080	1
13	113	54938	1
13	135	54707	1
14	135	54460	1
15	113	67855	1
15	135	70343	1
16		56051	1
17		35031	1
18	113	25217	1
18	135	25076	1
19	ROxxxAxxxx	50070	1
19	ROxxxBxxxx	50064	1

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



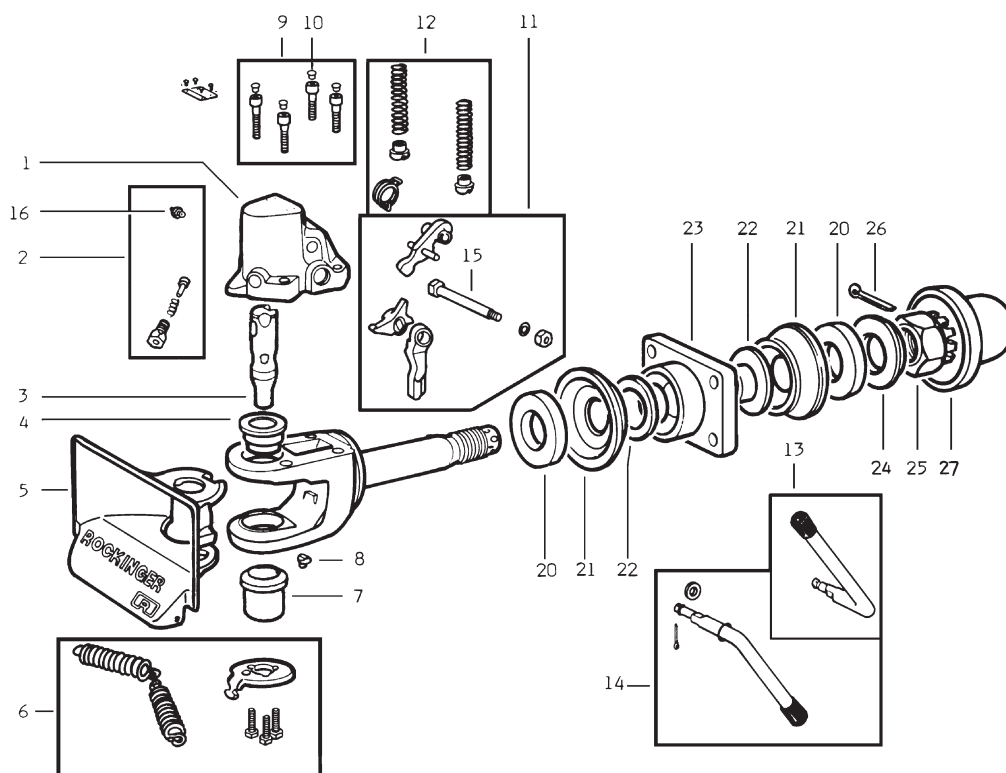
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
135	120,0	55,0	155,0	90,0	15,0	74,0
140	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

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

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

			(mm)	D (kN)	S (kg)	C (t)	(kg)
RO263A4602	A	145	140 x 80	100	950	9,0	29,6
RO263A5153	A	150	160 x 100	120	1000	9,5	31,2
RO263A5153	A	150	160 x 100	168			31,2
RO263G135S	A	135	120 x 55	70	700	6,5	25,2
RO263G140S	A	140	140 x 80	95	900	9,0	29,6
RO263G150S	A	150	160 x 100	120	950	9,5	31,2

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



Pos.		ROE	
01	ROxxxAxxxx ¹	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

Pos.		ROE	
14	ROxxxBxxxx	50184	1
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

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

Pos.	ROE	
08, 20, 22, 26	67858	135
08, 20, 22, 26	67859	140, 150

¹ 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.

¹ 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.

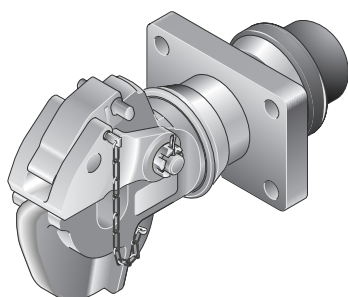
¹ pour ces pièces détachées, la tige de contrôle est livrée plus longue que nécessaire. Il faut par conséquent la rectifier au niveau avec la gaine de contrôle après vissage de l'unité automatique, le crochet d'attelage étant verrouillé.

¹ 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.

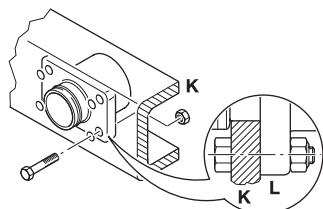
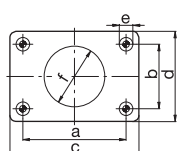
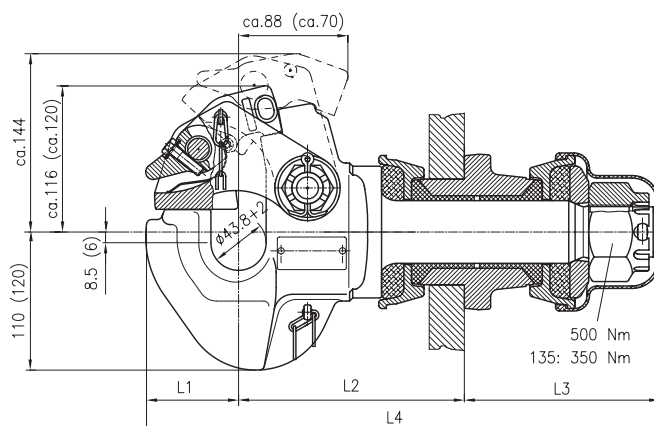
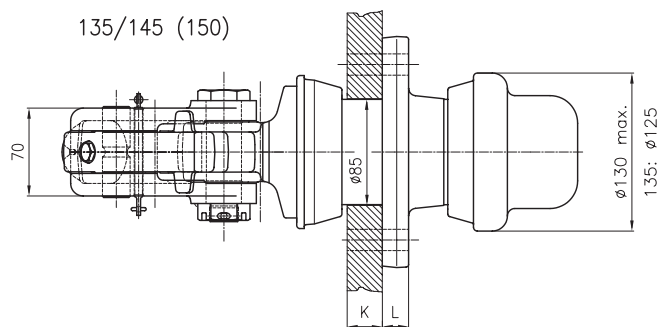
¹ con estas piezas de recambio se suministra el pasador de control con sobrelongitud. Por ello, se deberá rectificar en plano con el casquillo de control una vez atornillada la unidad automática con el enganche cerrado.

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



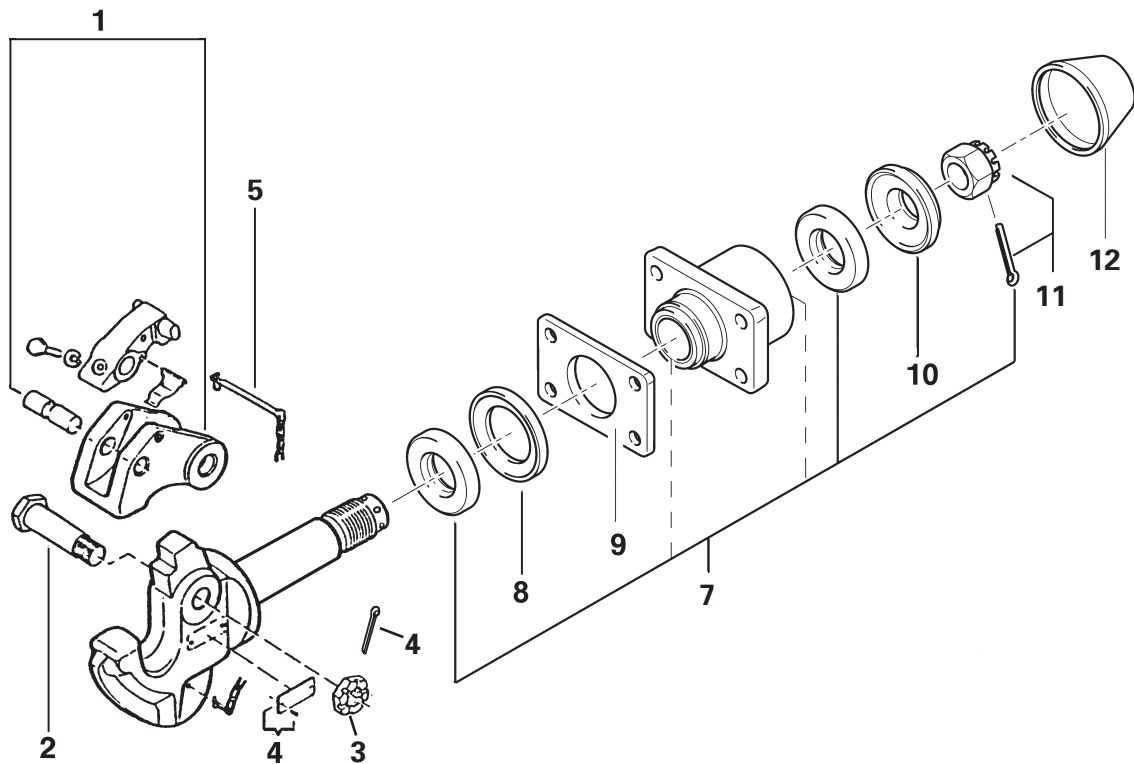
	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
135	74	167	131	372
145	88	180	156	410
150	88	180	156	424

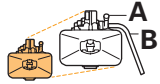
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
135	120,0	55,0	155,0	90,0	15,0	74,0
145	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

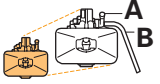
	K (mm)	K (mm)
135	20	20
145	28	28
150	28	28

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

		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	C (t)	R (t)	(kg)
RO283A35001	135	120 x 55	70	42,5	800	15,6	6,5	16	17,7
RO283A45000	145	140 x 80	95	54,0	1000	21,6	9,0	30	22,7
RO283A50000	150	160 x 100	160	54,0	1500	21,6	9,0	40	31,0
RO283A50090	150	160 x 100	160	54,0	1500	21,6	9,0	40	31,0

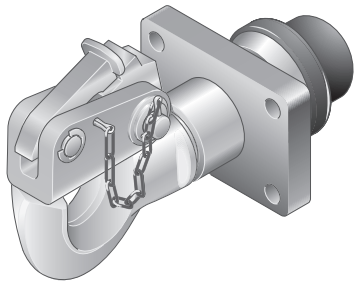


Pos.		ROE	
01	135, 145	66393	1
01	150	66324	1
01	150	70932	1
02	135, 145	52036	1
02	150	52037	1
03		56030	1
04		35024	1
05		71606	1
05	283A50090	70285	1
07	135	70343	1
07	145, 150	70344	1

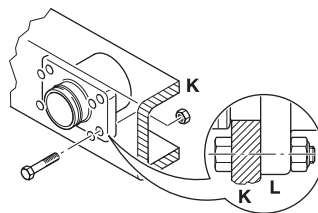
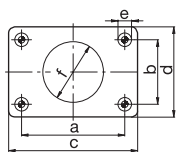
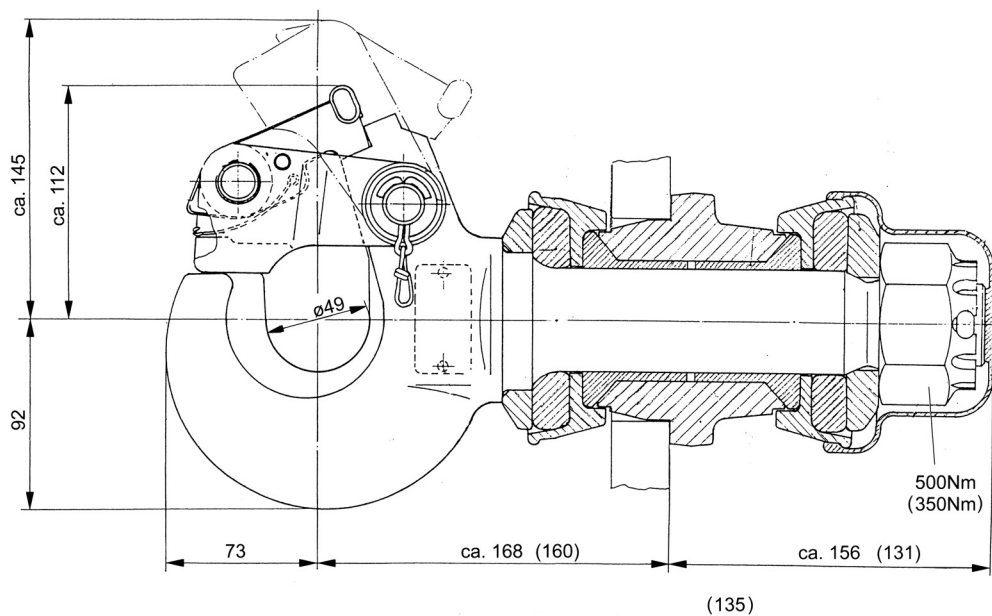
Pos.		ROE	
08	135	44080	2
08	145, 150	44079	2
09	135	43242	1
09	145	43235	1
09	150	43236	1
10	135	54707	1
10	145, 150	54680	1
11	135	56051	1
11	145, 150	56049	1
12	135	25076	1
12	145, 150	25072	1

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



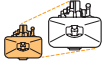
a = 76 mm
VG 74059
NATO

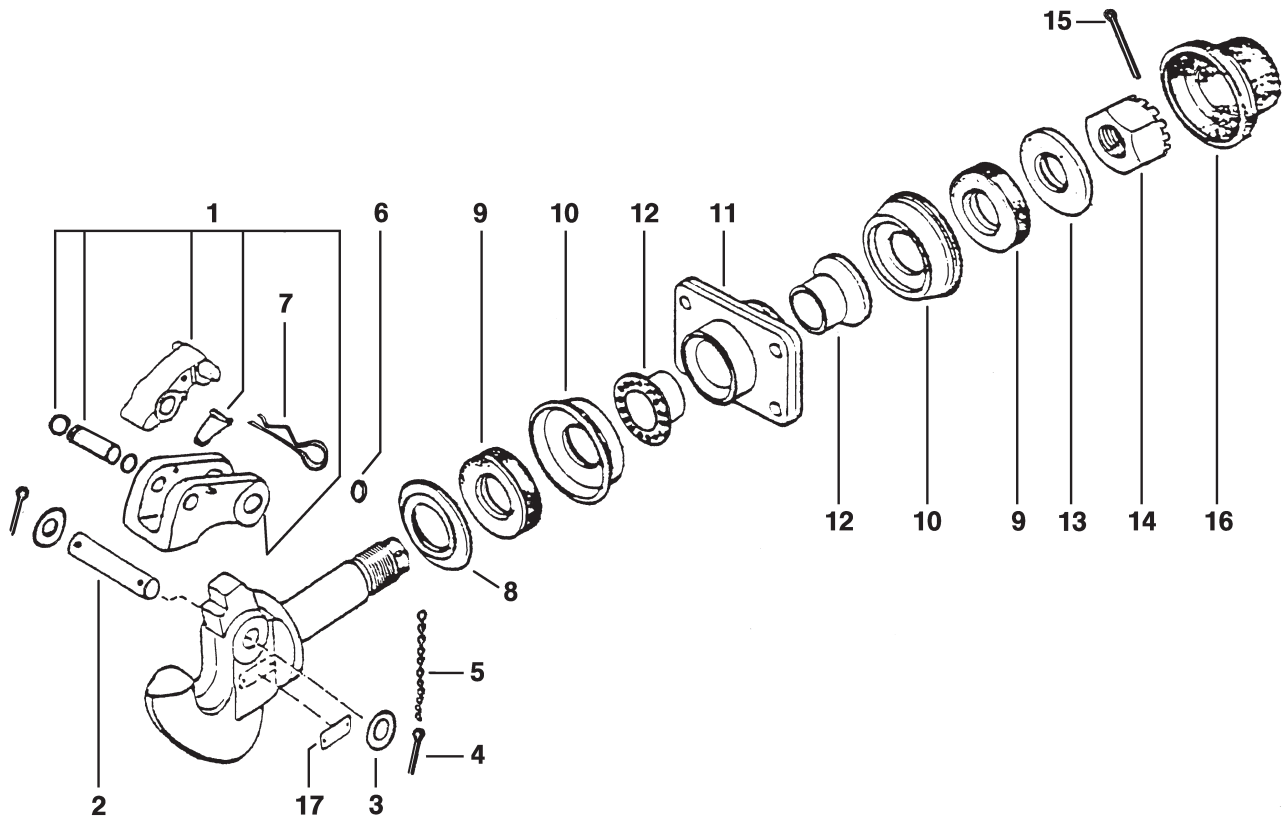


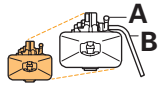
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
135	120,0	55,0	155,0	90,0	15,0	74,0
145	140,0	80,0	180,0	120,0	17,0	84,0

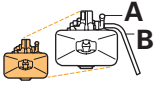
	K (mm)	K (mm)
135	20	20
145	28	28

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

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

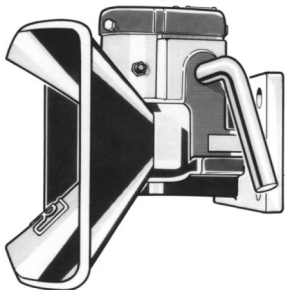


Pos.		ROE	
01		401300	1
02		423408	1
03		400902	2
04		400903	2
05		408103	1
06		400904	1
07		400905	1
08	135	401002	1
10	135	44080	2

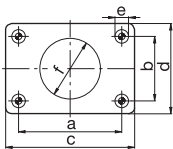
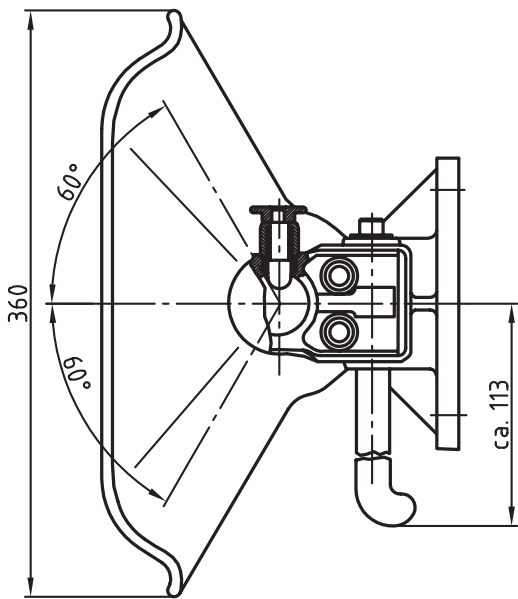
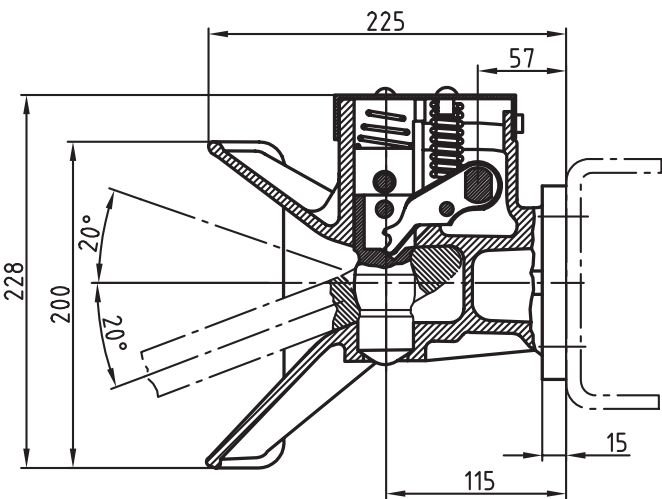
Pos.		ROE	
11	135	43242	1
13	135	54707	1
14	135	56051	1
15	135	35031	1
16	135	25076	1
Kit	09, 12, 15 (135)	67472	1
Kit	09, 12, 15 (145)	67471	1

