

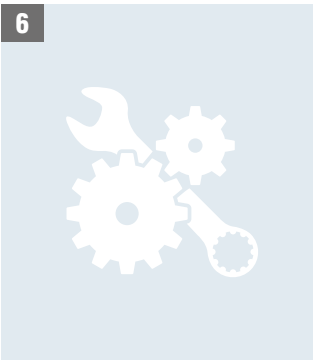
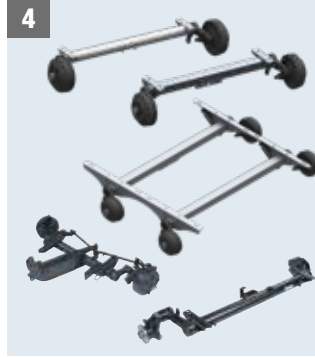
AL-KO

QUALITY FOR LIFE

CATALOGUE ADDENDUM TRAILER COMPONENTS

Reference BPW Fahrzeugtechnik





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1. SERVICE PACKAGE





SERVICE PACKAGE

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MERGER TO FORM DEXKO GLOBAL INC.



MERGER OF DEXTER AND AL-KO VEHICLE TECHNOLOGY: TOGETHER IS BETTER!

DE >< KO
G L O B A L



With DexKo Global Inc., we are on an expansion course around the world. We are a global market leader in our core business fields.

Last but not least, the merger with Dexter Axle shows that we think in long-term cycles and are actively shaping our commercial future with healthy growth.

The image that we have built for ourselves over a period of decades makes us the primary contact in all our business fields today.

With our strong brands, we are one of the designers of the mobile future.

THE AL-KO BRAND



BRAND IDENTITY

Safety, comfort and joy are the aims of our work. Factors that are reflected in the brand itself as well as in all our products. We love quality, we live quality. Ultimately, we have dedicated ourselves to a highly emotional message: to improve the quality of life of our customers a little bit every day. At AL-KO Vehicle Technology, we understand this to be QUALITY FOR LIFE.

AL-KO VEHICLE TECHNOLOGY AND ITS BRANDS



The name Sawiko is well-known in the motorhome market. It stands for expertise, innovative power, premium service and mobility for virtually every caravan and/or every lightweight commercial vehicle. The specialist in carrier systems for carrying bicycles, scooters, motorcycles, etc. delivers quality products that are produced in Germany as far as possible. "Made in Germany" at its best.

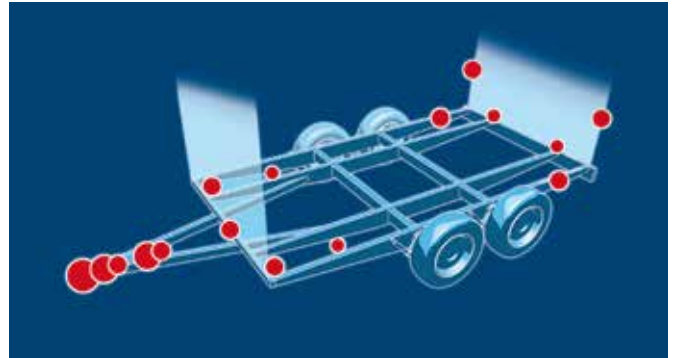


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WINTERHOFF
QUALITY TRAILER SYSTEMS

For decades, the name has been a constant on the market and fits perfectly into the AL-KO Vehicle Technology portfolio with its main focus on hitches, jockey wheels and fittings. The high Winterhoff quality is based on many years of experience, reliable employees, modern manufacture and perfect quality management, and guarantees exceptional value for money.



The Bradley brand stands for the highest levels of quality and safety, and thus slots seamlessly into the AL-KO brand promise. Outstanding constructions, extreme robustness, high longevity. And more than 90 years of experience in towing hitches and coupling components.



E&P Hydraulics develops, produces and markets hydraulic levelling systems for motorhomes, caravans and commercial vehicles. Our priority is on quality, reliability, durability and outstanding performance. The high-precision technology allows an appropriate solution to be found for practically any recreational vehicle.



QUALITY FOR LIFE

We love quality. We live quality. And we have the right answer for virtually every transport requirement in our sector. Our way of differentiating products into "Basic", "Plus" and "Premium" ensures that each customer can find the AL-KO solution best suited to his individual requirements. AL-KO Vehicle Technology is safety and quality in one: from product to delivery.

We want our customers to be satisfied and successful.

Quality for life!





VEHICLE TECHNOLOGY

We are not only a byword for motorhome and caravan fans in the leisure vehicle sector: with ingenious lightweight chassis and chassis components as well as individual accessories, we guarantee safe driving and joy on journeys.

With our premium solutions in the commercial vehicles and trailers segment, we also ensure outstanding ergonomics and safety during transport. We are one of the leading global axle supplier in the lightweight weight range.

"We carry what matters": Boat trailers, delivery vehicles, slope maintenance vehicles and many more. You can trust us with your loads. We supply the vehicle components and accessories – the best basis for your tasks.

TRAINING

In our seminars, we communicate the specialist knowledge needed to keep your service and sales capabilities honed to the highest level.



TECHNOLOGY CENTRE

At AL-KO, research and development are firmly involved in the product creation process from the initial idea right through to production. The result: Innovative solutions that satisfy the most demanding requirements.



OUR SERVICE FOR YOU



OUR SITES

ALOIS KOBER GMBH

Ichenhauser Strasse 14
89359 Kötz, Germany
Phone: +49 82 21 97-0
info@alko-tech.com

ALOIS KOBER GMBH

Weiler Weg 5
89335 Ichenhausen, Germany
Phone: +49 82 23 /40 03-0
kunststofftechnik@alko-tech.com

AL-KO DÄMPFUNGSTECHNIK GMBH

Frankenberger Landstraße 1
09661 Rossau OT Seifersbach, Germany
Phone: +49 3727 99 4 99-0
info.rossau@alko-tech.com

AL-KO TECHNOLOGY PADERBORN GMBH

Pater-Ewald-Straße 29
33104 Paderborn, Germany
Phone: +49 5254 803-0
info15@alko-tech.com

AL-KO S.A.S.

365 Rue des industries B.P.99
71501 Louhans Cédex, France
Phone: +33 38576-3500
info.fr@alko-tech.com

AL-KO KOBER LTD.

South Warwickshire Business Park, Kineton Road,
Southam, Warwickshire, CV47 0AL, UK
Phone: +44 19 26 8 18-500
mail.uk@alko-tech.com

AL-KO KOBER SRL

Via G. Verdi 23
37060 Castel d'Azzano, Italy
Phone: +39 045 85 46 011
info.it@alko-tech.com

AL-KO KOBER B.V.

Diamantstraat 33
7554 TA Hengelo, Netherlands
Phone: +31 74 255-9955
info.nl@alko-tech.com

AL-KO KOBER B.V.