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

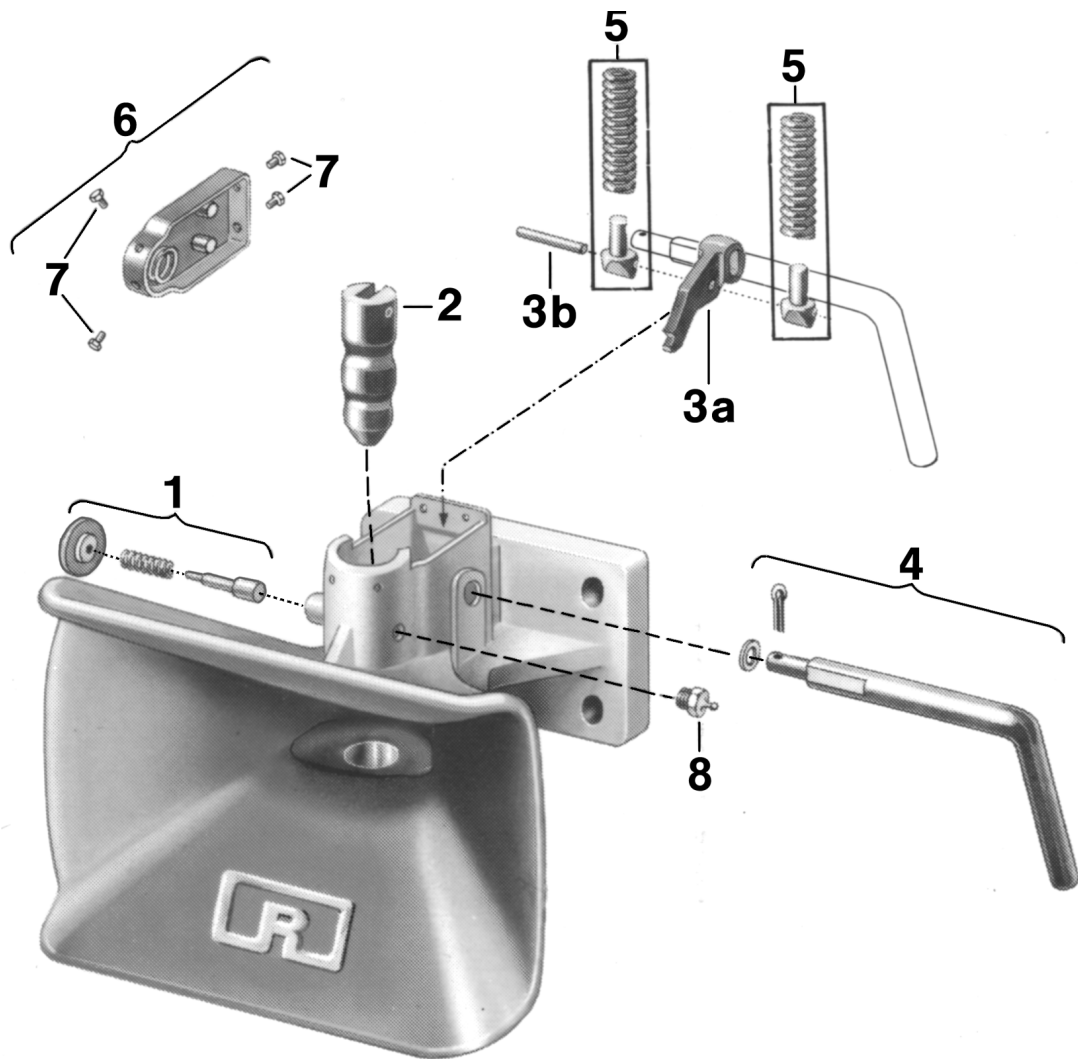


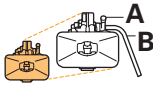
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
145	140,0	80,0	180,0	120,0	17,0

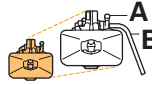
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

RO290A45020	A	145	140 x 80	14	15,4



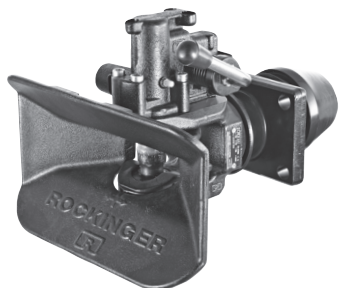


Pos.		ROE	
01		66017	1
02		47005	1
03		51005	1
04		70296	1

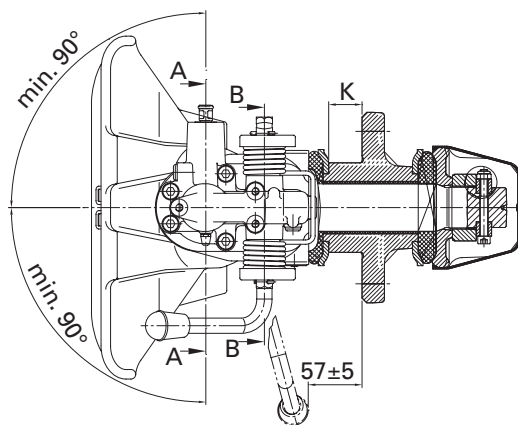
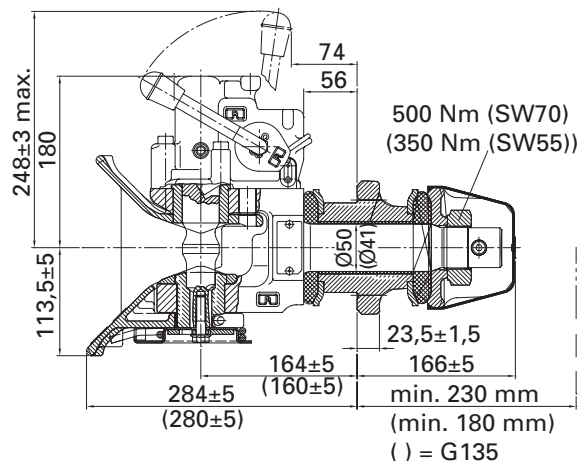
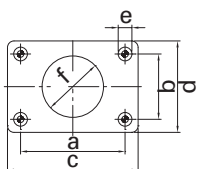
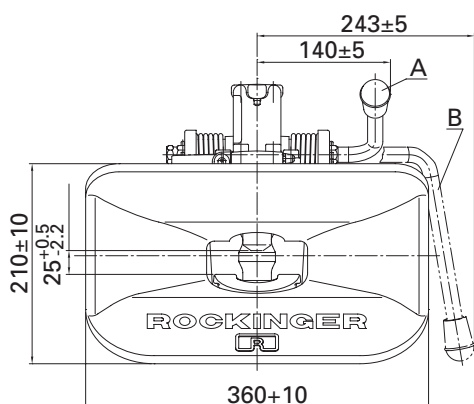
Pos.		ROE	
05		70297	1
06		70298	1
07		70324	1
08		65018	1

RO★400-1

- 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

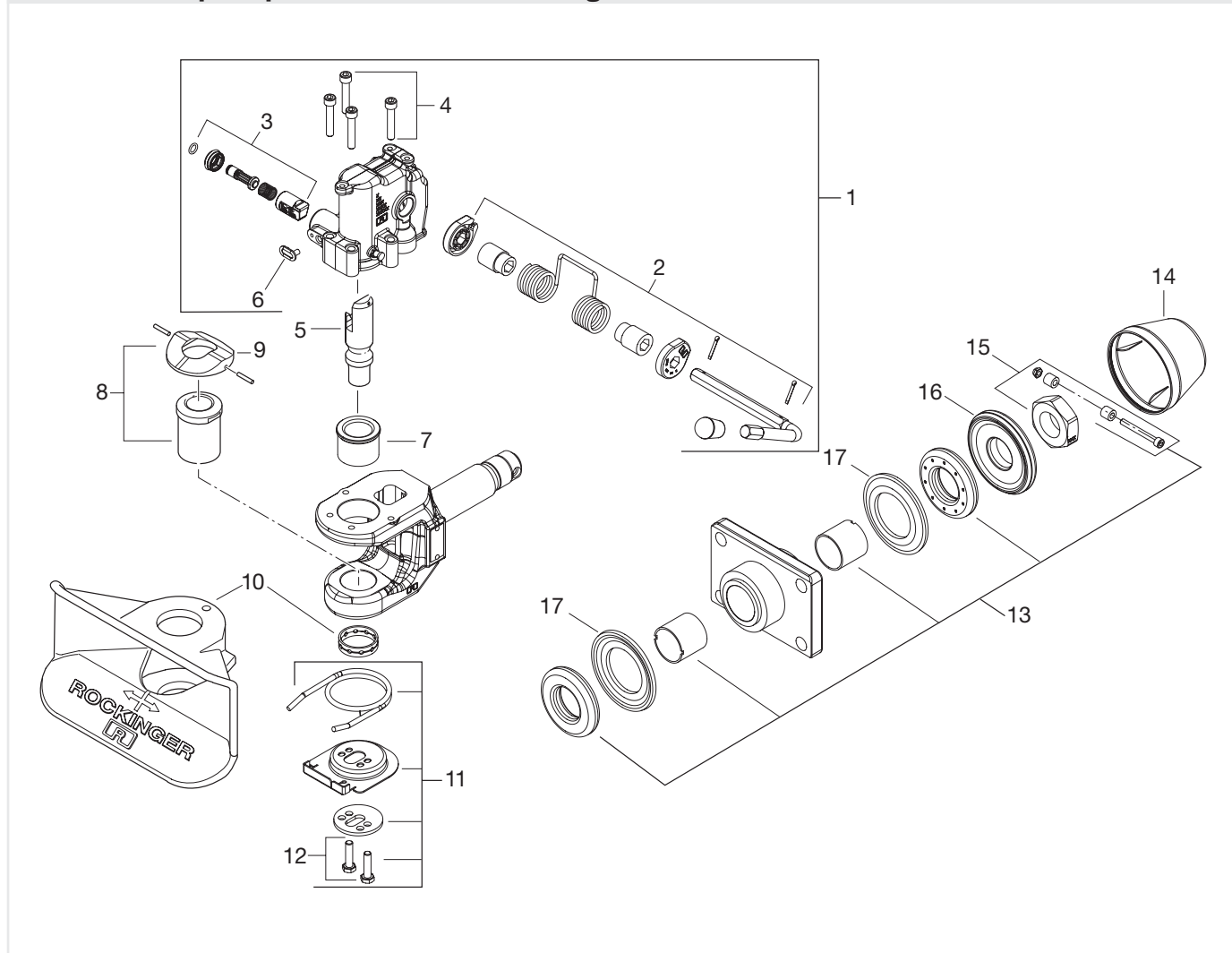
	K (mm)	K (mm)
135	11-32	max. 32
145	11-35	max. 35
150	11-35	max. 35

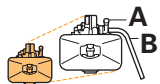
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

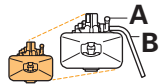
	A B							e1		ROE
		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)			
RO400A36001	135	120 x 55	70	70,0	700	24,0	30,0	00-0352		70970
RO400A36001	135	120 x 55	70	70,0	500	26,4	30,0	00-0352		70970
RO400B36001	135	120 x 55	70	70,0	700	24,0	30,0	00-0352		70970
RO400B36001	135	120 x 55	70	70,0	500	26,4	30,0	00-0352		70970
RO400A46001	145	140 x 80	100	91,5	1000	31,2	33,0	00-0351		70952
RO400B46001	145	140 x 80	100	91,5	1000	31,2	33,0	00-0351		70952
RO400A51001	150	160 x 100	130	90,0	1000	35,0	35,0	00-0350		70971
RO400B51001	150	160 x 100	130	90,0	1000	35,0	35,0	00-0350		70971
RO400A51201	150	160 x 100	130	90,0	1000	35,0	35,0	00-0350	x	70971

RO★400-1

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



Pos.		ROE	
01	A	71448A	1
	B	71448B	1
02	A	71644A	1
	B	71644B	1
03		71491	1
04		30361	1
05		47099	1
06		25558	1
07		53520	1
08		71718	1
09		59415	1
10		46109	1

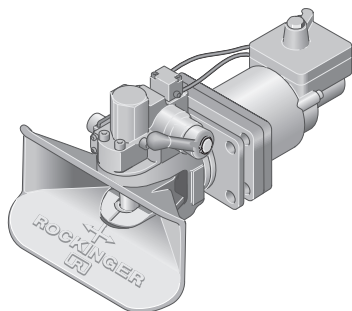
Pos.		ROE	
11		71331	1
12		30486	1
13	G135	25476	1
	G145/150	25477	1
14	G135	25254	1
	G145/150	25347	1
15	G135	71641	1
	G145/150	71642	1
16	G145/150	59280	1
	G135	59279	1
17	G135	44160	1
	G145/150	44161	1

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

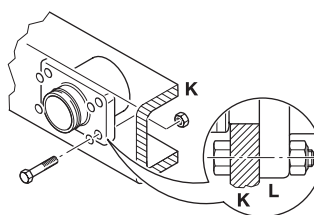
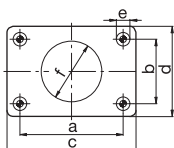
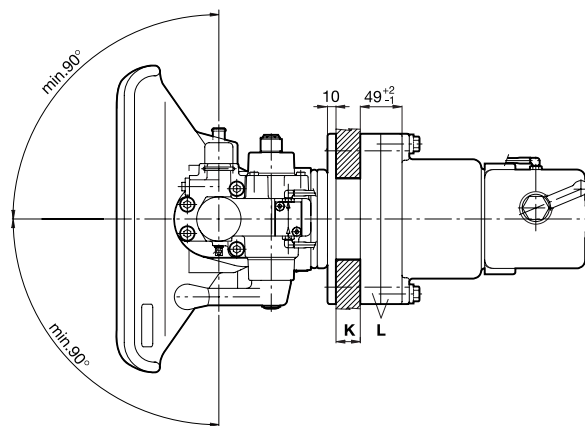
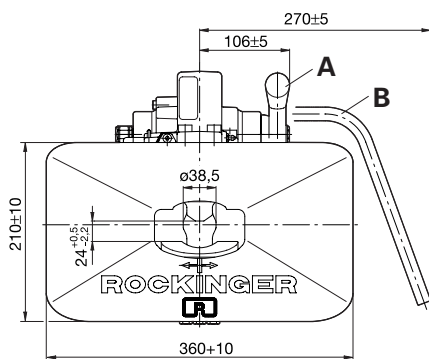
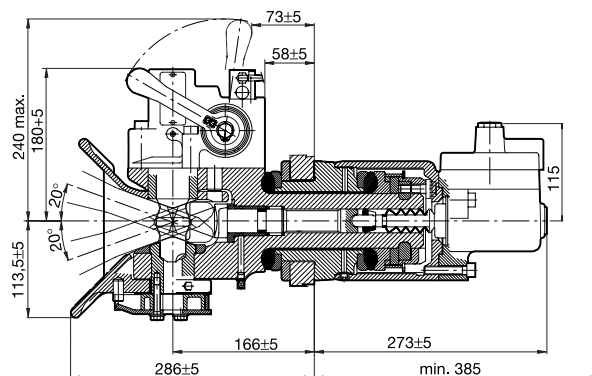
Pos.	ROE
03, 05, 07, 08, 11	71728

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



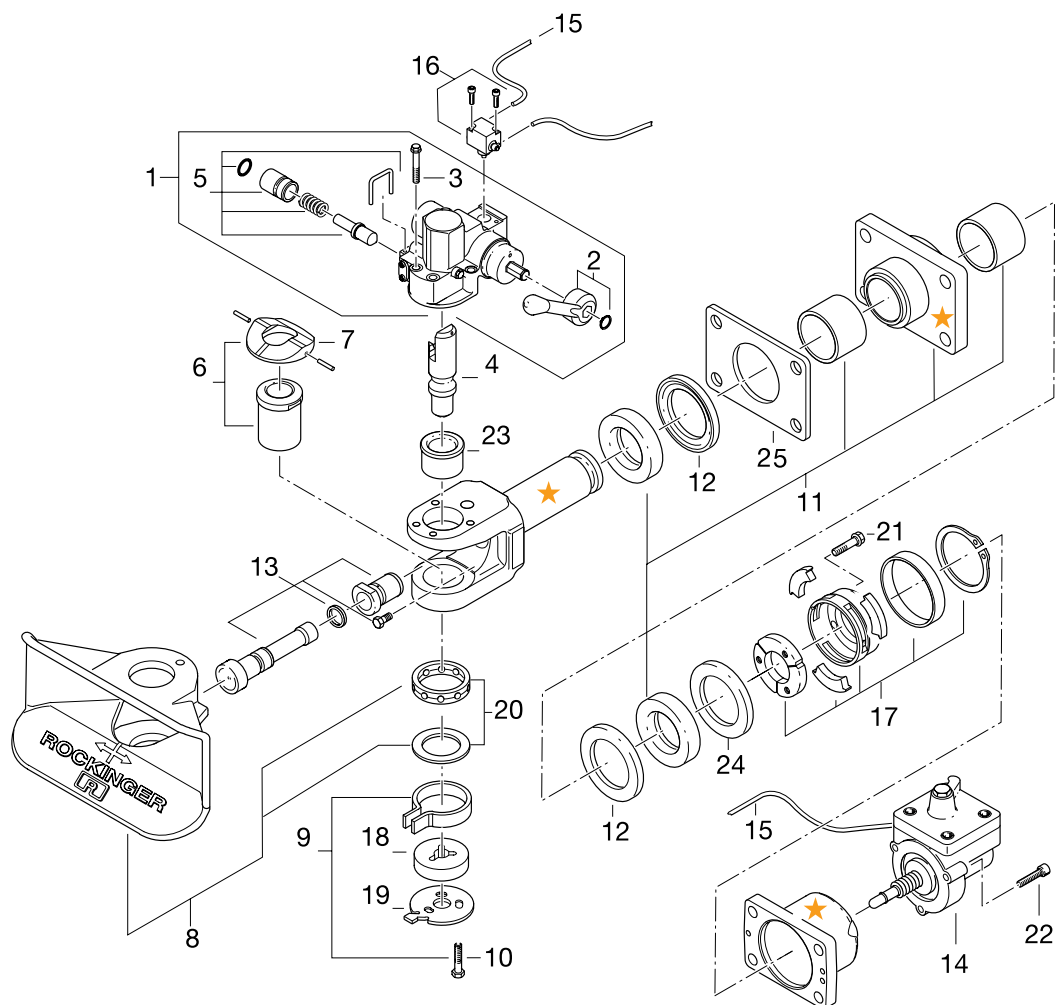
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
145	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

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

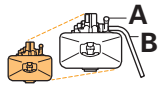
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

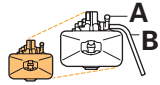
	A B							e1		
		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)			
RO430A45000	145	140 x 80	100	91,5	1000	36	51,0	00-0406		
RO430B4500	145	140 x 80	100	91,5	1000	36	51,0	00-0406		
RO430A50000	150	160 x 100	130	91,5	1000	36	52,0	00-0405		
RO430B50000	150	160 x 100	130	91,5	1000	36	52,0	00-0405		

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		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

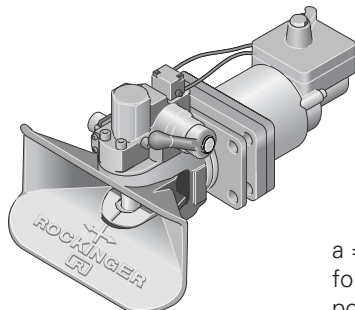
Pos.		ROE	
14	RO430xxxx1	71611	1
14	RO430xxxx2	70635	1
15		70981	1
16	RO430xxxx0	90291	1
16	RO430xxxx1	71610	1
17		59277	1
18		53467	1
19		65626	1
20		25479	1
21		30365	1
22		30364	1
23		53520	1
24		45133	1
25		59169	1

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

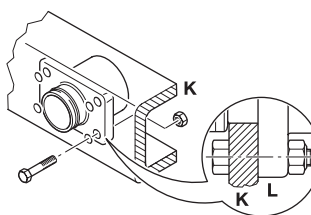
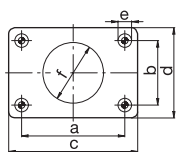
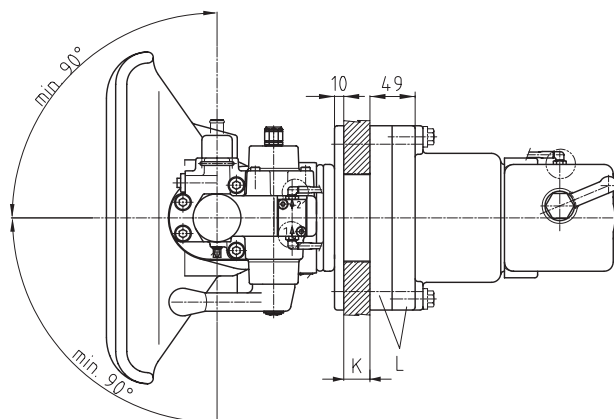
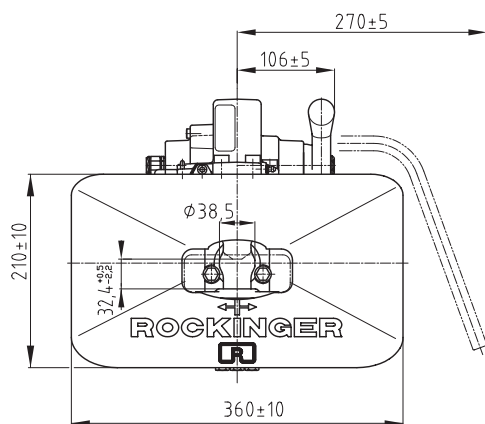
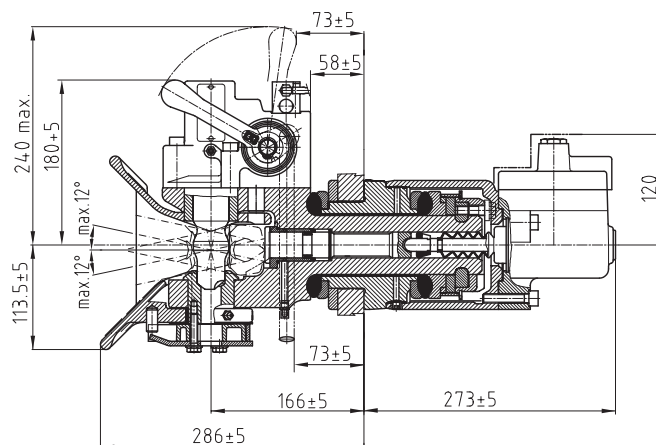
Pos.	ROE
04, 05, 06, 09, 18, 19, 23	71124