Noorderlaan 79 bus 9
2030 Antwerpen, Belgium
Phone: + 32 3 543 6110
info.be@alko-tech.com

AL-KO TECHNOLOGY AUSTRIA GMBH

Talstraße 150
6284 Ramsau im Zillertal, Austria
Phone: +43 5282 3360 700
vertrieb.at@alko-tech.com

AL-KO TECHNOLOGY POLSKA SP. Z O.O.

ul. Bukowska 10, Wysogotowo
62-081 Przeźmierowo, Poland
Phone: +48 61 8163966
technikapojazdowa@alko-tech.com

OOO AL-KO TECHNOLOGY RUS

Otkrytoe shosse 12/14,
Moscow, Russian Federation 107370
Phone: +7 4 99 168 87 16
info@alko-tech.com.ru

Successful partnerships need to be refreshed, invigorated and created anew every day.

The **international marketing** of our products and services demands continuous contact. Continuous presence on the ground is ensured by our **global network of branches**, with which we combine our strengths and exploit synergy effects.

Customers and suppliers can find **direct contacts**, reliable **AL-KO quality** and comprehensive, **expert service** here!

AL-KO KOBER AB

Box 9088 J A Gahms Gata 6
400 92 Göteborg, Sweden
Phone: +46 31 57 82 80
question.se@alko-tech.com

TOV AL-KO KOBER

Brovarska Str. 156, 07442, Velyka Dyerka,
Brovary district, Kyiv region, Ukraine
Phone: +38 044 392-0708
info@al-ko.ua

AL-KO KOBER TECHNOLOGY SRL

Str. GARII, Nr. 7,
557270 – Parc Industrial Sura Mica,
Sibiu, Romania
sales.ro@alko-tech.com

MARINELAND CO., LTD.

536, Kyoungchoon-ro, Kapyong-kun,
Korea 12457
Phone: +82 31 -585-5221
al-ko@marineland.kr

AL-KO ESPANA S. A. U.

Crta. de Logrono, Km. 13
50180 Utebo Zaragoza, Spain
Phone: +34 976 462280
info.zaragoza@alko-tech.com

AL-KO MAGYAROSZÁG KFT.

Harasztí u. 122/a
2351 Alsónémedi, Hungary
Phone: +36 29 53 70-50
al-ko@al-ko.hu

TRANSTEC ENGINEERING CO., LTD.

111 Ladprao 29, Chankasem, Chatujak
Bangkok 10900, Thailand
Phone: +662 513 2571
sales@transtec-group.com

CARAC INDUSTRY CO., LTD.

1-4-2 Heiwadai, Nerima-ku
Tokyo 179-0083, Japan
Phone: +81 3 3931 0220
info@carac.co.jp

AL-KO TECHNOLOGY CZ S. R. O.

Razov 1217
76312 Vizovice, Czech Republic
Phone: +420 5 7745 43 42
info@al-ko.cz

ALKO TEKNOLOJİ VE ARAÇ LTD. ŞTİ.

Yukarı Dudullu Mah. İmes Sanayi Sitesi A108 Sk.No:2
34776 Ümraniye - İstanbul, Turkey
Phone: +90 216 3405128
info-tr@alko-tech.com

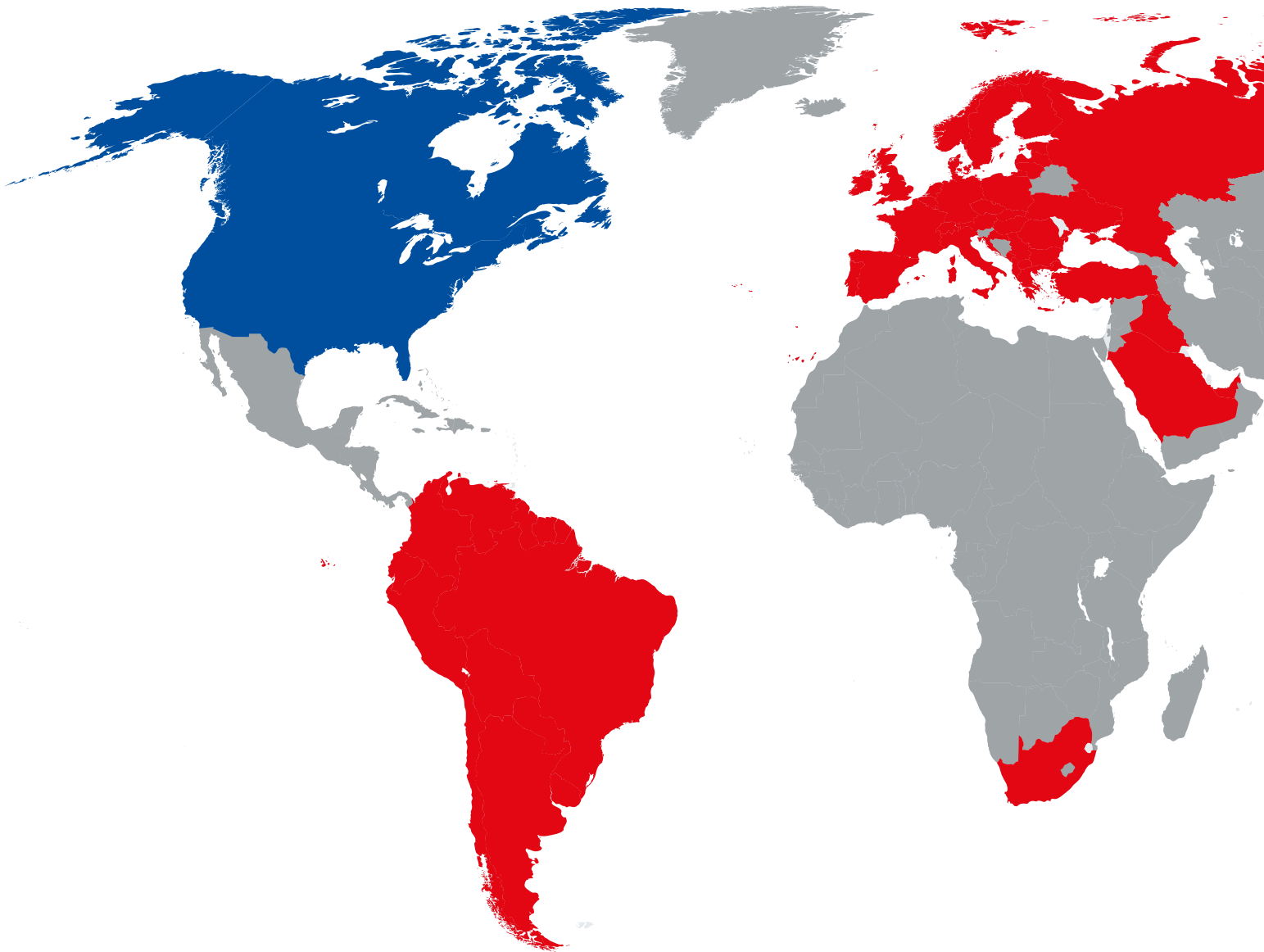
AL-KO KOBER SIA

Ciekurkalna 2. line 75
LV-1026, Riga, Latvia
Phone: +371 67 40 9330
al-ko@al-ko.lv

M. H. AL MAHROOS BSC (C)

P.O. Box 65, Manama
Bahrain
Phone: +97 3 17 40 80 90
suraj@almahroos.com

IN GOOD HANDS – WORLDWIDE





WE'RE RIGHT WHERE YOU NEED US

With around 30 production sites and sales offices as well as roughly 1,000 service stations around the world, our network guarantees constant presence and personal contact. Our sophisticated logistics network around the entire globe optimises our flow of goods and guarantees a global presence 'just-in-time'.

AL-KO quality and service are assured everywhere. You can count on that!

- AL-KO sites and sales partners
- Sites of the Dexter Axle Company

AL-KO LOGISTICAL COMPETENCE

FOCUS IS ON THE CUSTOMER

At AL-KO, we not only attach great value to the top quality of our products, we also focus on the customer. Service quality and a smooth and efficient delivery process are vital so that each customer order is completed quickly and reliably. More than ever before in this age of globalisation.

As an internationally operating company, we know what we are talking about. Effectiveness and logistical competence are required from order processing, production and procurement up to and including distribution.

CLOSE COOPERATION BETWEEN AL-KO AND THE CUSTOMER

Our primary concern is close cooperation between AL-KO and our customers, because only this enables the effective and satisfactory implementation of individual projects. Together with our customers, we plan individual cooperation models, in the B2B/EDI sector, for instance, or offer process audits or tailored support in process design.

Because we believe that close and partnership-based cooperation is the foundation for a trusting business relationship.

PROCESS-OPTIMISED, INTEGRATIVE ORDER PROCESSING SCM

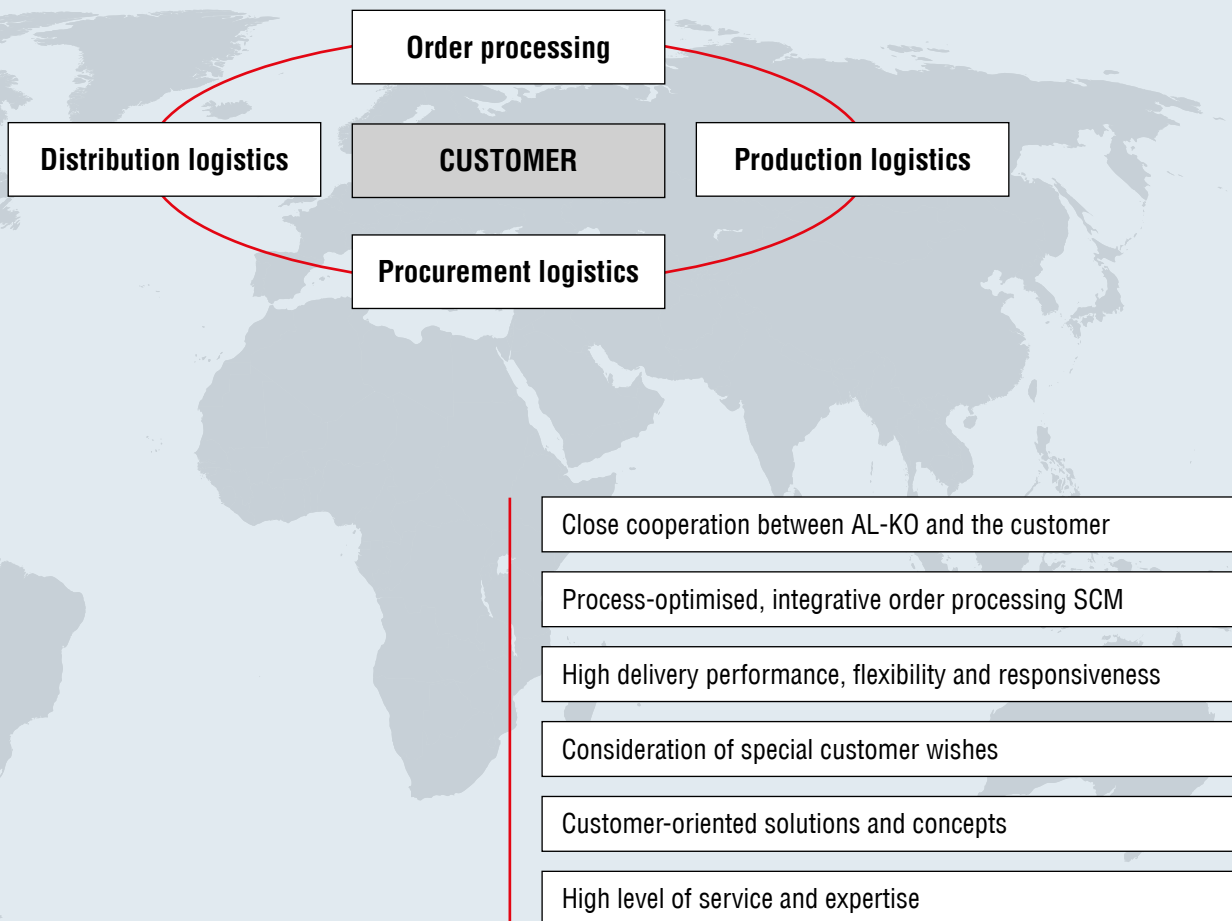
(Supply chain management)

Not only close cooperation with our customers is an important concern to us. As a globally operating customer, we focus on efficiency and customer orientation. Process-optimised, integrative order processing (supply chain management) means the optimisation of procedures and the integration of important business processes along the supply chain. The synergy effects that result within the company and also within the individual supply chain companies ensure not only the commercial success, but also the joint success, of all involved business partners.

RELIABLE CUSTOMER PLANNING CAPABILITY

Effective supply chain management enables our customers to plan precisely. Vendor-managed inventory (VMI), process reliability and our AL-KO timeline: we always guarantee reliable delivery. The use of customer forecast data also enables the optimum definition of stocking levels; short lead times optimise the supply process - you can always rely on high delivery performance, flexibility and responsiveness from us.





CONSIDERATION OF SPECIAL CUSTOMER WISHES

Whether just-in-time delivery (JIT), labelling or special packaging, we are happy to take account of your special customer wishes. Do you have a special requirement situation? No problem. Together with you, we will work out tailored solutions and individual concepts that optimally meet your requirement profile. Talk to us.

OUR SERVICE EXPERTISE IS INTERNATIONAL

Service quality is very important to us. As an international company, we operate a tight network of qualified AL-KO service centres and customer centres throughout Europe. Irrespective of whether they are located in Germany, Austria, Switzerland, Poland, England, France or Italy, for instance - you will be provided with professional and expert advice by our employees at all of our service

centres. There are 410 AL-KO service stations in Germany alone. To guarantee a constantly high level of service in the long term, we regularly offer specialist seminars and qualified training courses at our own AL-KO Academy. Here, our trade and workshop partners can undergo extensive further training on site, ensuring that their specialist knowledge is absolutely up to date.