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

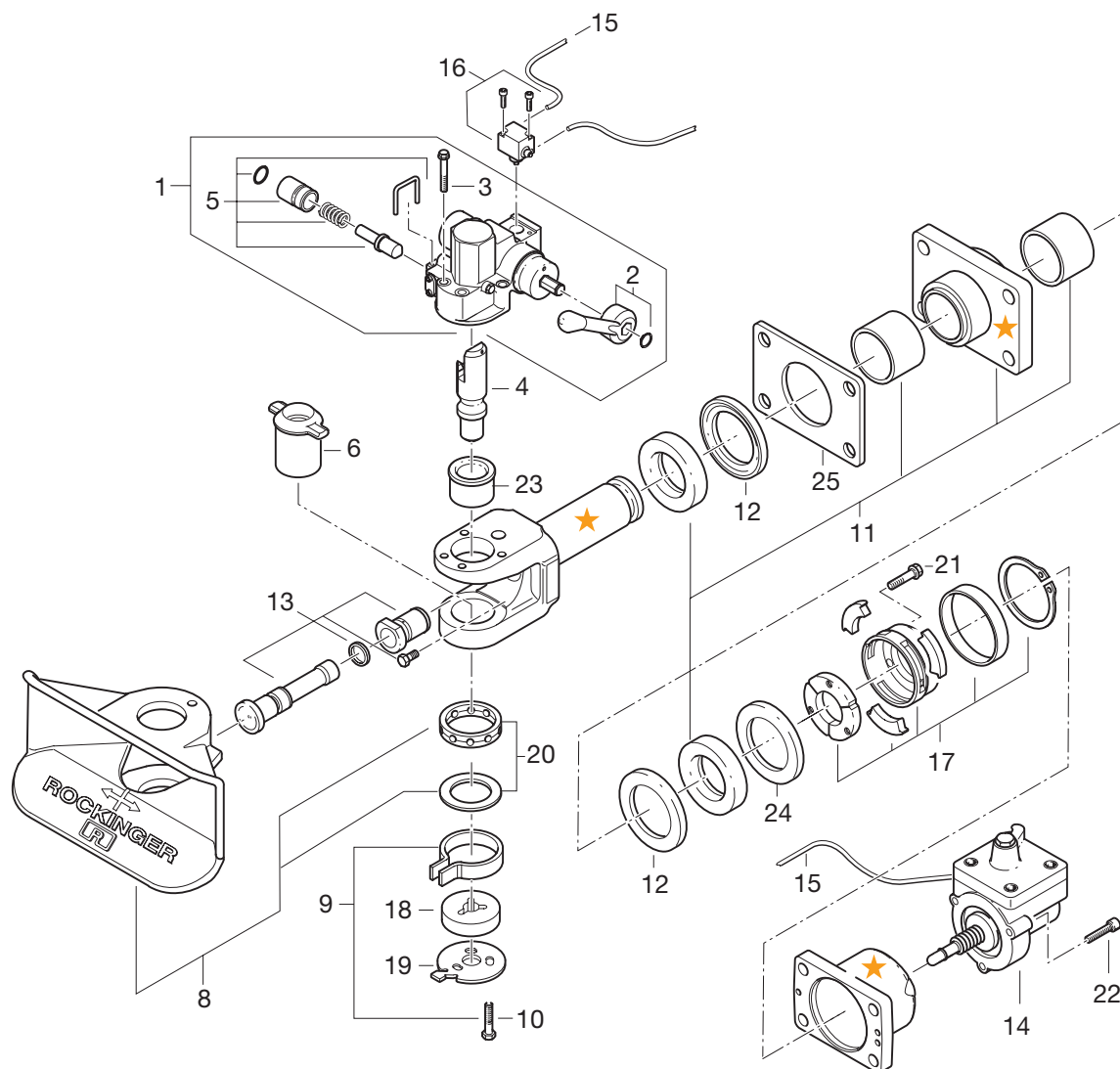


	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
145	140,0	80,0	180,0	120,0	17,0	84,0
150	160,0	100,0	200,0	140,0	21,0	94,0

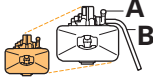
	K (mm)	K (mm)
145	11-28	max. 28
150	11-28	max. 28

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

	A B	(mm)	D (kN)	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		



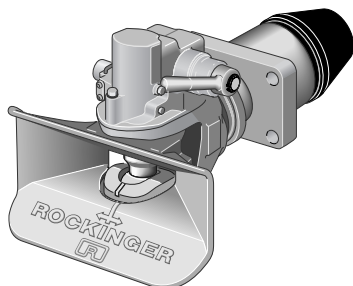
★ kein Ersatzteil
no spare part
non pièce de rechange
no ricambio
no es pieza de recambio

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
11		25475	1
12		44159	1
13		71096	1

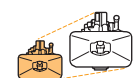
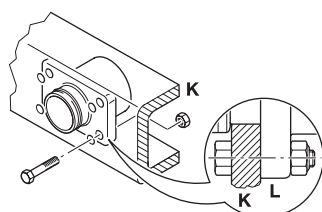
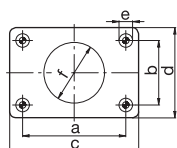
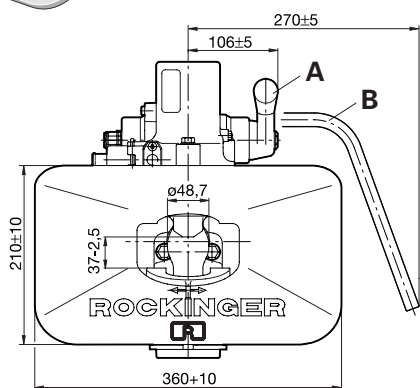
Pos.		ROE	
14		70939	1
15		70981	1
16		90291	1
17		59277	1
18		53467	1
19		65626	1
20		25479	1
21		30365	1
22		30364	1
23		53520	1
24		45133	1
25		59169	1

RO★500 - 50 mm

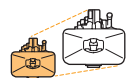
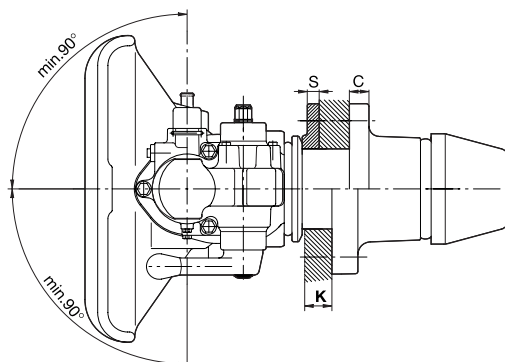
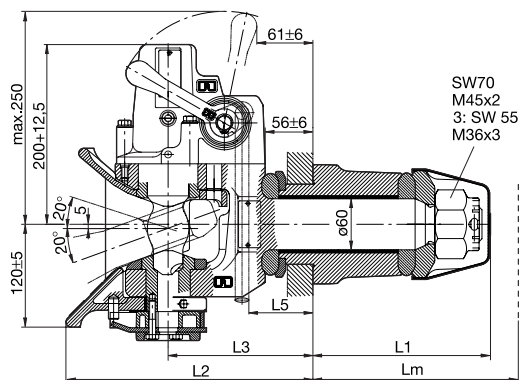
- D** Standardkupplung
- GB** Standard hitch
- F** Crochet standard
- I** Gancio di traino standard
- E** Enganche estándar



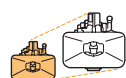
a = 50 mm
DIN 74053,
94/20/CE
ISO 1102,
ROE57005



	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



	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

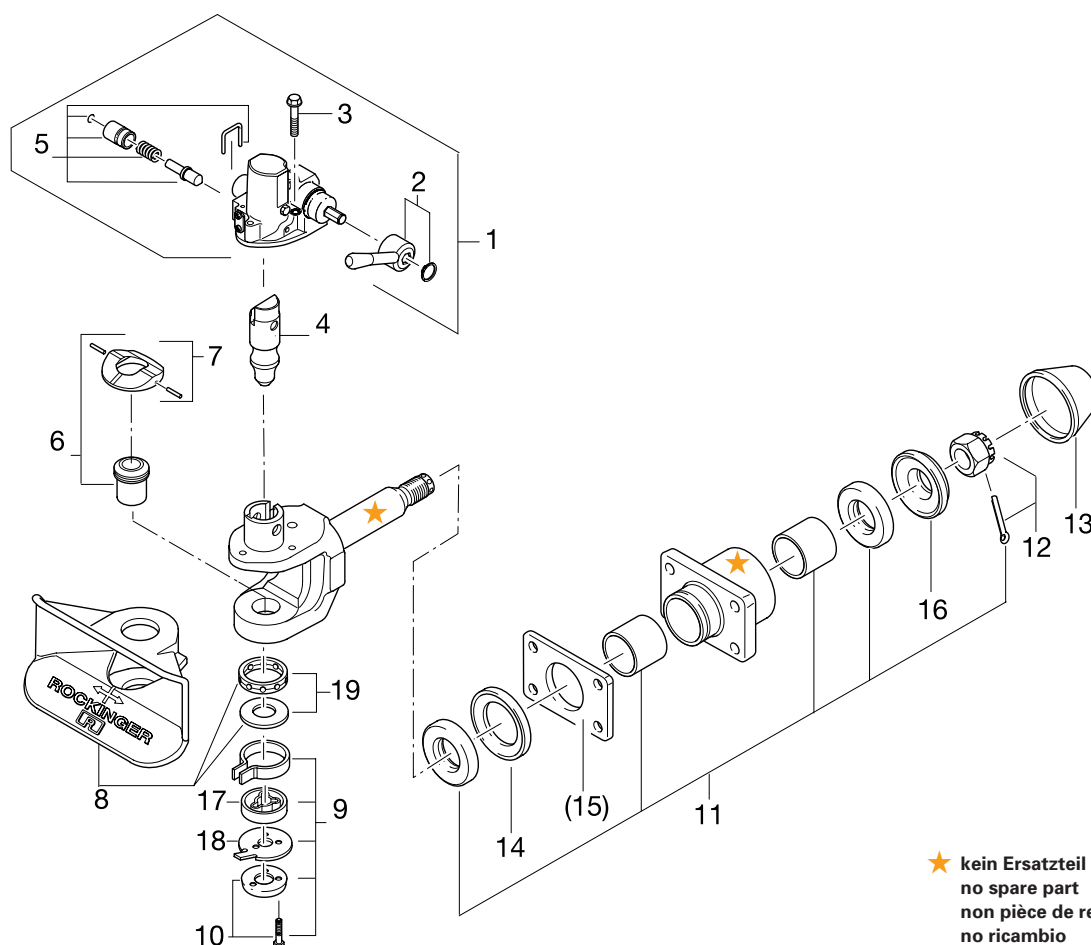


	K (mm)	K (mm)
3/61	11-32	max. 32
4/5/62	11-35	max. 35

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

	A	B	(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1		
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		

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	ROxxxAxx2	70849	1
01	ROxxxAxx3	71366	1
01	ROxxxBxx3	71367	1
02	ROxxxAxxxx2	50244	1
02	ROxxxAxxxx3	50257	1
02	ROxxxBxxxx2	70735	1
02	ROxxxBxxxx3	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

Pos.		ROE	
11	3	25476	1
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

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

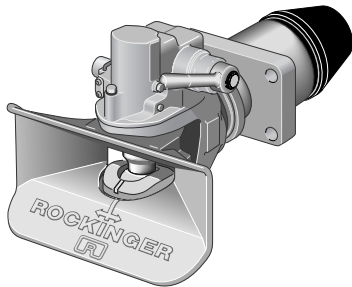
Pos.	ROE
04, 05, 06, 09	71125

* Bronze, bronze, bronze, bronzo, bronce

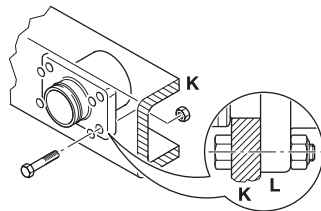
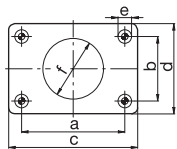
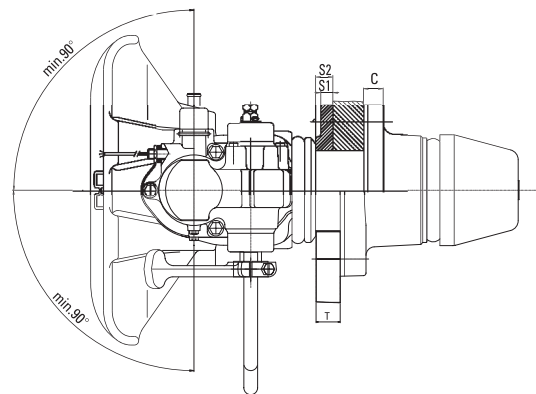
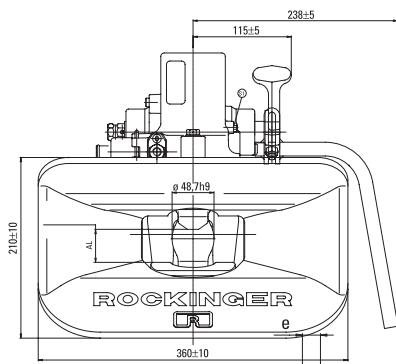
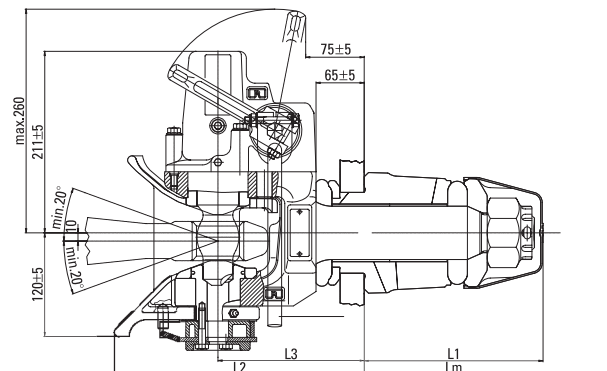
** Stahl, steel, acier, acciaio, acero

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	170	min. 285	30	-

	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

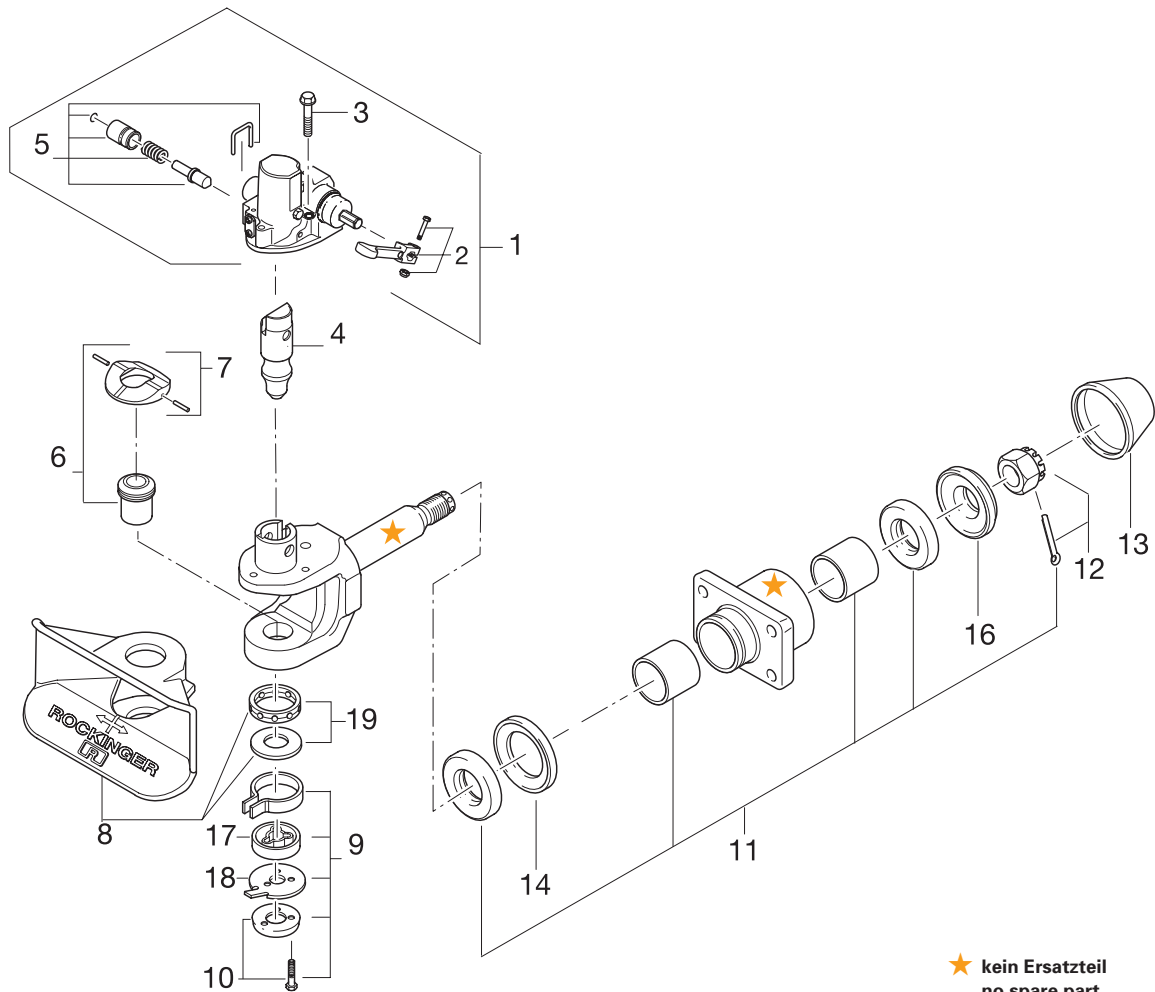
	K (mm)	K (mm)
65	13-28	max. 28

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

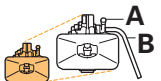
	A B		(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1	
RO500A65003		65	160x100	200	135,0	1000	90	45	00-1468	
RO500A65003		65	160x100	200	135,0	2500	55	45	00-1468	
RO500B65003		65	160x100	200	135,0	1000	90	45	00-1468	
RO500B65003		65	160x100	200	135,0	2500	55	45	00-1468	
RO500A65403		65	160x100	200	135,0	1000	90	48	00-1468	x
RO500A65403		65	160x100	200	135,0	2500	55	48	00-1468	x
RO500A65203		65	160x100	200	135,0	1000	90	45	00-1468	x
RO500A65203		65	160x100	200	135,0	2500	55	45	00-1468	x

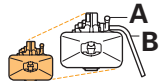
RO★500 G 65

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



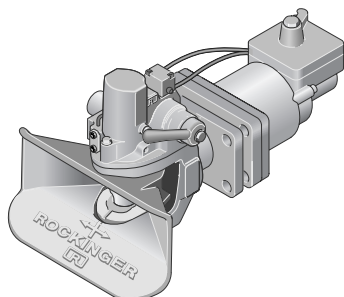
★ kein Ersatzteil
no spare part
non pièce de rechange
no ricambio
no es pieza de recambio

Pos.		ROE	
01	ROxxxAxxxx	71366	1
01	ROxxxBxxxx	71366	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

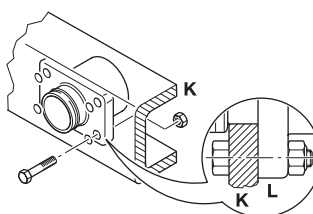
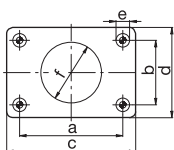
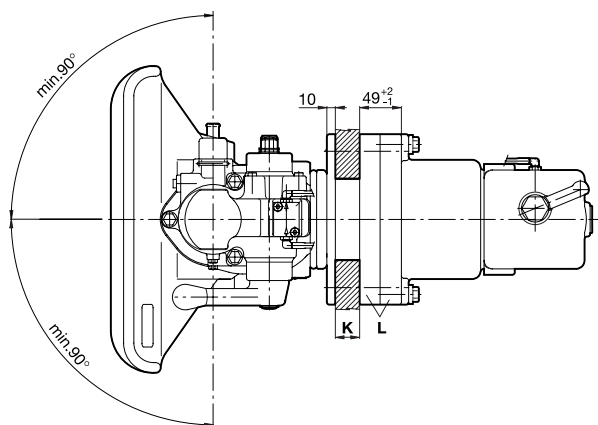
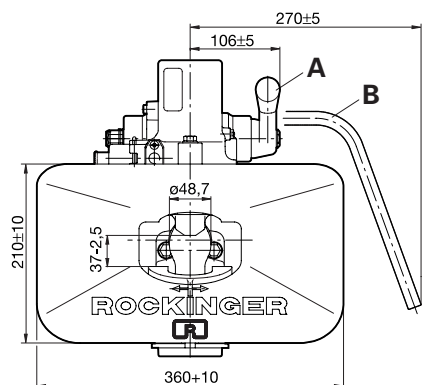
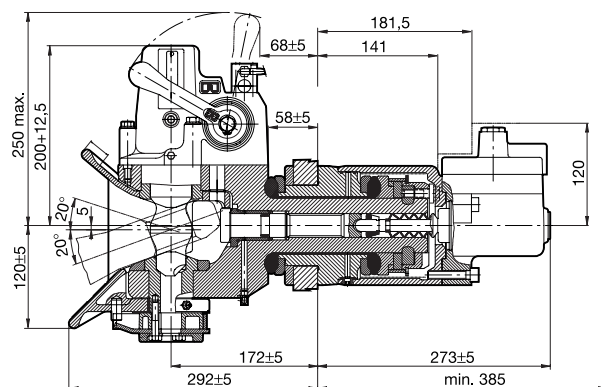
Pos.		ROE	
09		65693	1
10		30358	1
11		71534	1
12		56102	1
13		25347	1
14		44177	1
16		59141	1
17		53467	1
18		65626	1
19		25479	

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

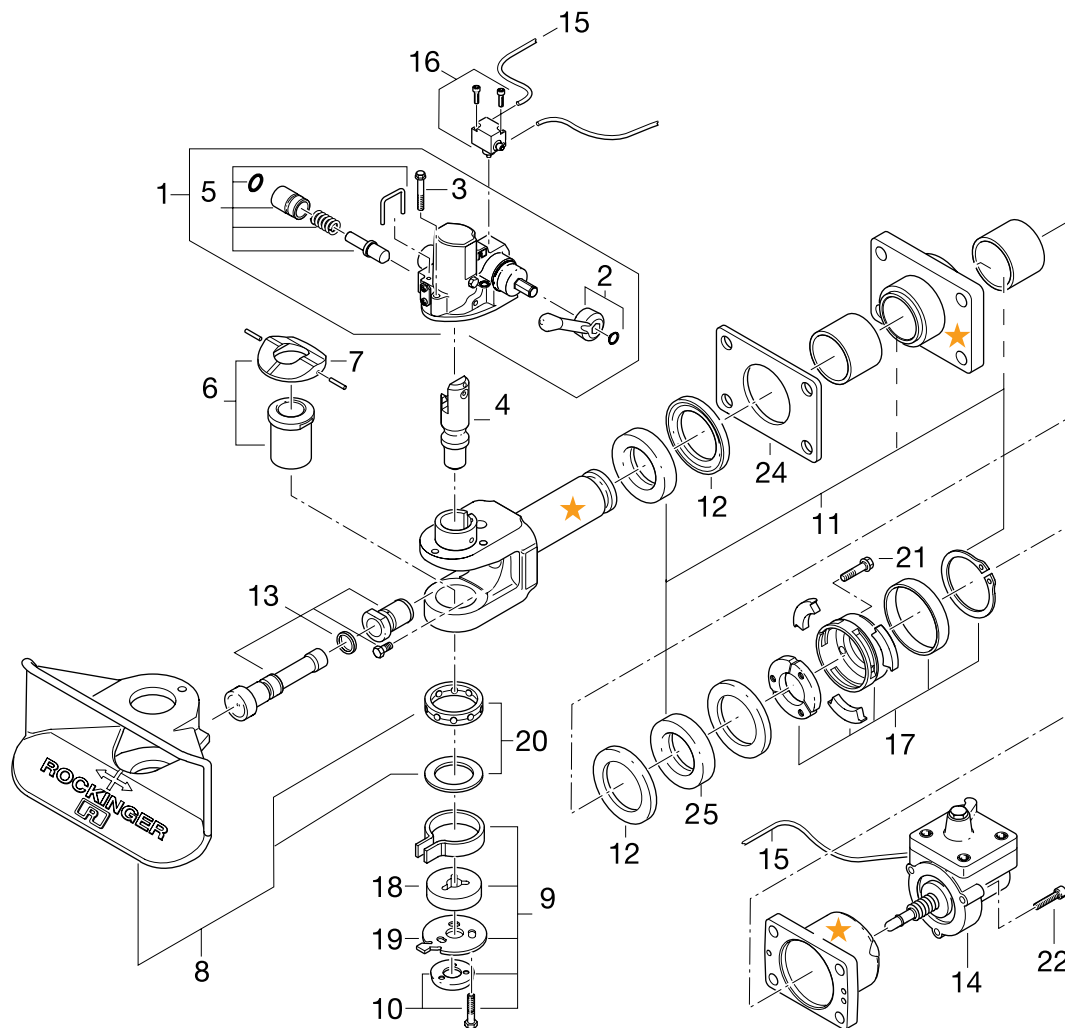


	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160,0	100,0	200,0	140,0	21,0	94,0

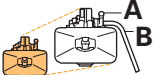
	K (mm)	K (mm)
6	11-28	max. 28

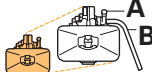
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

	A B	(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1		
RO530A6000C	6	160 x 100	190	115	1000	50,0	54,0	00-0407		
RO530B6000C	6	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 A xxxx	50244	1
02	ROxxx B xxxx	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

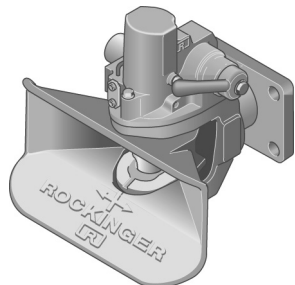
D Kupplung mit Flansch

GB Hitch with flange

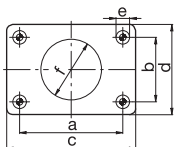
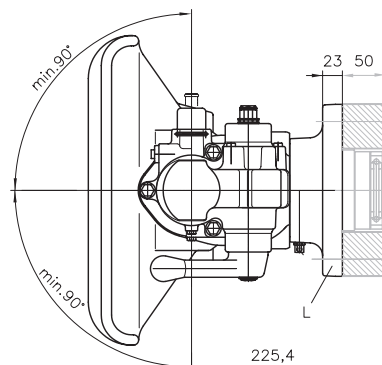
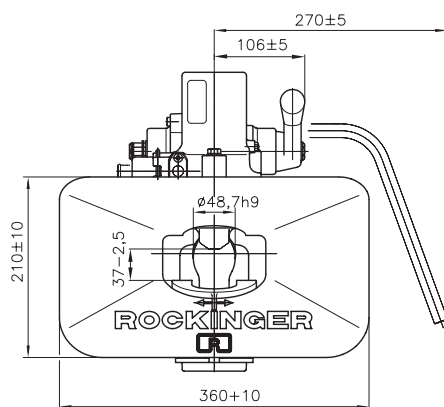
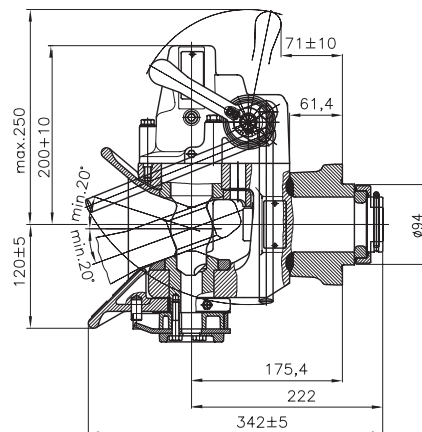
F Crochet avec bride

I Gancio con flangia

E Enganche con brida

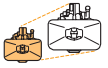


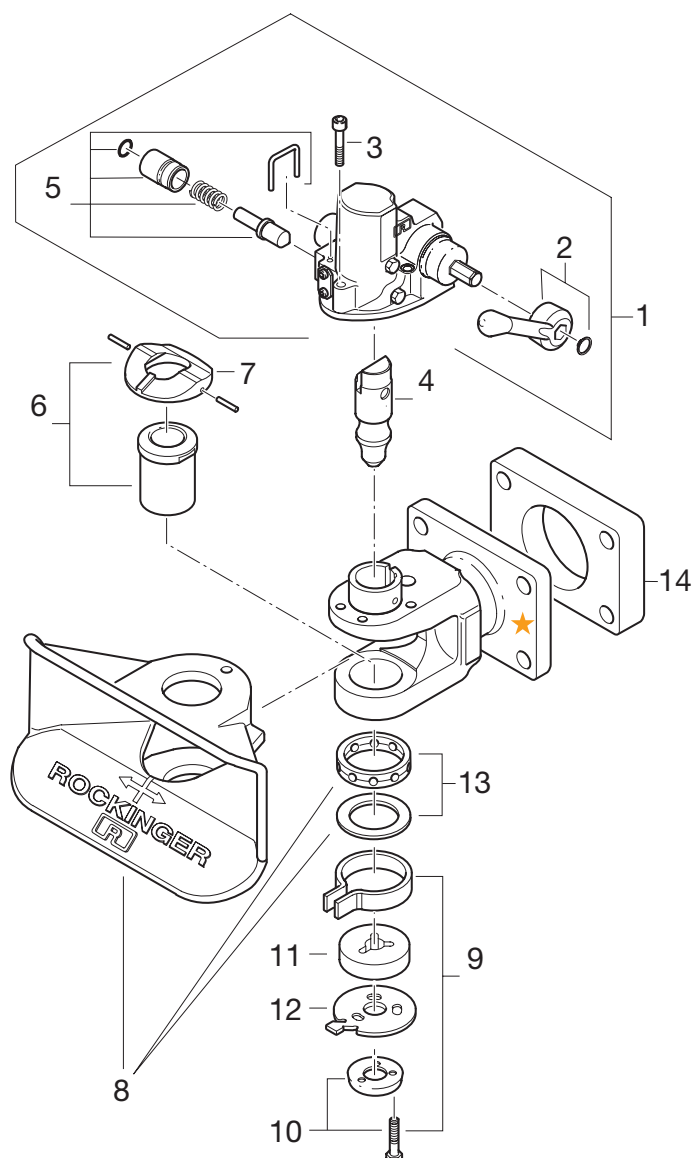
a = 50 mm
DIN 74053,
94/20/CE
ISO 1102,
ROE57005



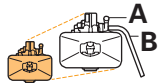
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
6	160,0	100,0	200,0	140,0	21,0	94,0

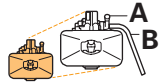
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

										
	A	B	(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1	
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		



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

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

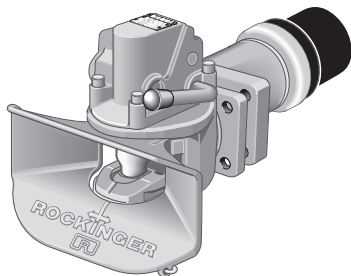
Pos.		ROE	
07		70851	1
08		46111	1
09		65693	1
10		30358	1
11		53467	1
12		65626	1
13		25479	1
14		71053	1

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

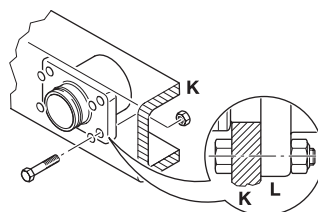
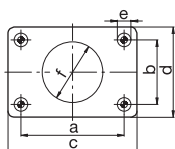
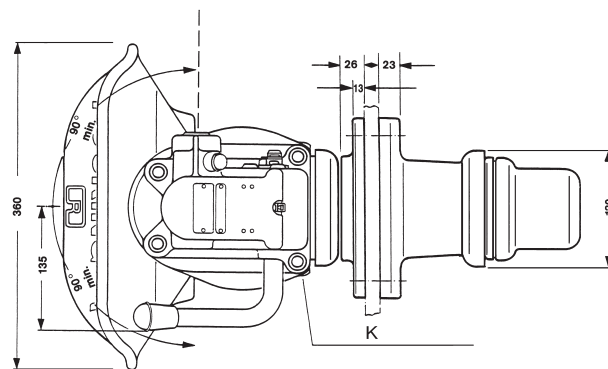
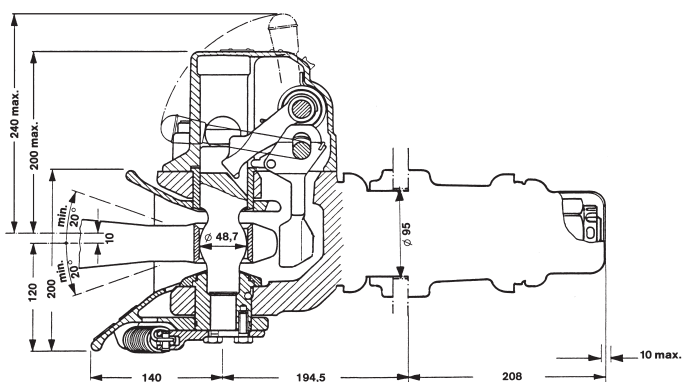
Pos.	ROE
04, 05, 06, 09	71125

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

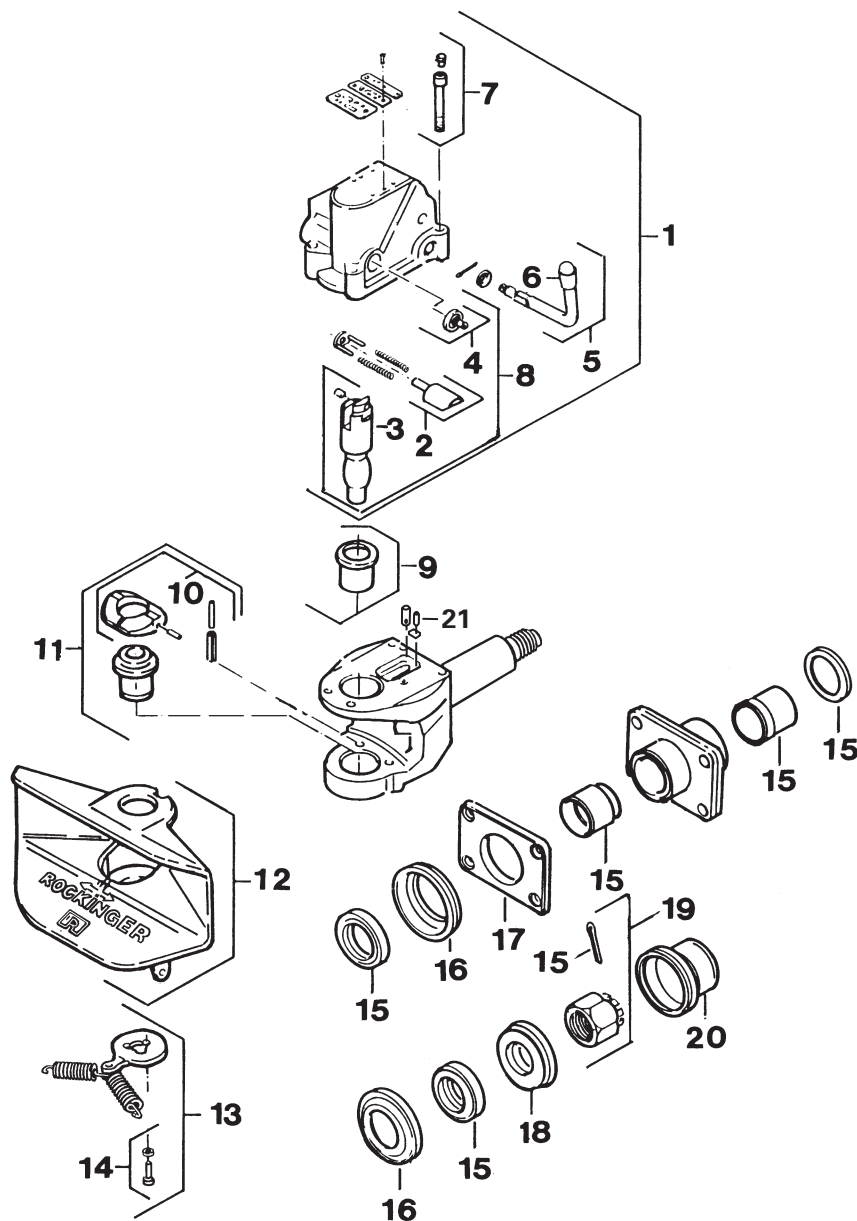
	K (mm)	K (mm)
61	22-28	max. 32

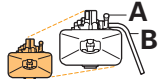
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

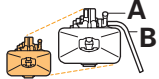
	A B	(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	e1		
RO70061A010	6	160 x 100	190	135	1000	72,5	50,0	00-0308		
RO70061A170 ¹	6	160 x 100	190	135	1000	72,5	50,0	00-0308		
RO70061B010	6	160 x 100	190	135	1000	72,5	50,0	00-0308		
RO70061C010	6	160 x 100	190	135	1000	72,5	50,0	00-0308	x	
RO70061E010 ²	6	160 x 100	190	135	1000	72,5	50,0	00-0308		x

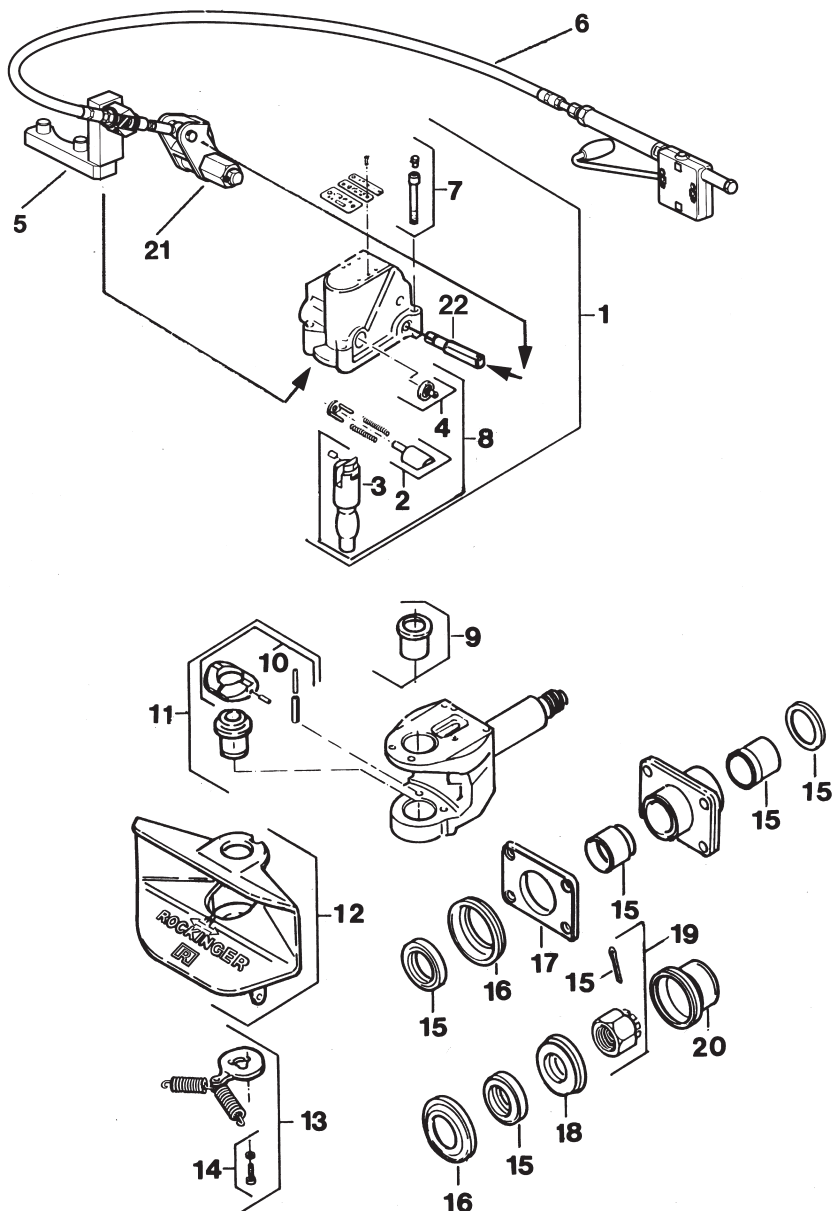
¹ verstärktes Fangmaul • reinforced funnel • renforcé pavillon • rinforzato testa campana • reforzado boca de enganche