AL-KO TECHNICAL DEVELOPMENT TESTING

In close coordination and collaboration with the state-of-the-art testing department, our engineers at the new technology centre push individual components, assemblies and even finished products to the limit every day. We are proud of our customised, state-of-the-art testing facilities that enable the most stringent endurance and wear tests under real operating conditions. In our market environment, they offer unique opportunities for the testing of individual components and entire vehicles. Only what is assessed as flawless finally receives our "Quality for Life" award!



TEST EQUIPMENT

- | Roller and brake dynamometer
- | Vibration platform
- | Servo-hydraulic test rig
- | Measurement trailer
- | Salt spray chamber (environmental simulation)
- | Various component test rigs for validating the AL-KO portfolio
- | Prototype/sample construction
- | 3 post-type lifting platforms
- | 2 concertina-type lifting platforms
- | State-of-the-art measurement technology
- | ...



Roller dynamometer



Brake dynamometer

TRAILER / CARAVAN SECTOR:

Test trailer construction

- | Caravan
- | Commercial

Customer test – e.g.

- | Endurance test
- | Special test (e.g. driving stability at 140 km/h)
- | Professional test (e.g. for CCC)

Vehicle measurement

- | Shaker test up to 2.0 t
- | Trailer stiffness (bending)

Trailer component test

- | Durability and operating stability
- | Active safety (Vcrit caravan, ATC, etc.)
- | MAMMUT manoeuvring drive
- | Brake performance
- | Homologation test
- | Etc.

Sample construction

- | Trade fair samples (e.g. for CSD coil spring axle, etc.)
- | Test samples for customer tests
- | Test trailer
- | Etc.





MOTORHOME / SPECIAL VEHICLE SECTOR

Test vehicle construction

- | Motorhome
- | Light commercial vehicles / special vehicles

Customer test – e.g.

- | Endurance test
- | Special test (e.g. driving properties)
- | Professional test (e.g. for RMI)

Vehicle measurements

- | Centre of gravity position
- | Torsional stiffness
- | Bending resistance

Motor chassis testing

- | Durability and operating stability
- | Active safety → AL-KO ESP Certificate of Compliance
- | Ride & handling → Chassis tuning
- | Brake performance
- | Homologation test
- | Etc.

Prototyping

- | Trade fair samples (e.g. all-wheel drive demonstrator, etc.)
- | Test vehicles for customers
- | Etc.



SERVO-HYDRAULIC TEST RIG

Execution of ECE R55 test for towbar connection parts such as e.g.

- | Hitches
- | Drawbars

Component and system tests

- | Swing arm
- | 13" twist-beam axle
- | Safety belt system
- | ISOFIX

Customer tests

- | Floor bracket system
- | Fitting systems
- | Sandwich material test
- | Etc.

- | Latest control/regulation system technology
- | Video monitored tests
- | 24 h – 7 days a week – 352 days a year



2. TOWBAR CONNECTIONS (DRAWBARS)



2. TOWBAR CONNECTIONS (DRAWBARS)

Unbraked towbar connections	22 – 25
Drawbars	26
Mounting assemblies	27

TOWBAR CONNECTIONS (DRAWBARS)

unbraked, height-adjustable with DIN drawbar eye ZOV,
permitted gross weight up to 5,000 kg



SAP: ZUGEINRICHTG KPL ZOV 1,2-1.1 B DIN-ÖSE

Permitted gross weight [kg]	Sales designation	Order No. incl. DIN drawbar eye	Reference No. incl. DIN drawbar eye	K	Dimensions [mm]				Perm. nose load [kg]	ECE test code	Weight [kg]
					A	L	B	V			
up to 1,200	ZOV 1.2-1.1 B	4021617	47.23.403.010	Ø 82.5	523	1070	0-225	300	100	E1 55R-01 1132	31.0
		4021618	47.23.403.012	Ø 82.5	589	1070	0-300	400	100	E1 55R-01 1132	33.0
		4014047	47.23.403.014	Ø 82.5	655	1070	0-375	500	100	E1 55R-01 1132	35.0
		4021619	47.23.403.015	Ø 82.5	523	1570	0-225	300	100	E1 55R-01 1132	37.0
		4021620	47.23.403.017	Ø 82.5	589	1570	0-300	400	100	E1 55R-01 1132	39.0
		4021621	47.23.403.019	Ø 82.5	655	1570	0-375	500	100	E1 55R-01 1132	41.0
		4021622	47.23.403.020	Ø 82.5	523	2070	0-225	300	100	E1 55R-01 1132	43.0
		4014048	47.23.403.022	Ø 82.5	589	2070	0-300	400	100	E1 55R-01 1132	45.0
		4014049	47.23.403.024	Ø 82.5	655	2070	0-375	500	100	E1 55R-01 1132	47.0
up to 2,500	ZOV 2.5-1.1	4014114	47.41.403.001	Ø 108/90	501	1090	0-225	300	150	E1 55R-01 1334	63.0
		4021623	47.41.403.003	Ø 108/90	568	1090	0-300	400	150	E1 55R-01 1334	65.0
		4014115	47.41.403.005	Ø 108/90	635	1090	0-375	500	150	E1 55R-01 1334	67.0
		4021624	47.41.403.006	Ø 108/90	501	1590	0-225	300	150	E1 55R-01 1334	76.0
		4021625	47.41.403.008	Ø 108/90	568	1590	0-300	400	150	E1 55R-01 1334	78.0
		4021626	47.41.403.010	Ø 108/90	635	1590	0-375	500	150	E1 55R-01 1334	80.0
		4021627	47.41.403.011	Ø 108/90	501	2090	0-225	300	150	E1 55R-01 1334	89.0
		4021628	47.41.403.013	Ø 108/90	568	2090	0-300	400	150	E1 55R-01 1334	91.0
		4014116	47.41.403.015	Ø 108/90	635	2090	0-375	500	150	E1 55R-01 1334	93.0
up to 5,000	ZOV 5.0-1.1	4014170	47.62.403.001	Ø 127	716	2300	0-413	550	400	E1 55R-01 1345	160.0
		4014171	47.62.403.002	Ø 127	716	2500	0-413	550	400	E1 55R-01 1345	168.0
		4014172	47.62.403.003	Ø 127	716	3000	0-413	550	400	E1 55R-01 1345	188.0

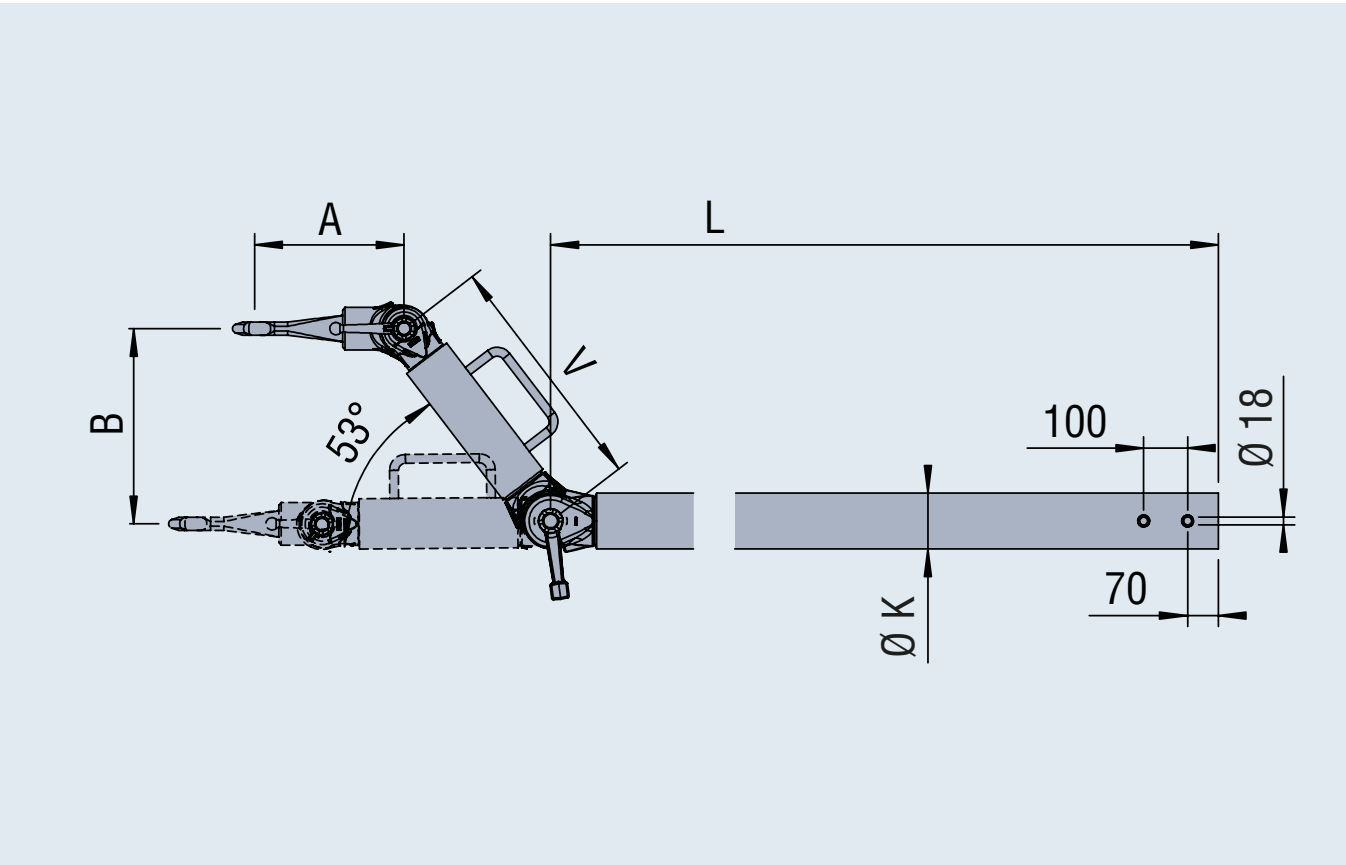
FD, see Technical information

CONVERSION KITS TO OTHER FRONT PARTS

	Order No. for ball hitch	Reference No.
up to 1,200	4006476	05.117.30.08.0
up to 2,500	4006477	05.117.30.09.0

DETAILS

| This height-adjustable connection with variable hitch heights offers enormous flexibility. Ball hitch and drawbar eye can be simply exchanged.



TOWBAR CONNECTIONS (DRAWBARS)

unbraked, height-adjustable with ball hitch ZOV,

permitted gross weight up to 1,200 kg



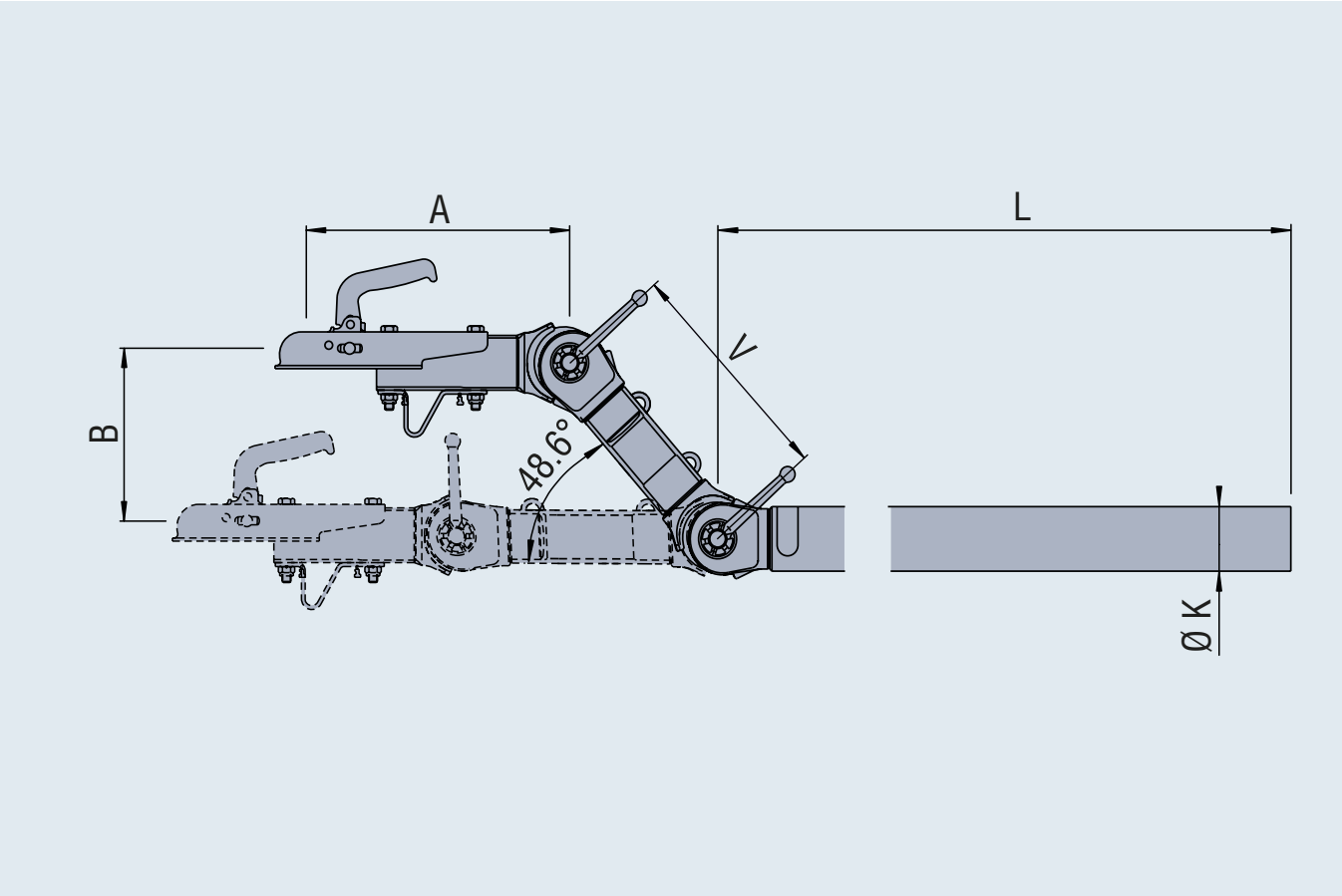
SAP: ZUGEINRICHTG KPL ZOV 1,2-1.1 B KUPP