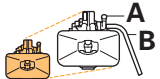
² mechanische Fernbedienung • mechanical remote operation • commande à distance mécanique • telemando mecánico • apertura meccanica a distanza

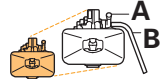


Pos.		ROE	
01	61	70428	1
01	ROxxxBxxxx	71023	1
02		70078	1
03		70009	1
04		70036	1
05	ROxxxAxxxx	70005	1
05	ROxxxBxxxx	70006	1
06		25104	1
07		57275	1
08		71024	1
09		53456	1
10		70074	1
11		70429	1

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

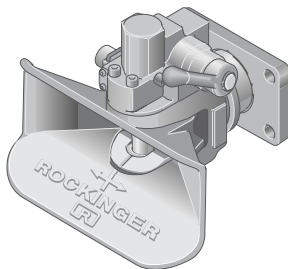


Pos.		ROE	
01		70446	1
02		70078	1
03		47063	1
04		70036	1
05		70467	1
06		57315	1
07		70115	1
08		70114	1
09		53456	1
10		70074	1
11		70429	1
12		46098	1
13		70430	1

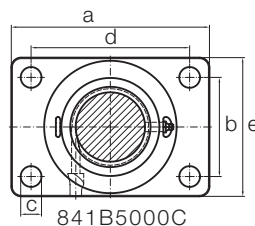
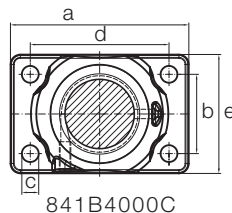
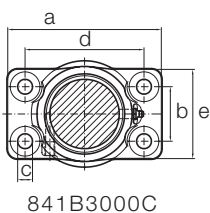
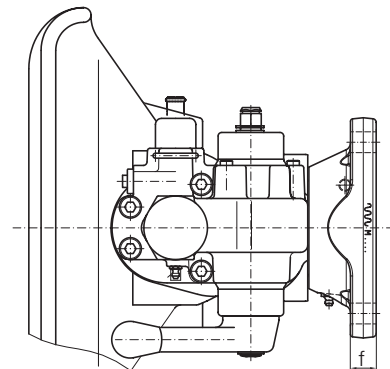
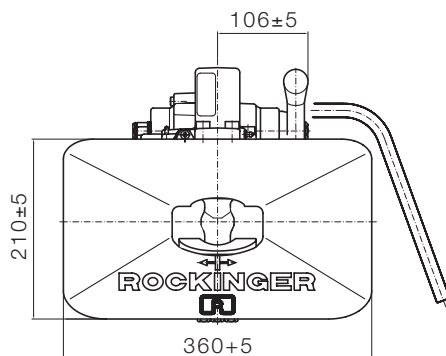
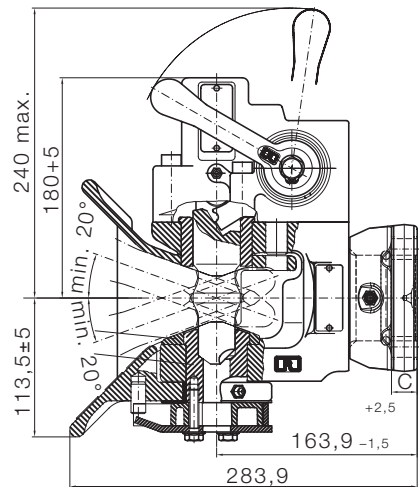
Pos.		ROE	
14		70431	1
15		70432	1
16		44119	2
17		59144	1
18		59122	1
19		56100	1
20		25326	1
21		70466	1
22		52495	1
•		70595	1
•		90091	1
•		90080	1

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



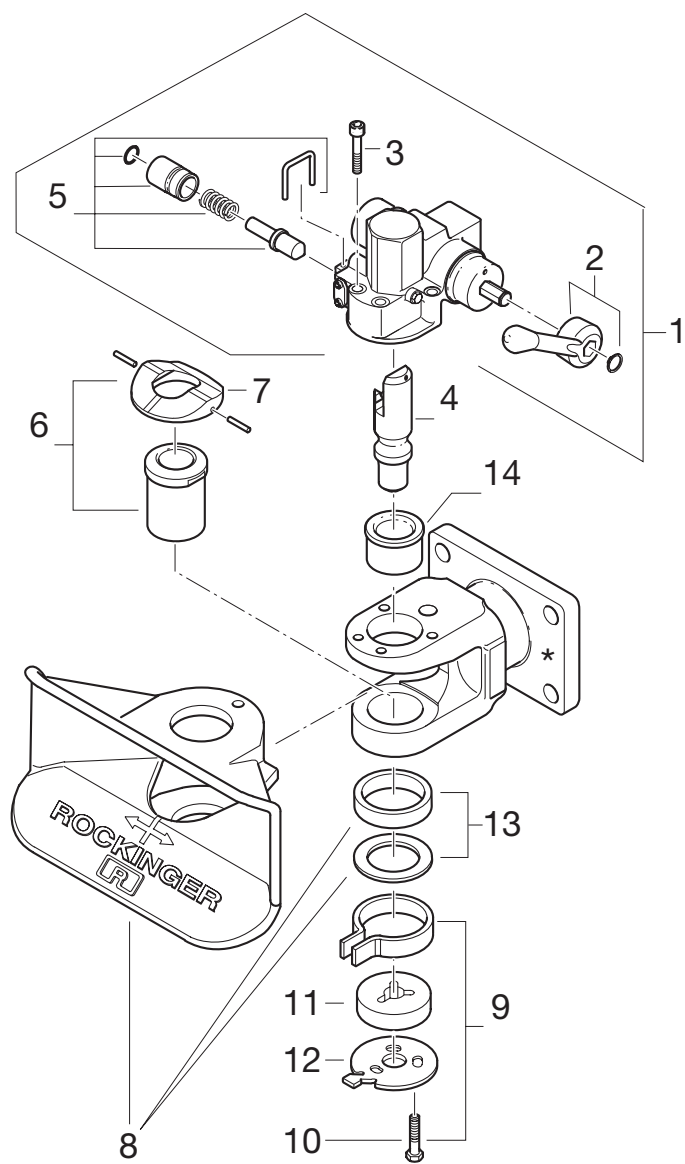
	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
130	155,0	55,0	15,0	120,0	90,0	16,0
140	180,0	80,0	17,0	140,0	120,0	21,0
150	200,0	100,0	21,0	160,0	140,0	20,0

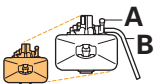
Technische Daten • Technical data • Données technique • Dati tecnici • Datos técnicos

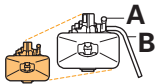
									e1
			(mm)	D (kN)	Dc (kN)	S (kg)	V (kN)	(kg)	
RO841B3000C	A	130	120 x 55	60	45	350	15,6	26,0	00-1457
RO841B3010C	B	130	120 x 55	60	45	350	15,6	26,0	00-1457
RO841B4000C	A	140	140 x 80	100	64	1000	23,0	28,0	00-1456
RO841B4010C	B	140	140 x 80	100	64	1000	23,0	28,0	00-1456
RO841B5000C	A	150	160 x 100	100	64	1000	23,0	28,0	00-1456
RO841B5010C	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
02	ROxxxBxxxx	70735	1
03		30361	1
04		47099	1
05		70925	1
06		53519	1
07		59278	1

Pos.		ROE	
08		70812	1
09		55256	1
10		30362	1
11		53467	1
12		65626	1
13		25479	1
14		53520	1

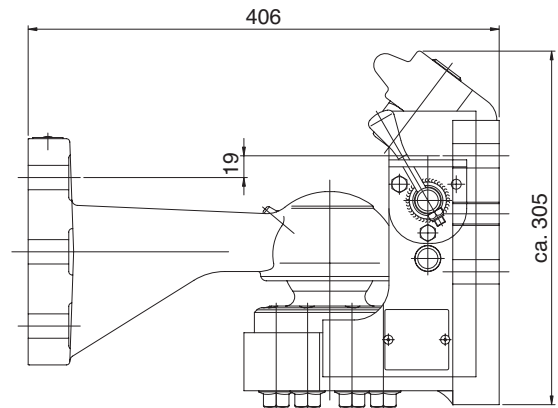
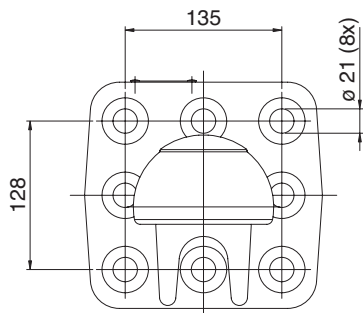
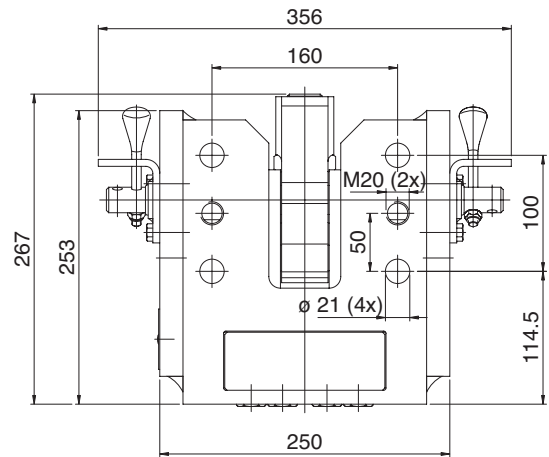
Reparatursatz • Repair kit • Kit de réparation • Kit riparazione • Juego de reparation

Pos.	ROE
04, 05, 06, 09, 11, 12, 14	71124



RO★KU 80 - 80 mm

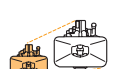
- D** Kugelkupplungssystem 80 mm für Fahrzeugtransporter
- GB** Ball Coupling System 80 mm for Car Carrier
- F** Système d'attelage à boule 80 mm pour plateau porte-voiture
- I** Sistema gancio a sfera 80 mm per veicolo adibito al trasporto vetture
- E** Sistema de enganches esféricos de 80 mm para vehículos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



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

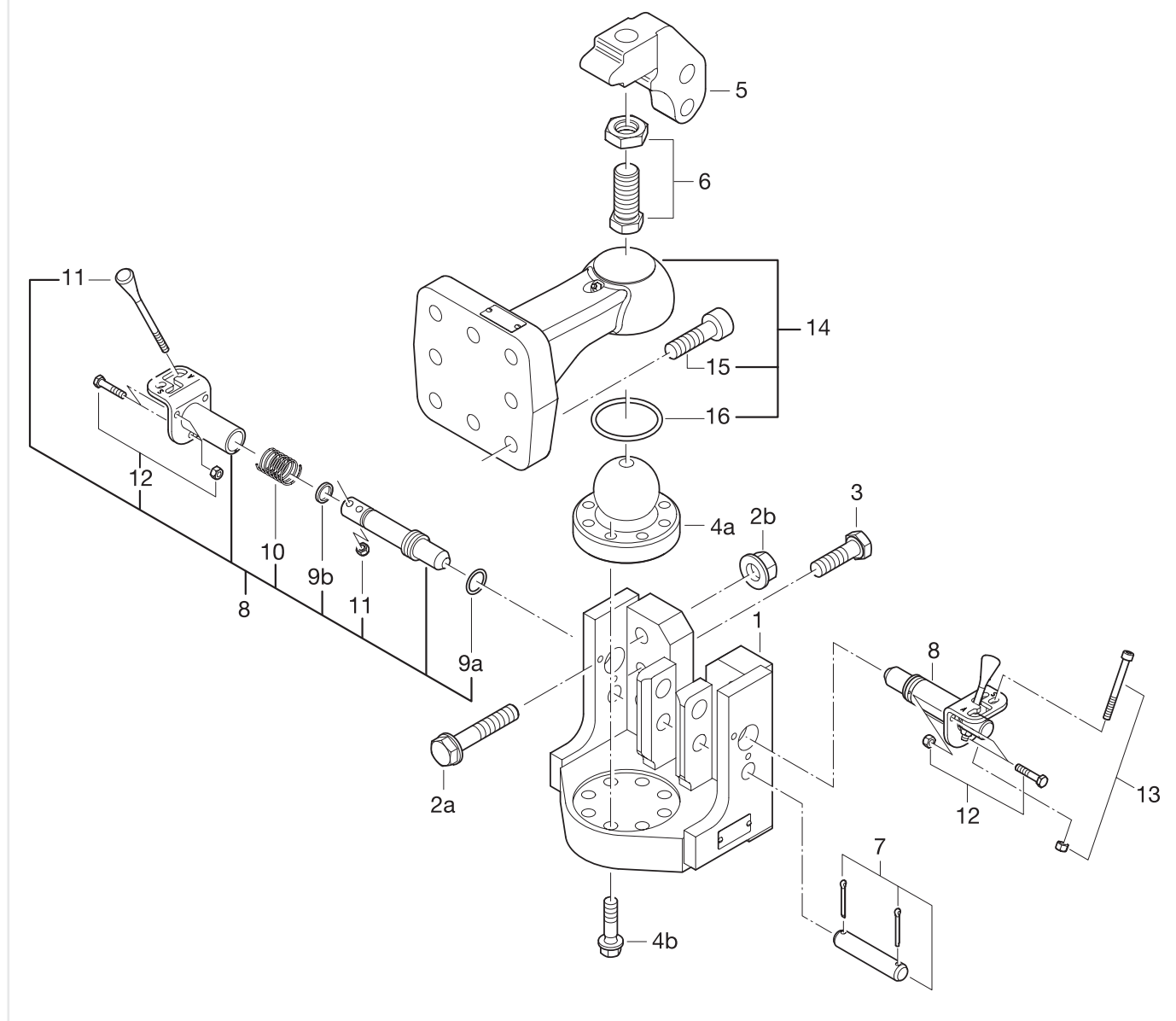
		 (mm)	  			 (kg)	e1/ECE	
RO908H61000	6	160x100	140,0	140,0	1000	90	65,4*	EG/94/20/S
RO908H61000	6	160x100	140,0	140,0	2500	75	65,4*	EG/94/20/S
RO908H61000	6	160x100	-	140,0	1000	90	65,4*	ECE 55/T
RO908H61000	6	160x100	-	140,0	2500	75	65,4*	ECE 55/T

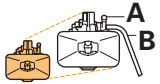
Schraubensatz 85 mm • Bolt kit 85 mm • Jeu de vis 85 mm • Kit viti 85 mm • Juego de tornillos 85 mm

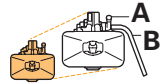
		 (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V (kN)	 (kg)	e1/ECE
RO908H61500	6	160x100	140,0	140,0	1000	90	65,4*	EG/94/20/S
RO908H61500	6	160x100	140,0	140,0	2500	75	65,4*	EG/94/20/S
RO908H61500	6	160x100	-	140,0	1000	90	65,4*	ECE 55/T
RO908H61500	6	160x100	-	140,0	2500	75	65,4*	ECE 55/T

Schraubensatz 110 mm • Bolt kit 110 mm • Jeu de vis 110 mm • Kit viti 110 mm • Juego de tornillos 110 mm

* 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

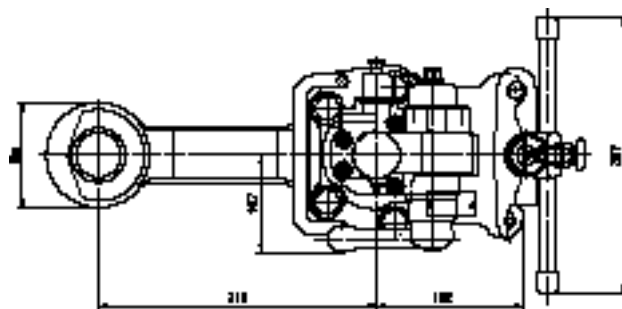
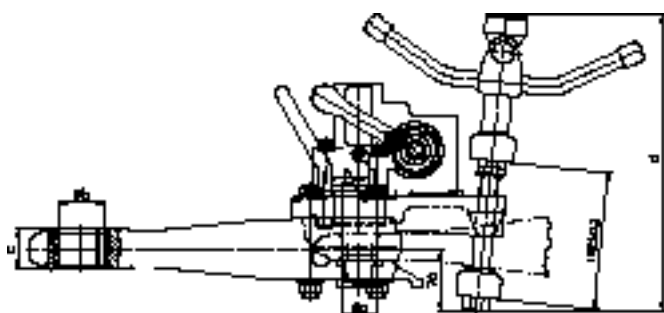


Pos.		ROE	
01		74001	1
02	2 a/b 85 mm	71687	1
02a	110 mm	30474#4	1
02b		31139#4	1
03		30133#2	1
04		71685	1
05		63002	1
06		71684	1
07		52563	1

Pos.		ROE	
08		71665	1
09		71683	2
10		55286	2
11		50283	2
12		71682	2
13		71686	2
14		57388R	1
15		30485#8	1
16		25568	1

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



	ø a (mm)	ø b (mm)	c (mm)	d (mm)	ø e (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

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

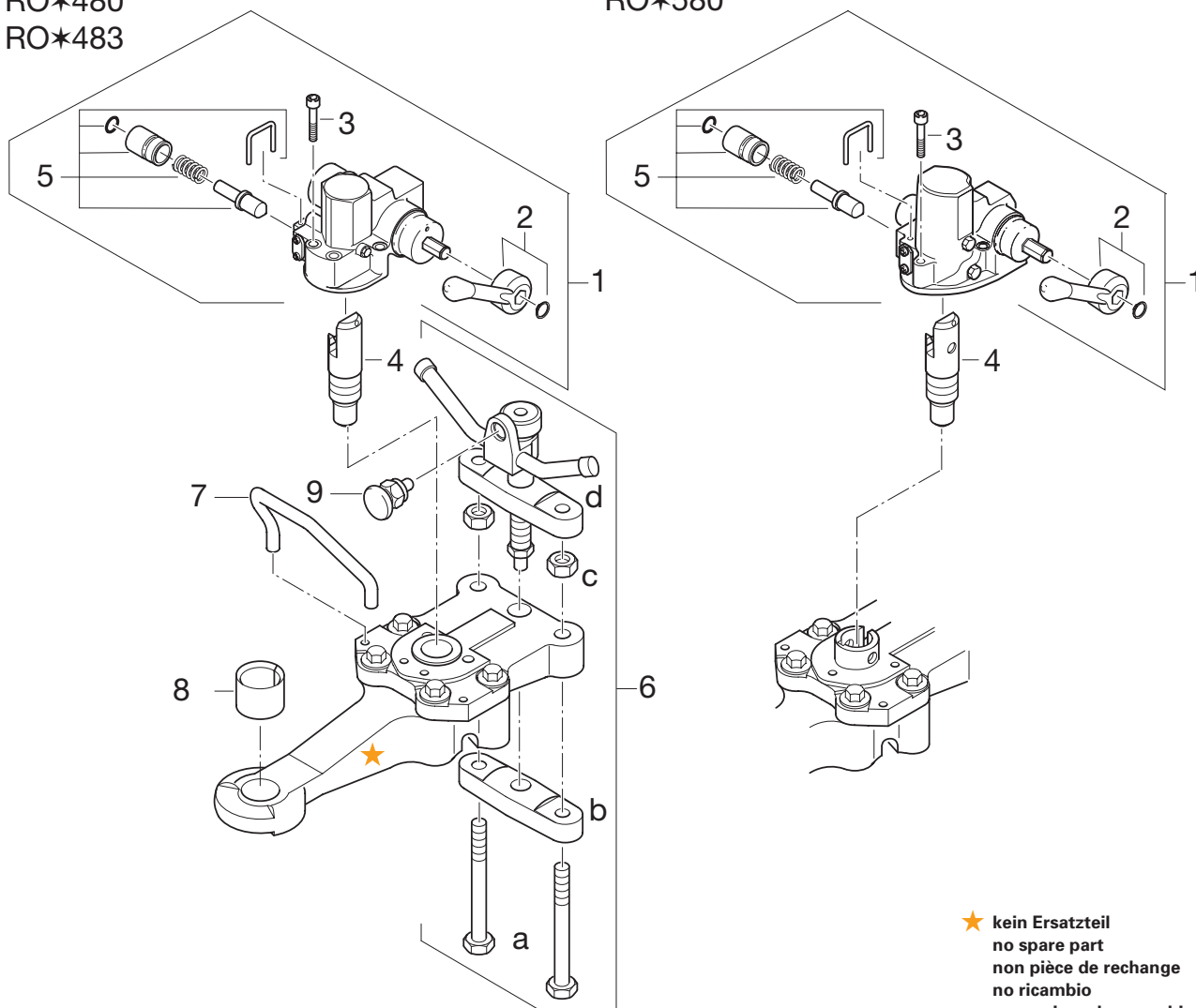
		 D (kN)	 S (kg)	 50 (mm)	 40 (mm)	 (kg)
ROE580B0000	A	130	-	DIN 74053 / 94/20/CE Kl. D	DIN 74051 / 94/20/CE Kl. S	33