Permitted gross weight [kg]	Sales designation	Order No. incl. DIN drawbar eye	Reference No. incl. DIN drawbar eye	Dimensions [mm]					Perm. nose load [kg]	ECE test code	Weight [kg]
				K	A	L	B	V			
up to 1,200	ZOV 1.2-1.1 B	4021610	47.23.401.010	Ø 82.5	543	1070	0-225	300	100	E1 55R-01 1132	31.0
		4021611	47.23.401.012	Ø 82.5	609	1070	0-300	400	100	E1 55R-01 1132	33.0
		4014044	47.23.401.014	Ø 82.5	675	1070	0-375	500	100	E1 55R-01 1132	35.0
		4014045	47.23.401.015	Ø 82.5	543	1570	0-225	300	100	E1 55R-01 1132	37.0
		4021612	47.23.401.017	Ø 82.5	609	1570	0-300	400	100	E1 55R-01 1132	39.0
		4021613	47.23.401.019	Ø 82.5	675	1570	0-375	500	100	E1 55R-01 1132	41.0
		4021614	47.23.401.020	Ø 82.5	543	2070	0-225	300	100	E1 55R-01 1132	43.0
		4021615	47.23.401.022	Ø 82.5	609	2070	0-300	400	100	E1 55R-01 1132	45.0
		4021616	47.23.401.024	Ø 82.5	675	2070	0-375	500	100	E1 55R-01 1132	47.0

FD, see Technical information

CONVERSION KITS TO OTHER FRONT PARTS

	Order No. for DIN drawbar eye	Reference No.
up to 1,200	4006475	05.117.30.07.0



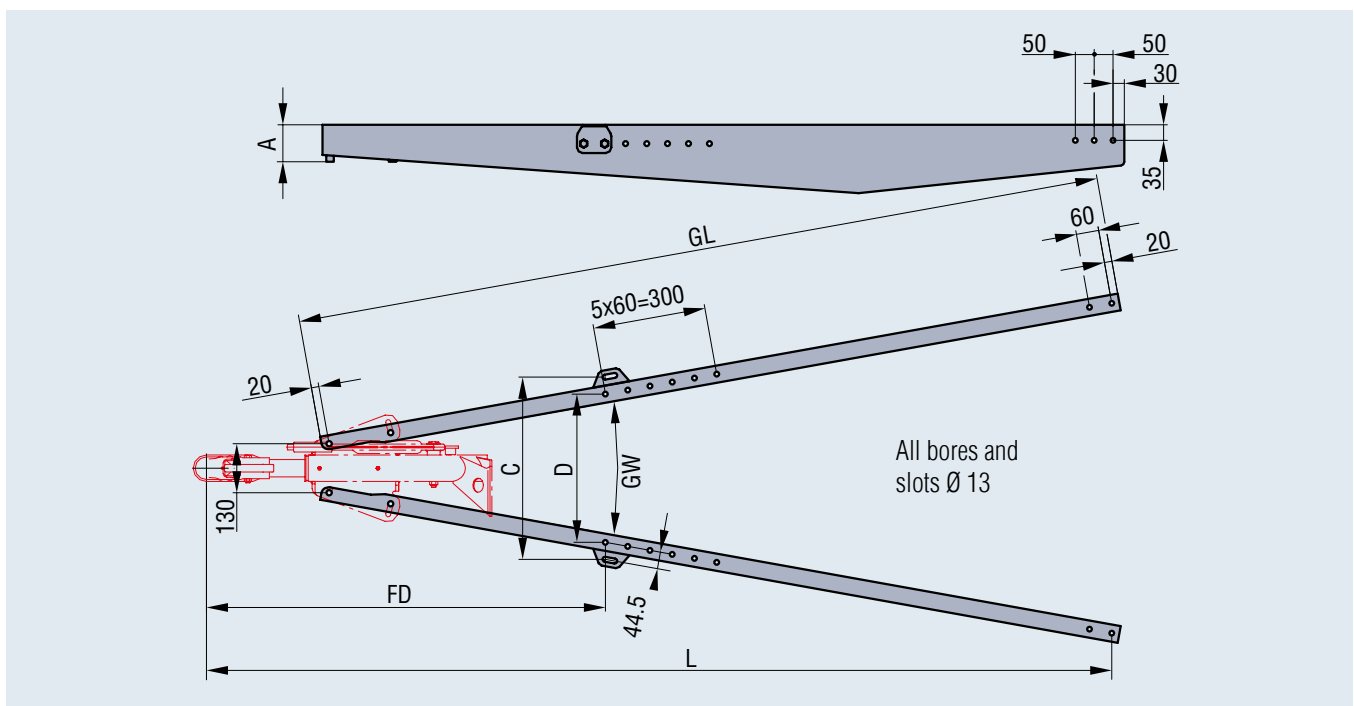
DRAWBARS

ZEA, permitted gross weight up to 3,500 kg

The drawbars with variable mounts promise greater flexibility in the design of the vehicle body. Bolting instead of welding is just one of the huge benefits: The corresponding mounting parts are included in the scope of supply. Hot-dip galvanising gives the parts permanent surface protection.



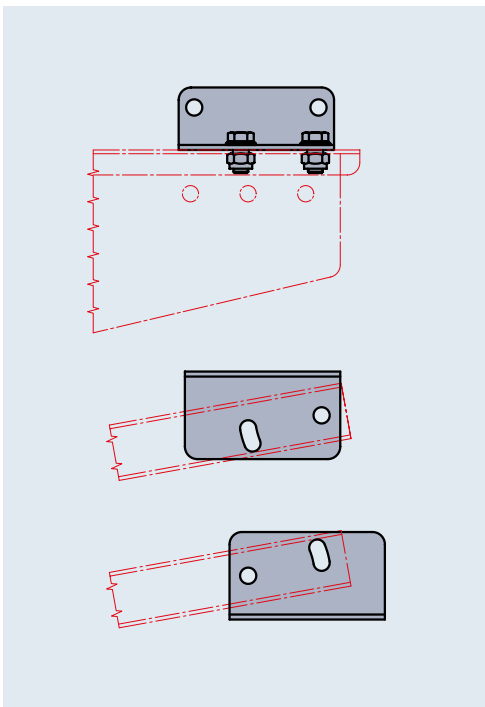
Version



Permitted gross weight [kg]	Sales designation	Order No.	Reference No.	Dimensions [mm]								Permitted nose load [kg]	ECE test code	Weight [kg]
				GW	A	C	D	FD	GL	L				
up to 2,000	ZEA 2.0-1.1	4011899	05.447.26.23.1	30°	80	605	516	1045	1800	2025	150	E1 55R-01 0986	16.4	
		4011900	05.447.26.24.1	30°	80	605	516	1045	2150	2364	150	E1 55R-01 0986	20.7	
		4008313	05.447.26.25.1	30°	80	772	653	1301	2500	2702	150	E1 55R-01 0986	25.0	
up to 2,800	ZEA 2.8-1.1 Vers. B	4011895	05.447.26.17.1	30°	98	605	516	1045	1800	2025	150	E1 55R-01 0891	20.1	
		4011896	05.447.26.18.1	30°	98	605	516	1045	2150	2364	150	E1 55R-01 0891	23.4	
		4008311	05.447.26.19.1	30°	98	772	653	1301	2500	2702	150	E1 55R-01 0891	26.6	
up to 3,500	ZEA 3.5-1.1	4008312	05.447.26.20.1	30°	104	605	516	1039	1800	2050	150	E1 55R-01 0975	27.2	
		4011897	05.447.26.21.1	30°	104	605	516	1039	2150	2388	150	E1 55R-01 0975	31.5	
		4011898	05.447.26.22.1	30°	104	772	653	1326	2500	2726	150	E1 55R-01 0975	38.6	

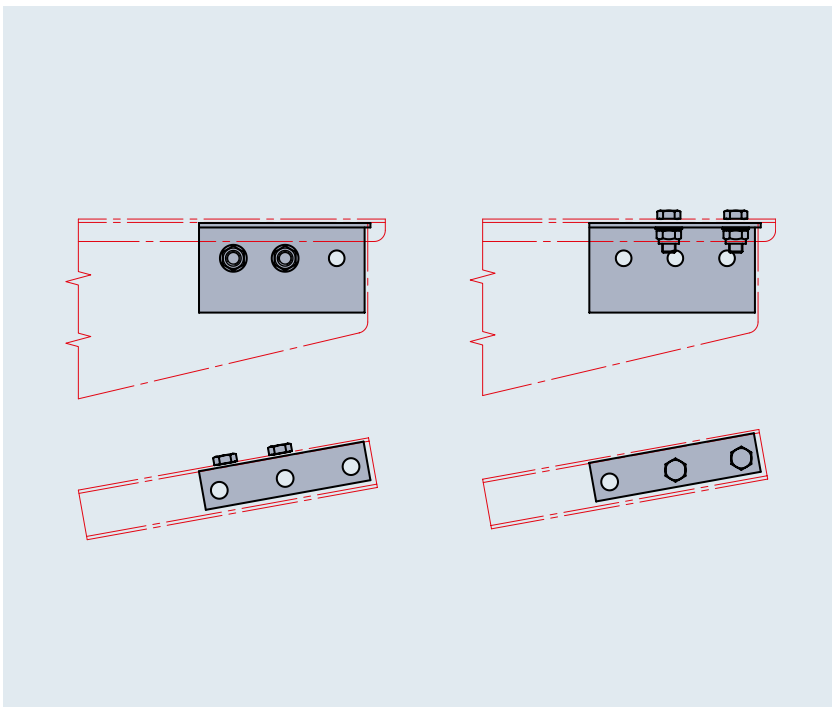
MOUNTING PART KIT

Screw connection kit for ZEA drawbars



VERTICAL BOLTS

Order No.	Reference No.
4008386	05.803.02.25.0



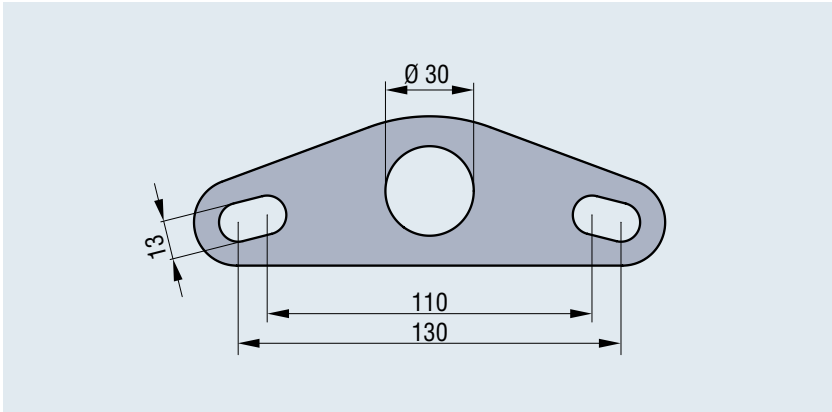
HORIZONTAL BOLTS

Order No.	Reference No.
4008387	05.803.02.26.0

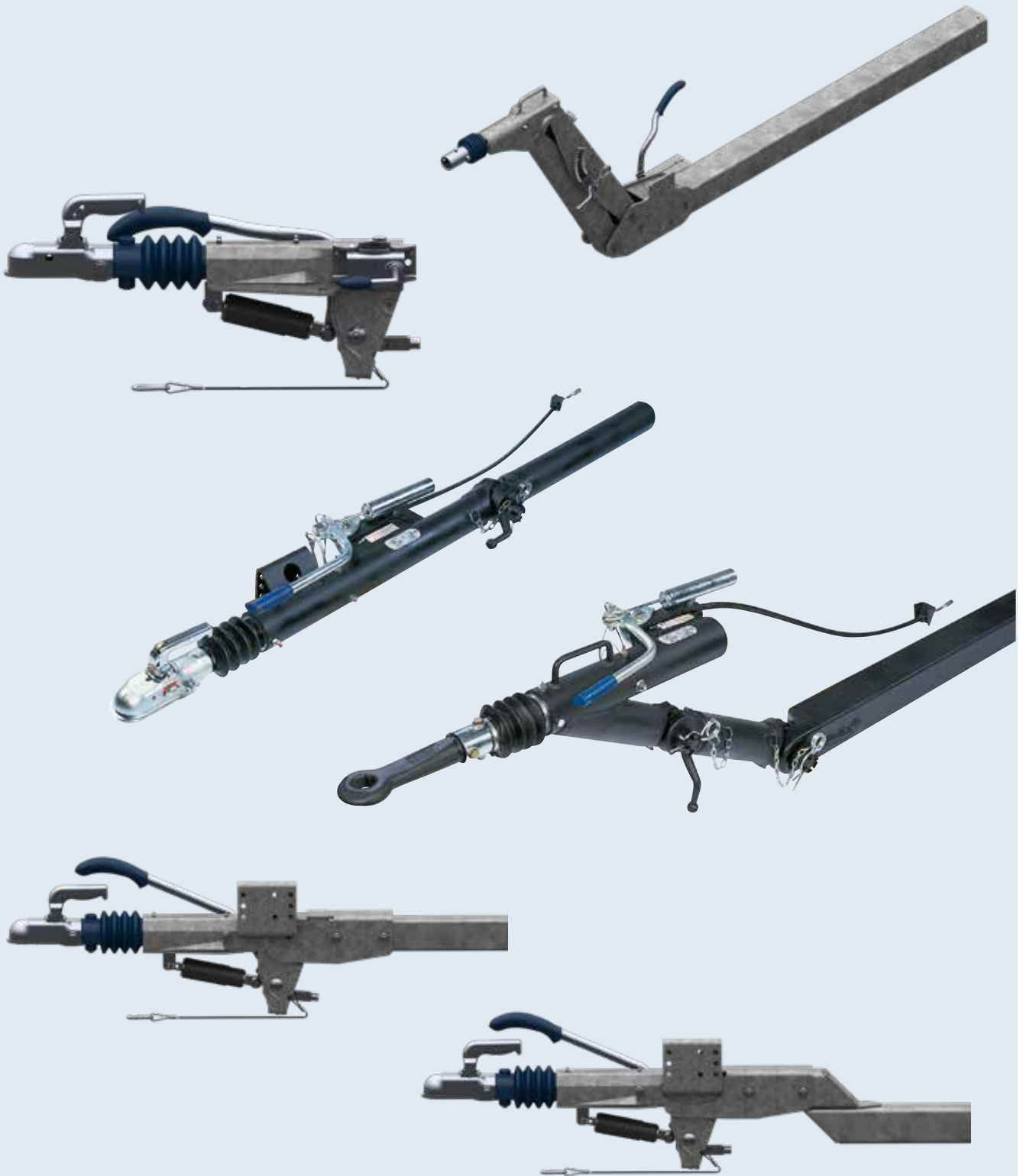
Drawbar shaft straps for ZEA drawbars, for installation of towbar connection parts (ZAF, ZOF)