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	71094	1
02		50244	1
03	480, 483	30361	1
03	580	30369	1
04	480	47111	1
04	483	47112	1

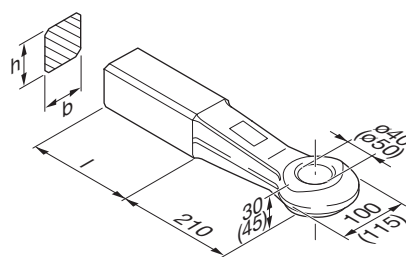
Pos.		ROE	
04	580	47113	1
05		70925	1
07		52501	1
08	480, 483	53004	1
08	580	53051	1
09		70618	1

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

Pos.	ROE
a, b, c, d, 09	71095

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

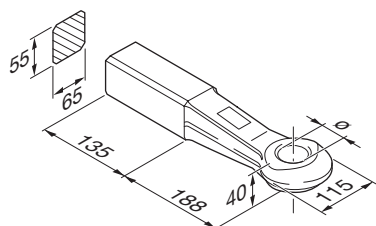
- D** Form A mit Schweißende
- GB** Shape A for welding
- F** Forme A avec extrémité soudée
- I** Forma A con estremità saldata
- E** Forma A con extremo soldado



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

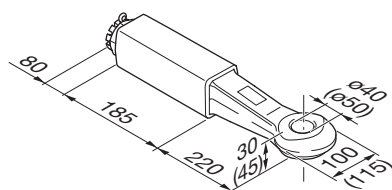
	ø (mm)	h x b (mm)	l (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V (kN)	 (kg)	e1
57260	40	40 x 40	110	18	18	180	8	4,1	00-0739
57262	40	50 x 40	110	25	25	250	9	4,7	00-0740
57264	40	50 x 50	110	70	50	500	14	5,9	00-0741
57268	40	65 x 55	125	125	66	900	20	7,8	00-0743
57270	40	65 x 60	125	125	74	1000	23	8,2	00-0744
57374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



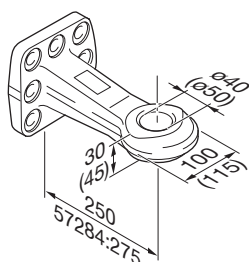
	ø (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V' (kN)	 (kg)	e1
57229	40	125	66	900	20,0	8,7	00-0694
57229	40	168				8,7	00-0694

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

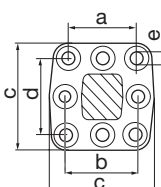


	ø (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V' (kN)	 (kg)	e1
57318	40	125	74	1000	23,0	11,0	00-0691
57321	50	130	90	1000	25,0	12,6	00-0627

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



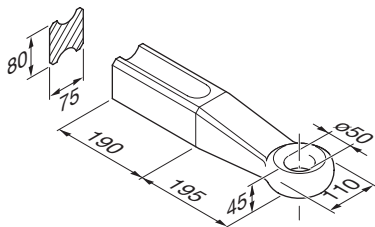
	ø (mm)	 D (kN)	 Dc (kN)	 S (kg)	 V' (kN)	 (kg)	e1
57243	40	130	100	1000	35,8	8,8	00-0046
57349	40	130	100	1000	35,8	8,8	00-0046
57244	50	190	135	1000	72,5	9,5	00-0045
57244	50	190	113	2500	43,2	9,5	00-0045
57284	50	250	135	1000	90,0	17,9	00-0162
57284	50	250	113	3000	43,2	17,9	00-0162



	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

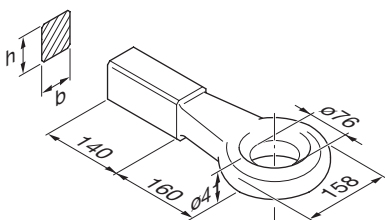
Zugösen • Towing eyes • Anneaux de remorquage • Occhioni di traino • Puntas de lanza

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



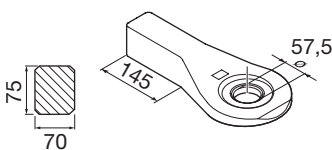
					e1
	D (kN)	R (t)	(kg)		
57005	314	250	13,4	00-0693	
57394	314	250	13,4	00-0693	

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



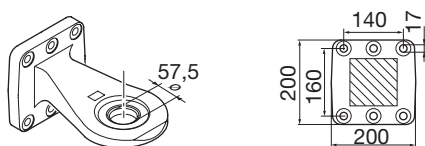
	h x b (mm)	D' (kN)	S (kg)	C' (t)	(kg)
57006	60 x 65	120	1000	12	10,3

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



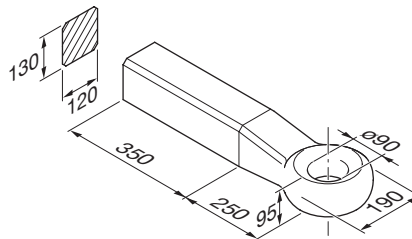
					e1
	D (kN)	S (kg)	Pc (kN)	(kg)	
57384 (V)	200	1000	25	10,0	00-1659
57386 (R)	200	1000	25	10,0	00-1658

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



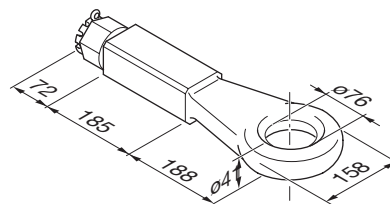
								e1
	D (kN)	Dc (kN)	S (kg)	V (kN)	Pc (kN)	Av (t)	(kg)	
57370	300	131	1000	82	30	18	18,7	00-1356
57370	300	130	2000	50	30	18	18,7	00-1356
57370	300	146,5	1000	65,5	30	18	18,7	00-1356

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



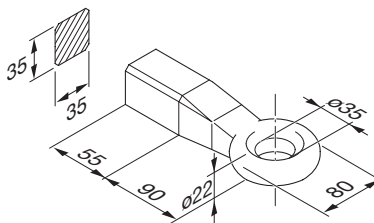
	S (kg)	R (t)	(kg)	
57121		1000	82	

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



	D' (kN)	S (kg)	C' (t)	(kg)
57294	120	1000	12	18,5
57295	200	1500	15	18,5

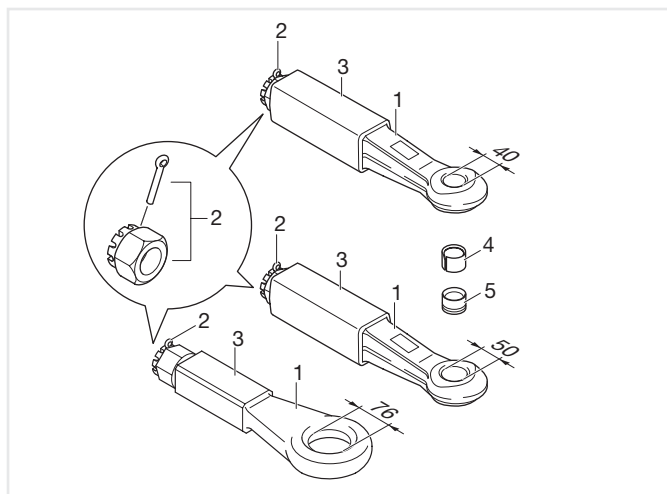
Zugösen für Flurförderzeuge mit Schweißende 35 mm • Towing eyes for industrial trucks for welding 35 mm • Anneaux de remorquage pour chariots de manutention avec extrémité soudée 35 mm • Occhioni per veicoli trasporti interni con estremità saldata 35 mm • Puntas de lanza para vehículos industriales con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



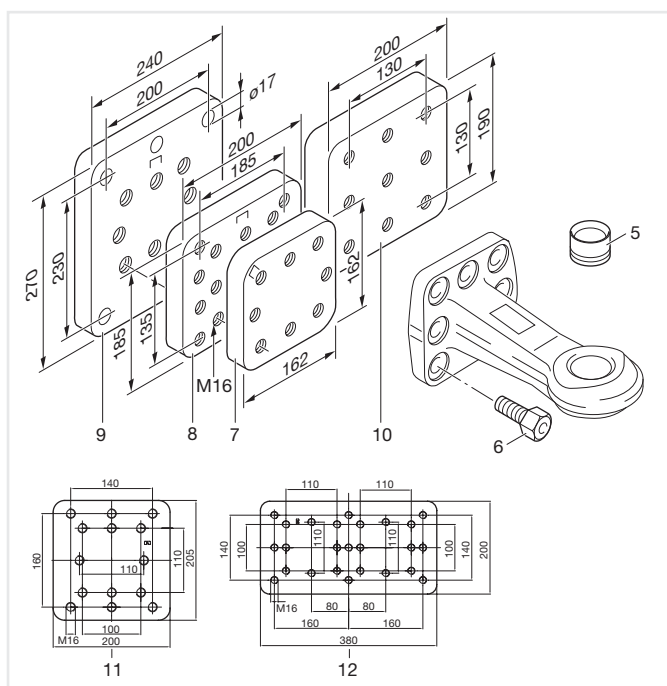
	R (t)	S (kg)	(kg)
57065	4		1,4

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

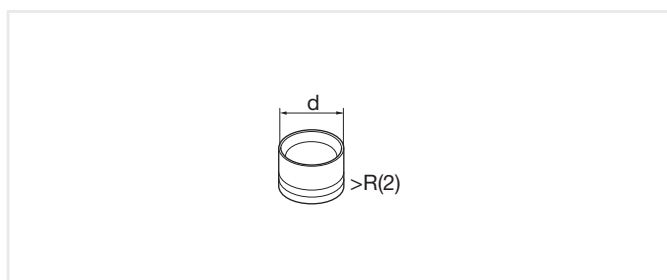


Pos.	ø (mm)	ROE	
01	40	57319	1
01	50	57322	1
01	76	57303	1
01	76	57304	1
02	40/50/76	56049	1
03	40/50/76	53435	1
04	40	53051	1
04	50	53004	1
05	40	53386	1
05	50	53376	1
05	90	53250	1



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



a = 40 mm

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

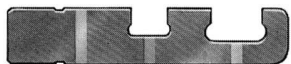


a = 50 mm

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



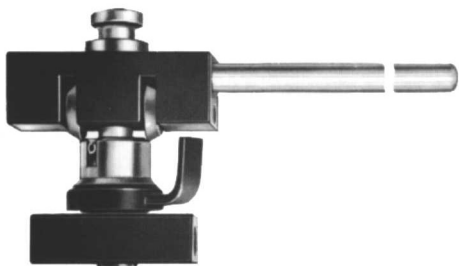
Werkzeuge • Tools • Outils • Attrezzi • Herramientas

- 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



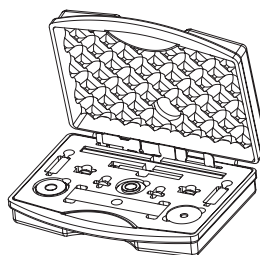
ø (mm)	ROE
40	57111
50	57228

- 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

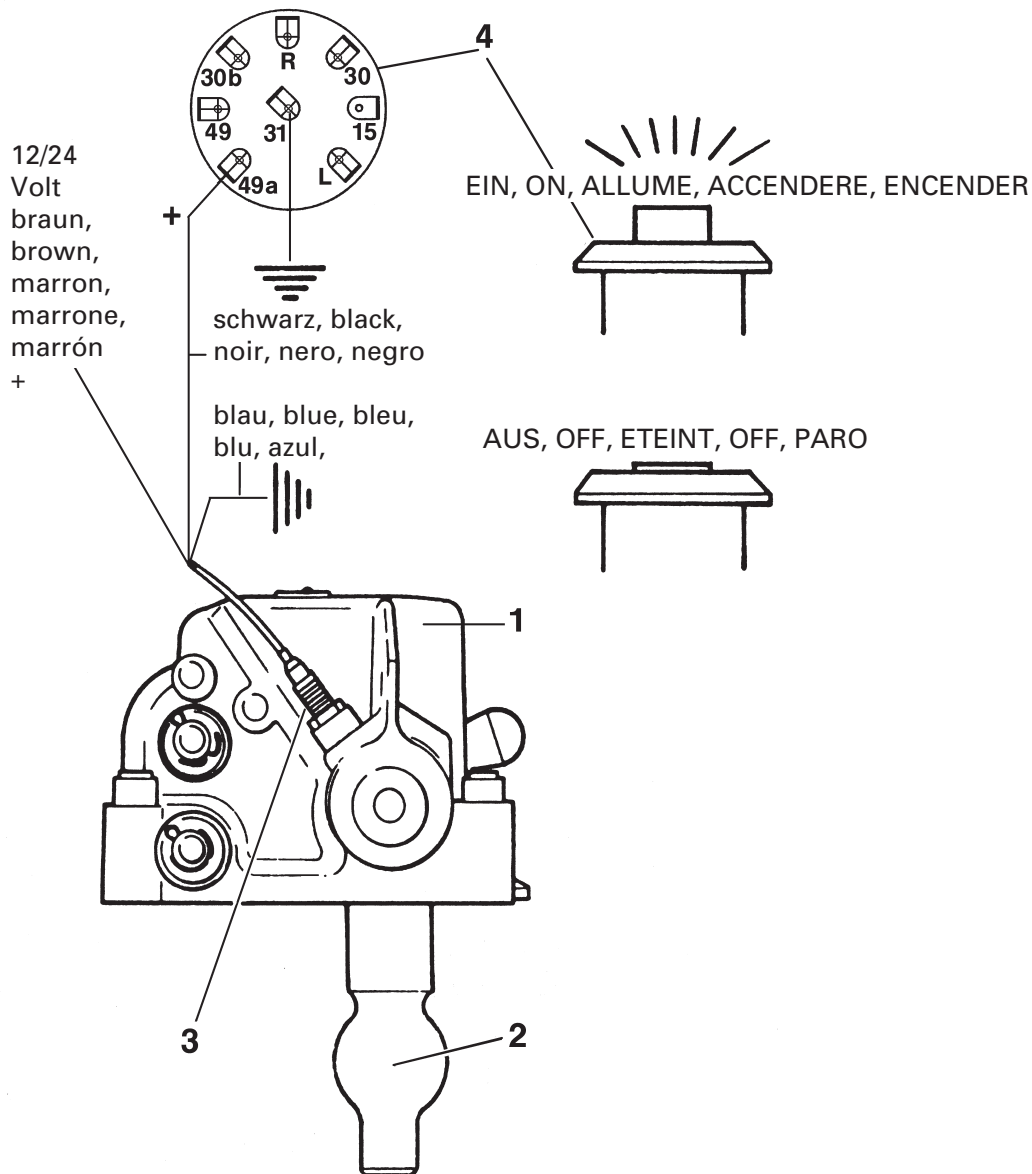


ROE	
71275	R057/57flex
57397	ROE57370 / ROE57371 / ROE57386 / ROE57384
71354	R057/57

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

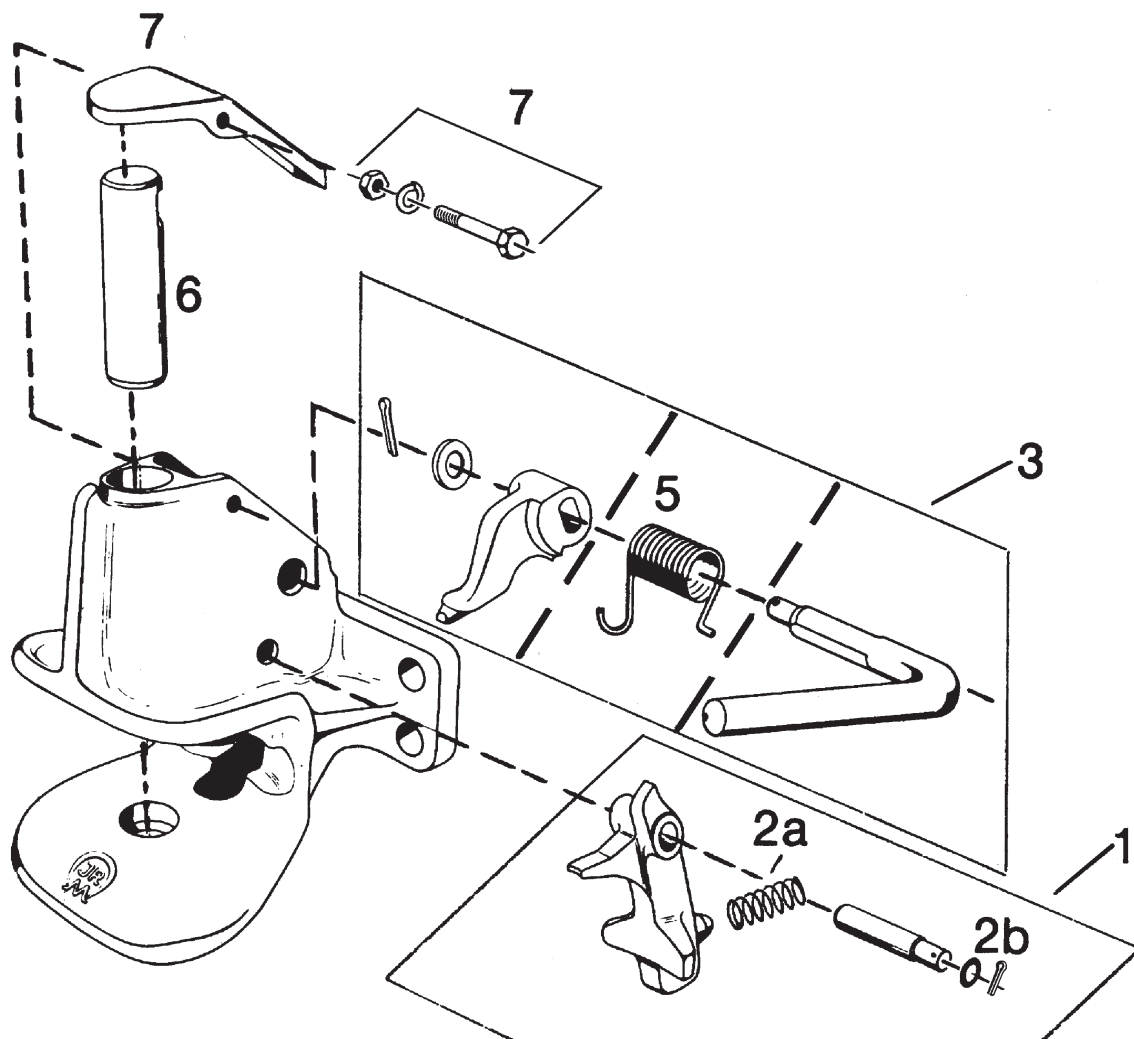


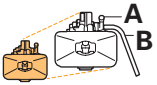
Pos.		ROE	
01	RO*260	67740	1
01	RO*260	67739	1
01	RO*340	70441	1
01	RO*700	70428	1
01	RO*710	70001	1
02	RO*260	47012	1

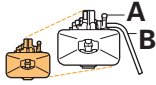
Pos.		ROE	
02	RO*340	47075	1
02	RO*700, RO*710	47063	1
03	RO*260, RO*340, RO*700, RO*710	90091	1
04	RO*260, RO*340, RO*700, RO*710	90080	1

RO★244-1 (ABG-Version)

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

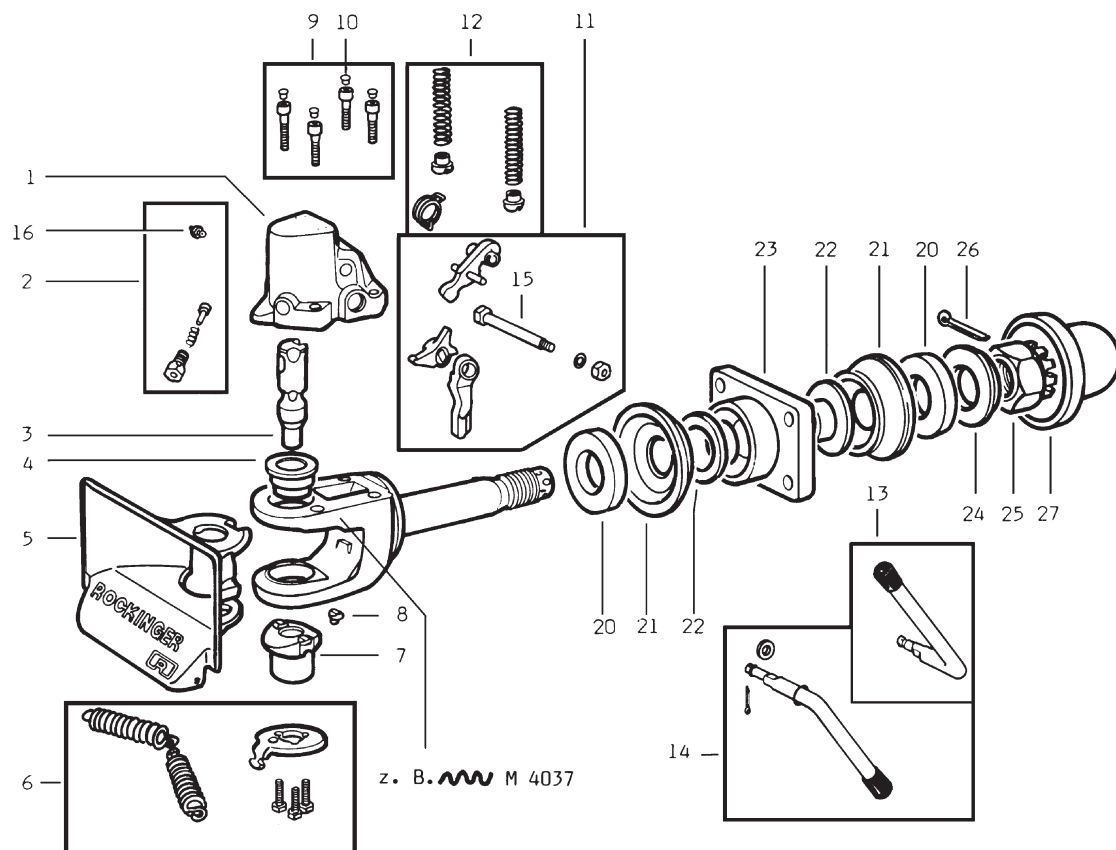


Pos.		ROE	
01	Kit¹ RO244xxx0	70237	1
01	Kit¹ RO244xxx1	70858	1
01	Kit¹ RO244A35511	70922	1
02	¹RO244Axx0	55204	1
02	¹RO244Axx1	55252	1

Pos.		ROE	
03	Kit	70238	1
05	RO244xxx0	55205	1
05	RO244xxx1	55252	1
06		47014	1
07		70240	1

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

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



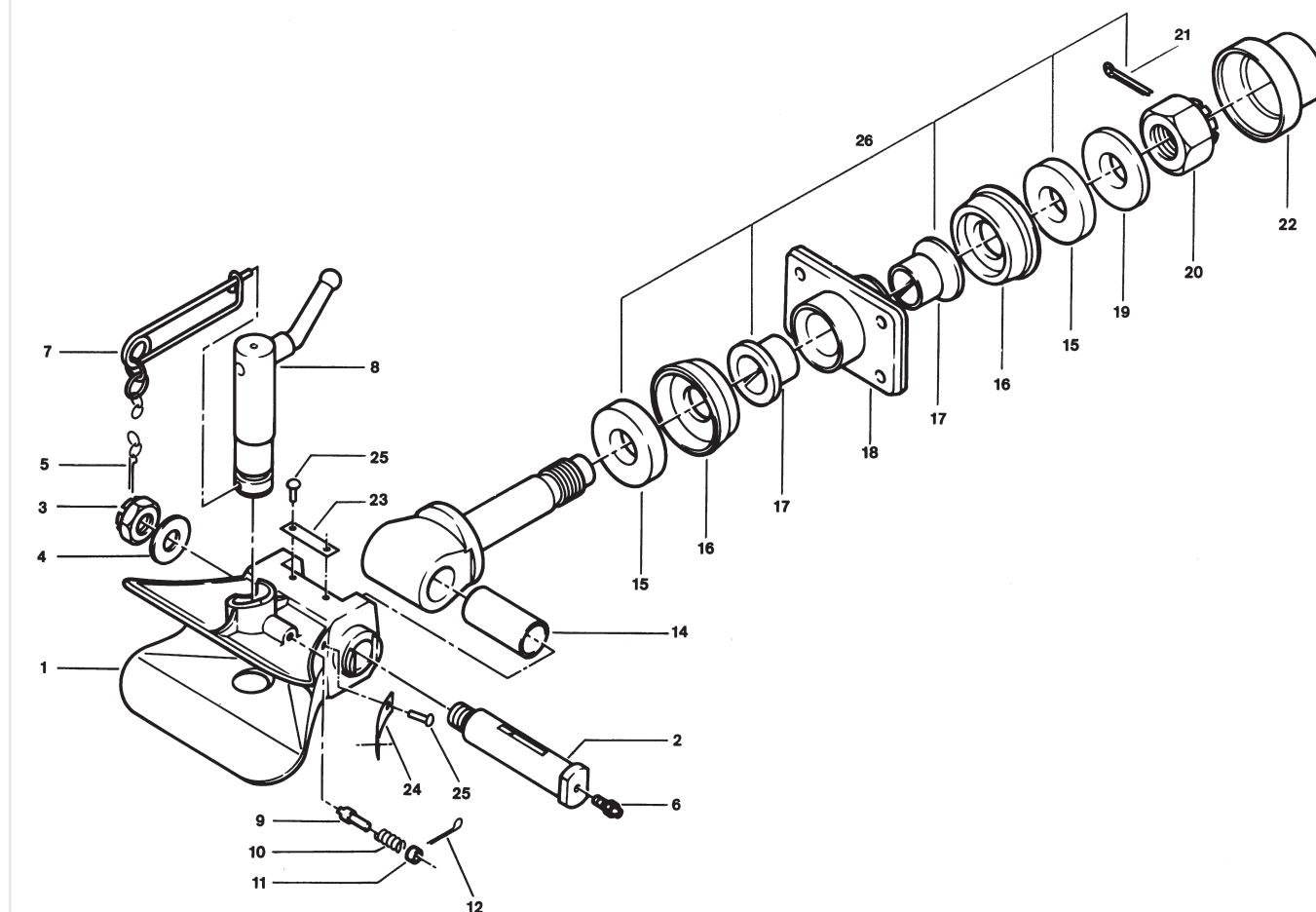
Pos.		ROE	
01	ROxxxAxxxx	67262	
01	ROxxxBxxxx	67263	
02		67796	1
03		47012	1
04		53293	1
05		46049	1
06		70721	1
07		67260	1
09		57162	1
10		25151	4
11		67797	1
12		67798	1
13	ROxxxAxxxx	50215	1

Pos.		ROE	
14	ROxxxBxxxx	50184	1
16		39179	1
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

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

Pos.	ROE	
08, 20, 22, 26	67472	135
08, 20, 22, 26	67471	145, 150
02, 03, 04, 06, 07, 08	71123	135, 145, 150

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

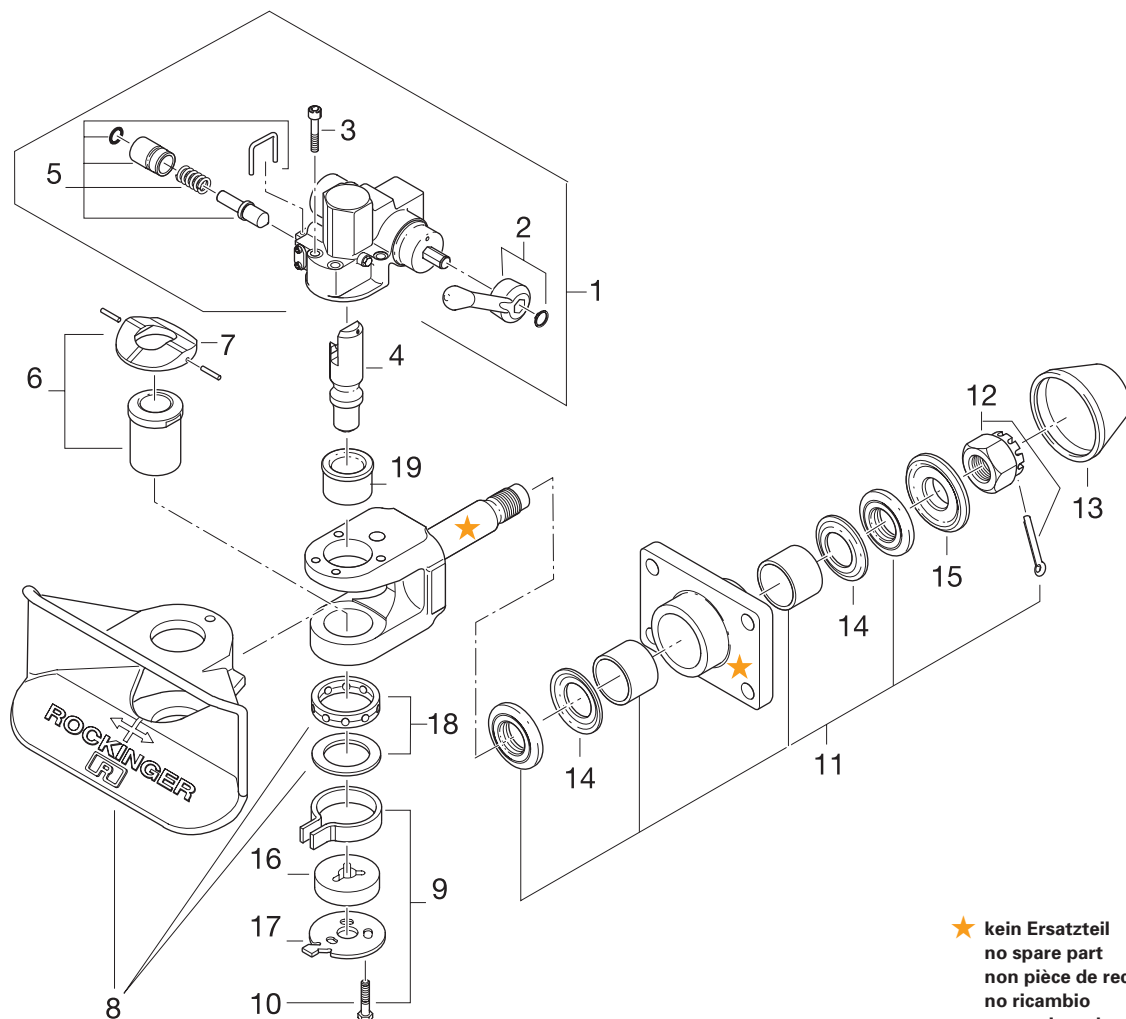
Pos.		ROE	
18	240	43235	1
18	250	43236	1
19	235	54707	1
19	240, 250	54680	1
20	235	56051	1
20	240, 250	56049	1
22	235	25214	1
22	240, 250	25072	1

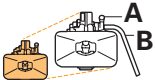
Reparatursatz • Repair kit • Kit de réparation Kit riparazione • Juego de reperation

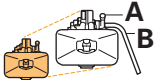
Pos.	ROE	
15, 17, 21	70343	235
15, 17, 21	70344	240, 250
01, 02, 07, 08, 09	70048	235, 240, 250

RO★400 C

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		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		46109	1
09		55256	1
10		30362	1
11	135	25476	1
11	145, 150	25477	1

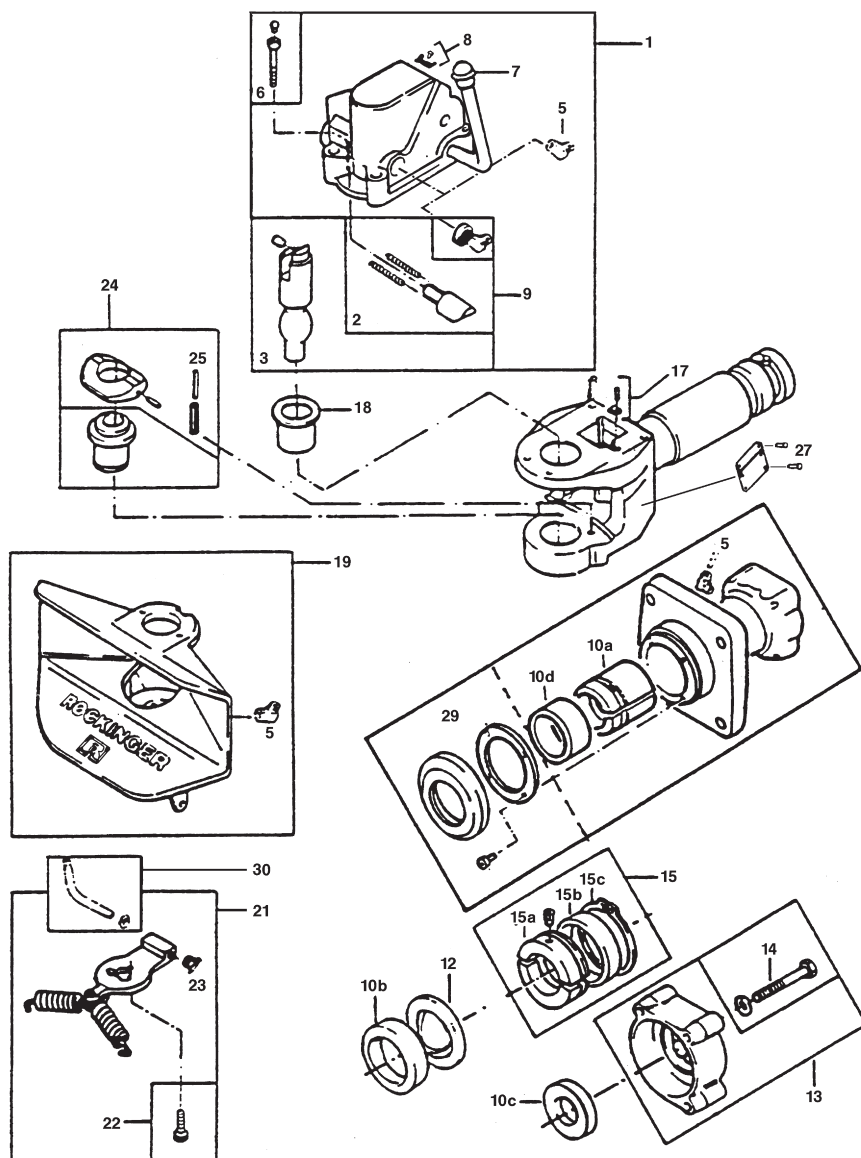
Pos.		ROE	
12	135	56111	1
12	145, 150	56112	1
13	135	25254	1
13	145, 150	25347	1
14	135	44160	1
14	145, 150	44161	1
15	135	59279	1
15	145, 150	59280	1
16		53467	1
17		65626	1
18		25479	1
19		53520	1

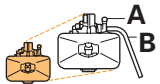
Reparaturatz • Repair kit • Kit de réparation Kit riparazione • Juego de reperation

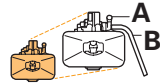
Pos.	ROE
04, 06, 09, 16, 17, 19	71124

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

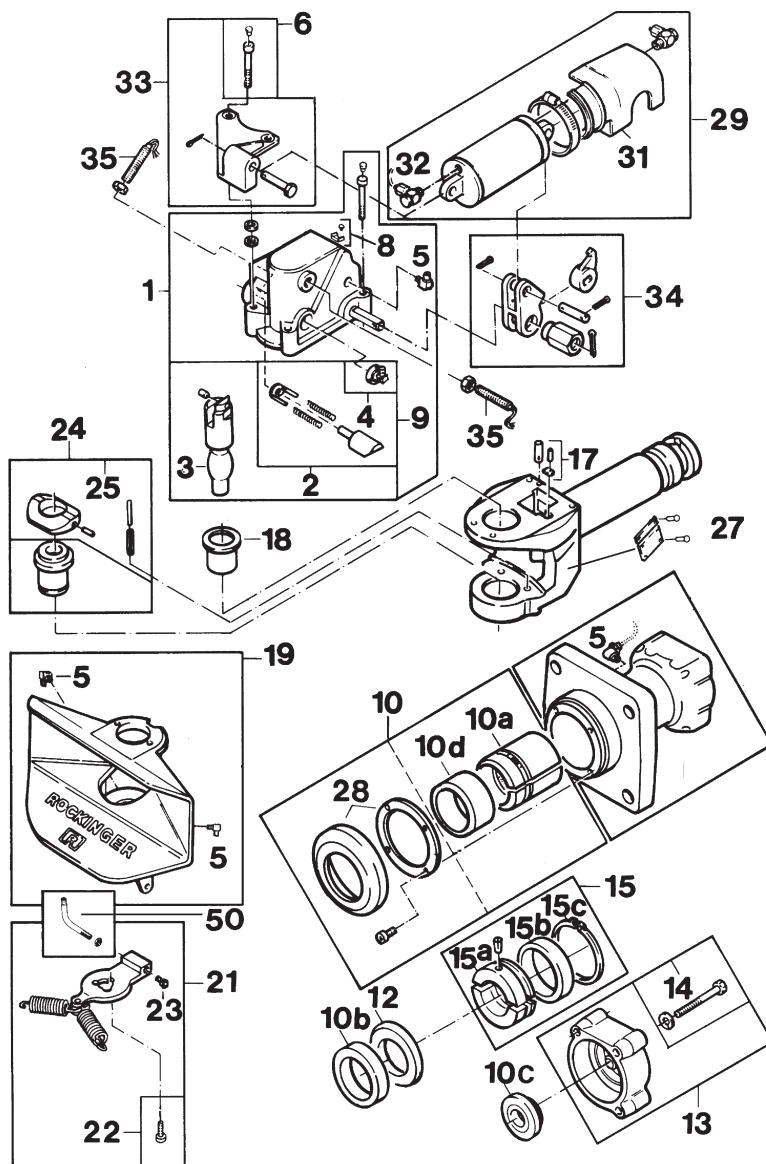


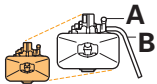
Pos.		ROE	
01	ROxxxAxxxx	70816	1
02		70991	1
03		70009	1
05		70196	5
06		57275	1
07		25104	1
08		70197	1
09		70992	1
10		70994	1
12		59042	1
13		70088	1
14		70014	1

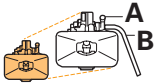
Pos.		ROE	
15		70089	1
17		70073	1
18		53367	1
19		70204	1
21		70995	1
22		70996	1
23		25230	1
24		70169	1
25		70170	1
29		25273	1
30		70202	1

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

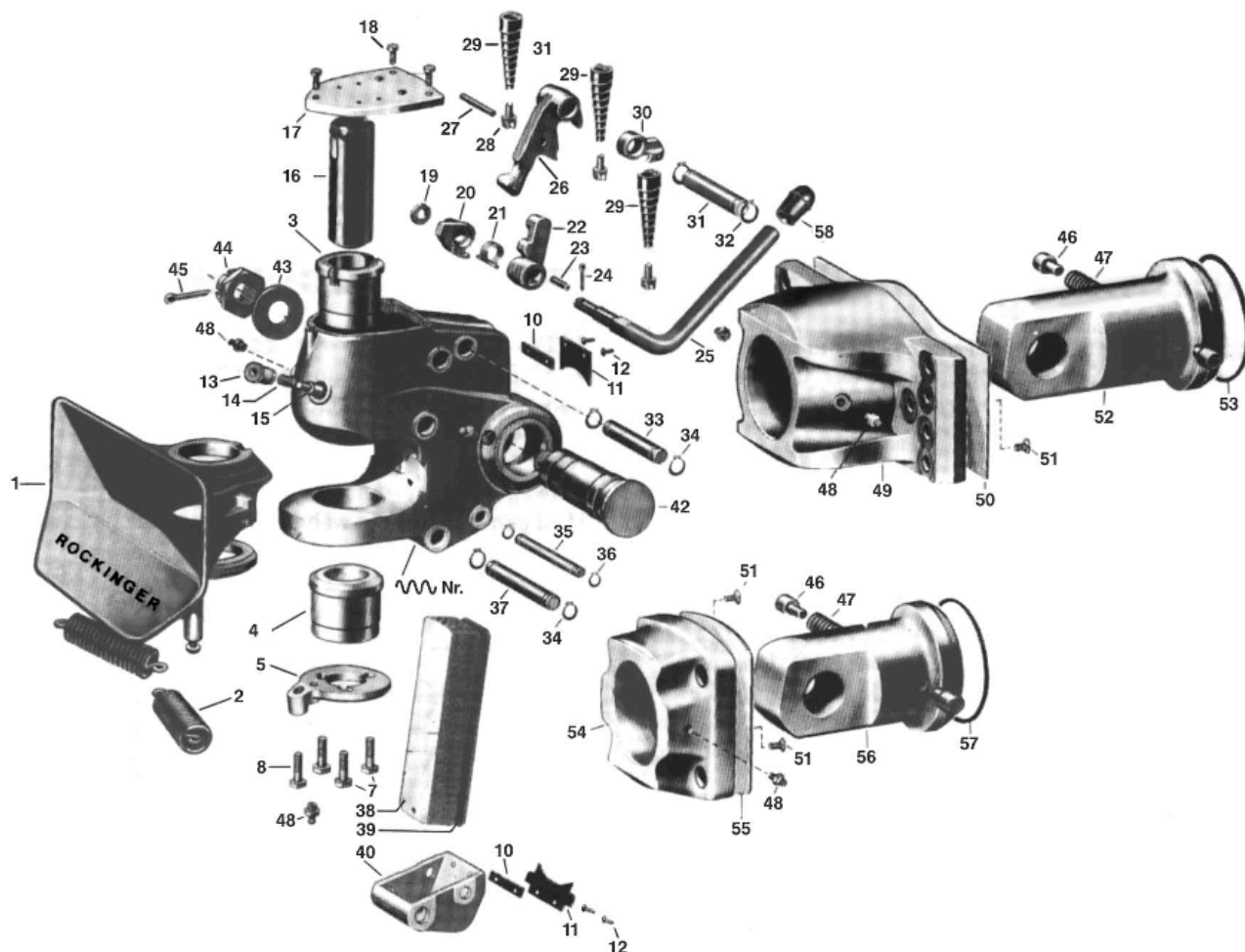


Pos.		ROE	
01		70815	1
02		70991	1
03		47063	1
04		70198	1
05		70196	5
06		70115	1
08		70197	1
09		70993	1
10		70994	1
12		59042	1
13		70088	1
14		70014	1
15		70089	1
17		70073	1

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

RO★56 / 561 (ABG-Version)

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



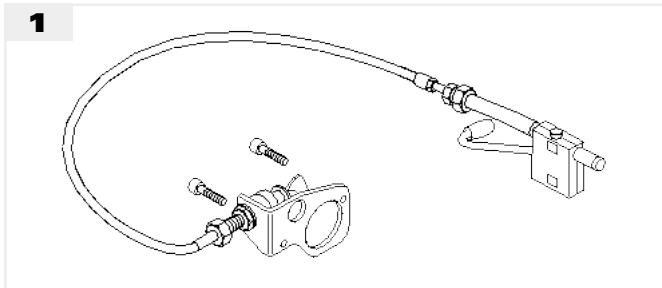
Pos.		ROE	
01		46020	1
01a	(1 + 3)	70463	1
02		55005	2
03		53019	1
04		53244	1
05		65549	1
07		57236	1
08		56024	1
10		15008	2
11		25010	2
15		68000	
16		47041	1
17		65009	1
18		70249	1
19		33011	1
20		51012	
22		51013	1
23		32007	1
25		50084	
25		50092	1

Pos.		ROE	
25		50177	1
26		51036	1
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

Reparaturatz • Repair kit • Kit de réparation • Kit riparazione • Juego de reperation

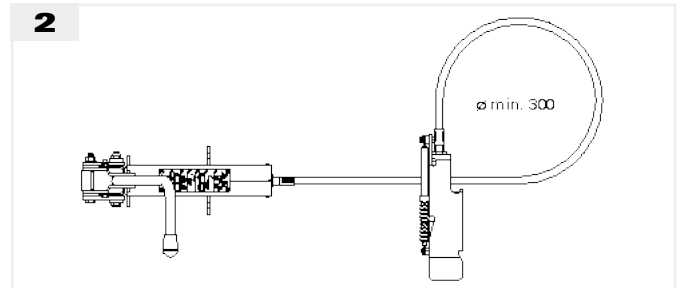
Pos.	ROE	
03, 04, 16, 21, 24, 32, 34, 35, 36, 39, 42, 44, 45, 48, 49, 54	66920	561
03, 04, 16, 21, 24, 32, 34, 35, 36, 39, 42, 44, 45, 48, 49, 54	67252	56

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



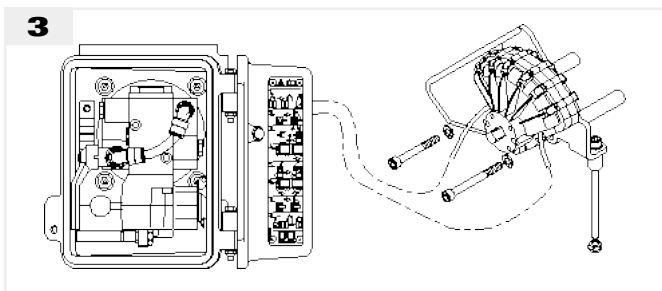
Mechanische Fernbedienung (40, 50 mm) • Mechanical remote operation (40, 50 mm) • Commande à distance mécanique (40, 50 mm) • Apertura meccanica a distanza (40, 50 mm) • Telemando mecánico (40, 50 mm)

ROE	
70962	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0400xxxC, R0530xxxC, R0430xxxC, R0560xxxC
71676	für/for/pour/per/para R0400xxx1, R0430xxx2



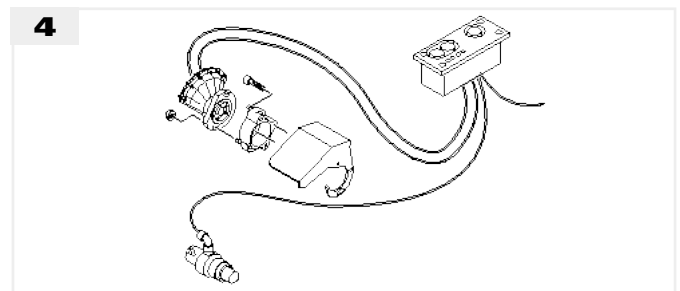
Mechanische Fernbedienung kraftunterstützend (40, 50 mm) • Mechanical remote operation power assisted (40, 50 mm) • Commande à distance mécanique à transmission de force (40, 50 mm) • Apertura meccanica a distanza a trasmissione di forza (40, 50 mm) • Telemando mecánico con transmisión de fuerza (40, 50 mm)

ROE	
71469FA2	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0400xxxC, R0530xxxC, R0430xxxC, R0560xxxC
71599FA1	für/for/pour/per/para R0400xxx1, R0430xxx2, R0410xxx0, R0413xxx0, R0590xxx1
71599FA2	für/for/pour/per/para R0410xxx0, R0413xxx0
71599FA5	für/for/pour/per/para R0590xxx1



Pneumatische Fernbedienungen • Pneumatic remote operation • Commandes pneumatiques à distances • Comando a distanza pneumatico • El mando a distancia neumático

ROE	
71270	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0530xxxC, R0560xxxC,
71461	für/for/pour/per/para R0400xxx1, R0430xxx2
71459	für/for/pour/per/para R0410xxx0, R0413xxx0
71645	für/for/pour/per/para R0590xxx1



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

ROE	
70844C	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0400xxxC, R0530xxxC, R0430xxxC, R0560xxxC



Mechanische Fernanzeige • Mechanical in-cab status indicator • Affichage à distance mécanique • Segnalatore apertura/chiusura meccanico • Tele-indicación mecánico

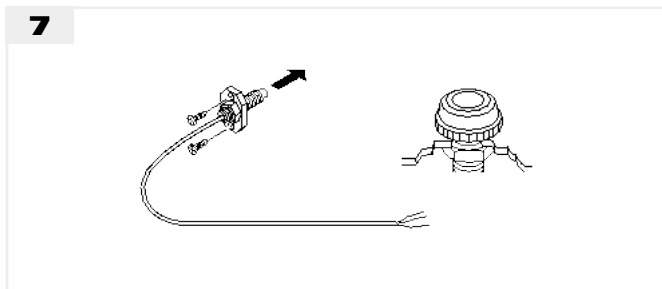
ROE	
71410	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0400xxxC, R0530xxxC, R0430xxxC, R0560xxxC
71575	für/for/pour/per/para R0400xxx1, R0430xxx2, R0410xxx0, R0413xxx0

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



Elektrische Fernanzeige, Anzeige am Heck • In-cab status indicator, display at the rear • Affichage à distance électrique, affichage à l'arrière • Segnalatore elettronico, segnalatore posteriore • Teleindicación eléctrica, monitor en la parte trasera

ROE	
71701	für/for/pour/per/para R0400xxx1, R0430xxx2, R0410xxx0, R0413xxx0, R0590xxx1



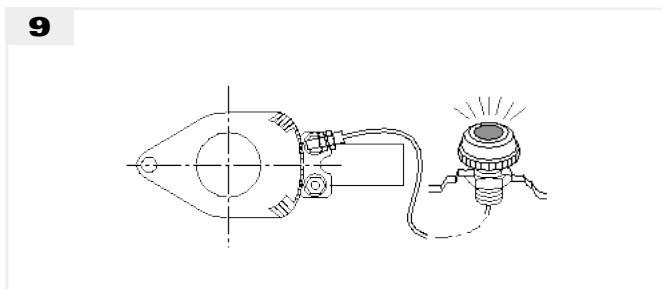
Elektrische Fernanzeige, Anzeige in der Kabine • In-cab status indicator, display in the cab • Affichage à distance électrique, affichage en cabine • Segnalatore elettronico, segnalatore nella cabina • Teleindicación eléctrica, monitor en la cabina

ROE	
70936	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0400xxxC, R0530xxxC, R0430xxxC, R0560xxxC
71654	für/for/pour/per/para R0400xxx1, R0430xxx2, R0410xxx0, R0413xxx0, R0590xxx1



Elektronische Fernanzeige (zwei Sensor) • Electronically in-cab status indicator (2-sensor) • Affichage à distance électronique (2 capteurs) • Segnalatore apertura/chiusura elettronico (2 sensori) • Teleindicación electrónico (2 sensores)

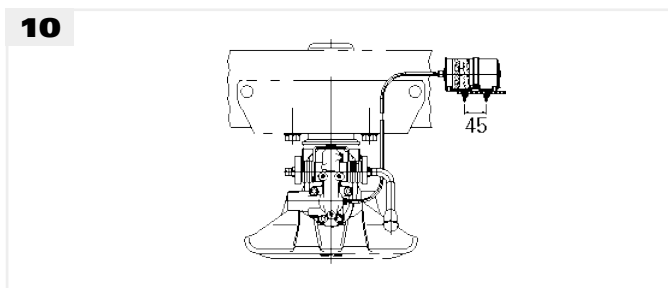
ROE	
71546	für/for/pour/per/para R0400xxx1, R0430xxx2, R0410xxx0, R0413xxx0, R0590xxx1
71671	für/for/pour/per/para R0567xxx0



Schwenkwinkel-Warnanzeige (50 mm) • Drawbar turn angle warning system (50 mm) • Voyant d'angle de rotation (50 mm) • Indicazione di pericolo angolo di inclinazione (50 mm) • Indicador de advertencia de ángulo de giro (50 mm)

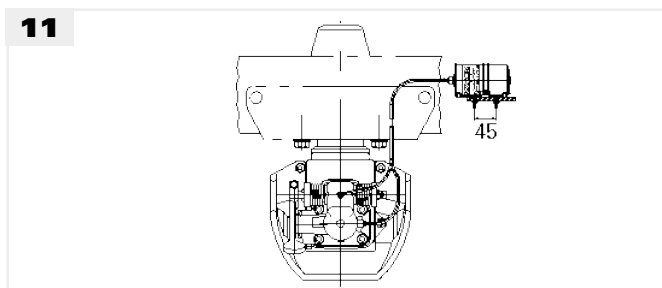
ROE	
70935	bis/up to/jusqu'à/fin a/hasta R0500xxx3, R0530xxxC, R0560xxxC
71588*	für/for/pour/per/para R0500xxx3

* 3 Sensor Lösung inkl. elektronische Fernanzeige (8) • 3 sensor solution including in-cab status indicator (8) • Solution à 3 capteurs, affichage à distance électronique inclu (8) • Soluzione a 3 sensori con segnalatore elettronico (8) • Solución de 3 sensores incl. teleindicación eléctrica (8)



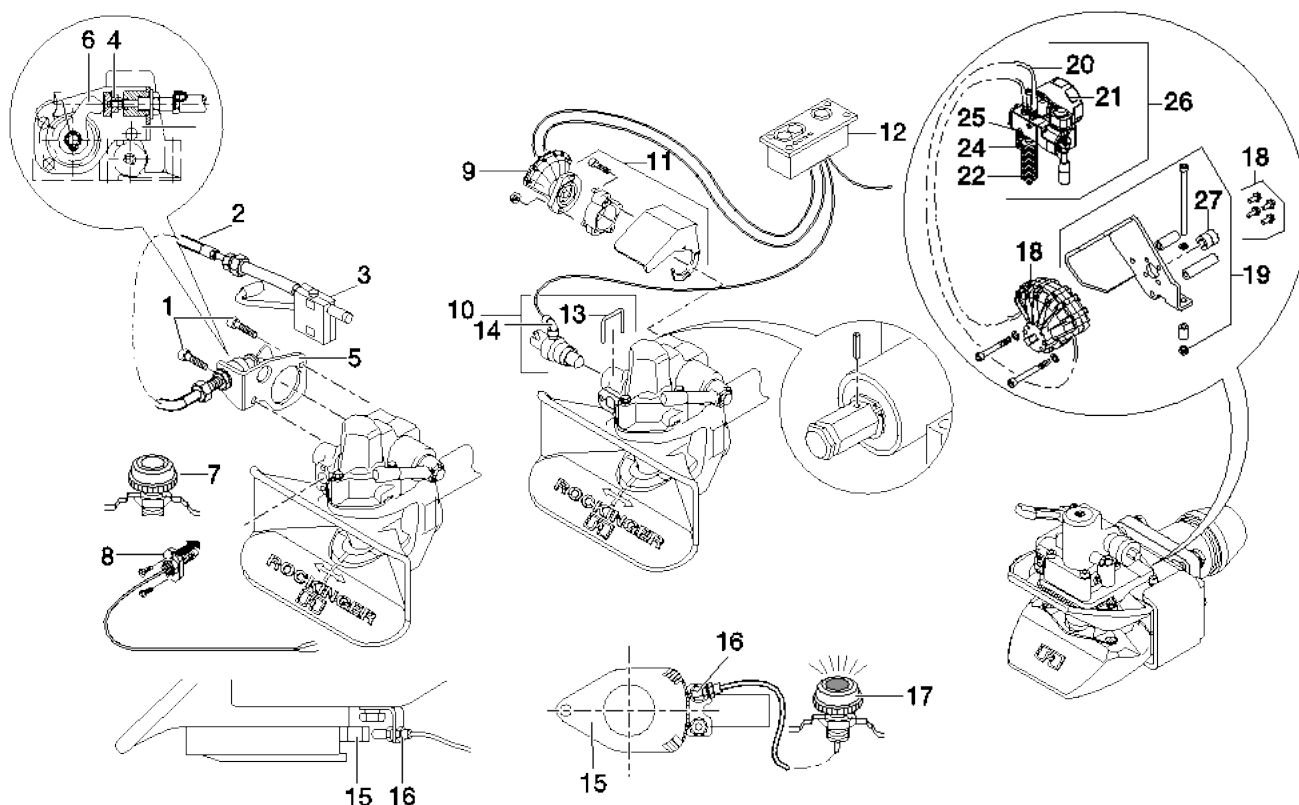
LubeTronic AK1 mit einer Schmierstelle • LubeTronic AK1 with one lubricating point • LubeTronic AK1 avec un point de graissage • LubeTronic AK1 con un punto di lubrificazione • LubeTronic AK1 con un punto de engrase

ROE	
71624-1	für/for/pour/per/para R0400, R0430, R05410, R0413, R0500, R0530, R0560, R0590



LubeTronic AK2 mit zwei Schmierstellen • LubeTronic AK2 with two lubricating points • LubeTronic AK2 avec deux points de graissage • LubeTronic AK2 con due punti di lubrificazione • LubeTronic AK2 con dos puntos de engrase

ROE	
71624-2	für/for/pour/per/para R0570, R0576



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

Pos.	ROE	
71167		
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

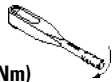
D Schraubensätze für die Befestigung der Kupplung an der Traverse

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

						ROE
			K (mm)	K (max. mm)	(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

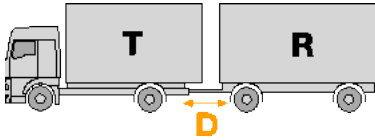
Größe von Kupplung und Zugöse

- 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/s²

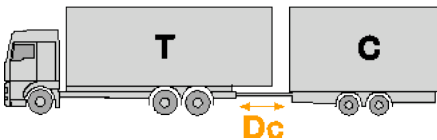
Der errechnete D-Wert darf **gleich** oder **kleiner** als der D-Wert von Kupplung bzw. Zugöse sein.
Bei zulässiger Verwendung der Kupplung am Anhänger:

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

R₁ : Gesamtgewicht des Anhängers, an den die Kupplung angebaut ist (max. 24 t) R₁ ≥ R₂

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)

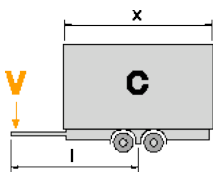
$$Dc \text{ (kN)} = g \cdot \frac{T \cdot C}{T + C}$$

T : Gesamtgewicht des Zugfahrzeuges in t
C : Summe der Achslasten des Starrdeichselanhängers in t
g : Erdbeschleunigung 9,81 m/s²

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/s²

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

x²/l² : 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

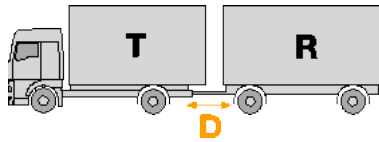
- Hole pattern in the crossbar of the towing vehicle
- Hole pattern in the hitch flange
- Pin size of the hitch

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/s²

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:

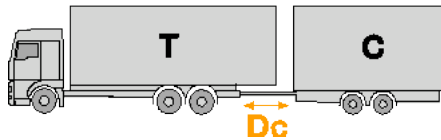
$$D \text{ (kN)} = g \cdot \frac{R_1 \cdot R_2}{R_1 + R_2}$$

R₁: total weight of trailer where the hitch is mounted
(max. 24 t) R₁ ≥ R₂

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

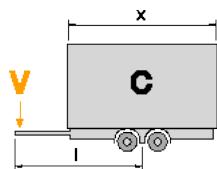
g : gravitation acceleration 9,81 m/s²

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

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

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/s²

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

x²/l² : 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.

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

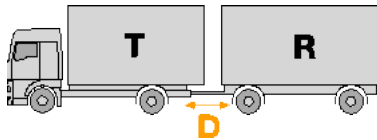
Dimension du crochet d'attelage et de l'anneau de remorquage

- 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/s²

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

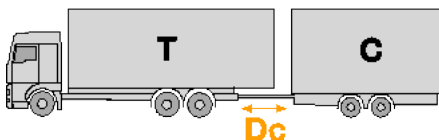
En cas d'autorisation d'utiliser le crochet d'attelage sur la remorque :

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

R₁ : poids total de la remorque à laquelle le crochet d'attelage est fixé (maxim. 24 t) R₁ ≥ R₂

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

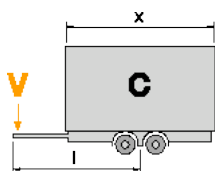
C : somme des charges de l'essieu de la remorque fixe en t

g : accélération due à la gravité 9,81 m/s²

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/s²

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

x²/l² : 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

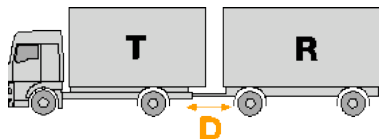
Dimensioni del gancio e dell'occhione

- 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/s²

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

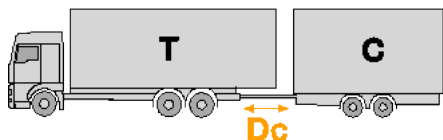
Per impieghi del gancio di traino ammessi al rimorchio:

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

R₁: peso totale del rimorchio sul quale è applicato il gancio di traino (max. 24 t) R₁ ≥ R₂

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

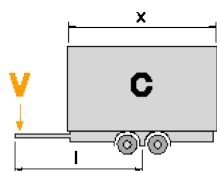
g : accelerazione di gravità 9,81 m/s²

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

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

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/s²

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

x²/l² : 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.

E Cálculo

Selección de enganche y punta de lanza

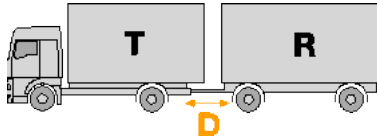
Tamaño de enganche y punta de lanza

- 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/s²

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

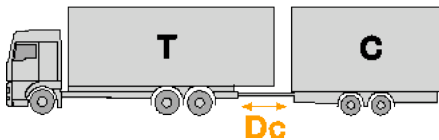
En caso de utilización admisible del enganche en el remolque:

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

R₁ : peso máximo del remolque en el que está montado el enganche (máx. 24 t) R₁ ≥ R₂

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

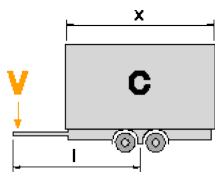
C : suma de las cargas de los ejes del remolque de ejes centrales en t

g : aceleración de la gravedad 9,81 m/s²

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/s²

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

x²/l² : 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.