STRAP SPACING 110-130 TRAILING ARM

Order No.	Reference No.
4000116	03.232.25.06.0



3. OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

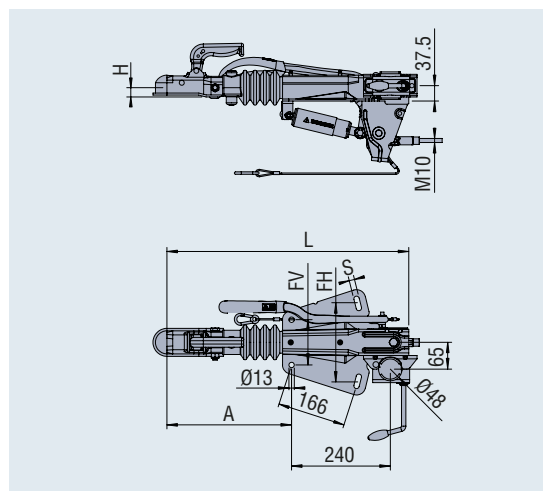


3. OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

Overrun devices V	30 – 33
Overrun hitches, square	34 – 37
Overrun devices, removable	38 – 39
Overrun devices with square tube	40 – 43
Height-adjustable overrun devices	44 – 51

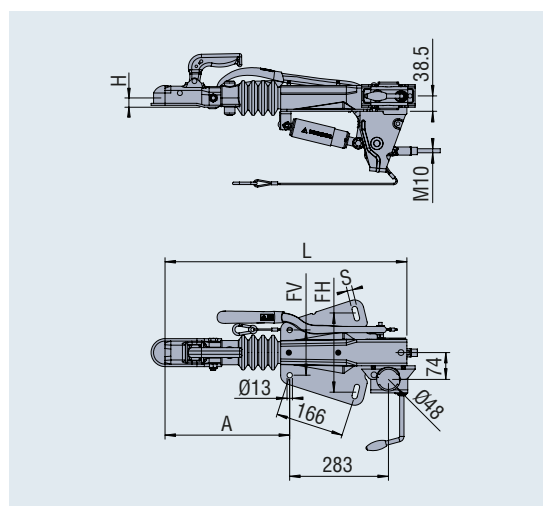
OVERRUN DEVICES V (TOWBAR CONNECTION PARTS)

ZAF, permitted gross weight 540 kg to 1,350 kg



SAP: ZUGLEITUNG KPL ZAF 1,0-3

Permitted gross weight [kg]	Sales designation	Order No.	Reference No.	Dimensions [mm]							S	Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
				A	H	L	FH	FH2	FV							
540-1,000	ZAF 1,0-3	4014216	48.20.581.025	303	33	608	167-212	-	110	13	75	oben	S1704-7 S2005-7	E1 55R-012012	12	

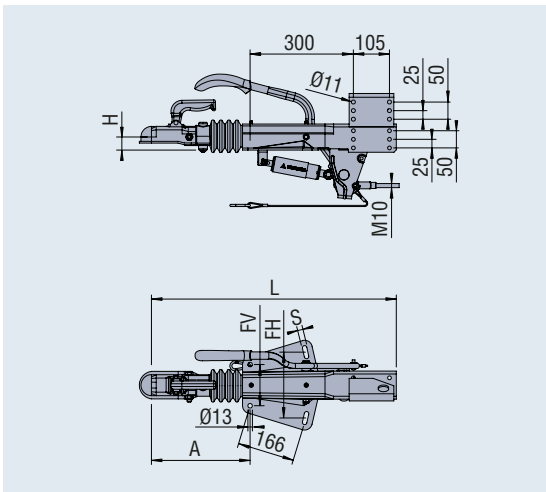


SAP: ZUGLEITUNG KPL ZAF 1,35-3

Permitted gross weight [kg]	Sales designation	Order No.	Reference No.	Dimensions [mm]							S	Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
				A	H	L	FH	FH2	FV							
750-1,350	ZAF 1.35	4014247	48.25.581.200	286	39	635	167-196	-	110	13	100	top	S1704-7 S2005-7	E1 55R-011974	13.7	

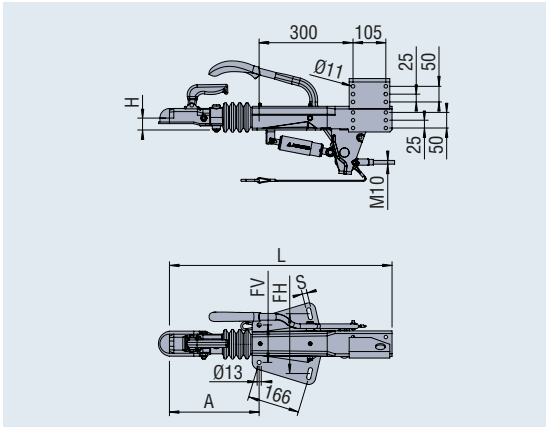
OVERRUN DEVICES V (TOWBAR CONNECTION PARTS)

ZAF, permitted gross weight 750 kg to 2,000 kg



SAP: AE KPL ZAF 1,6-3 A.1,5 120_167-217

Permitted gross weight [kg]	Sales designation	Order No.	Reference No.	Dimensions [mm]								Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
				A	H	L	FH	FH2	FV	S						
750-1,500	ZAF 1.6-3	4014293	48.27.581.202	286	33	711	167-217	-	120	13	100	top/bottom	S1704-7 S2005-7 S2504-7	E1 55R-012051	15.7	

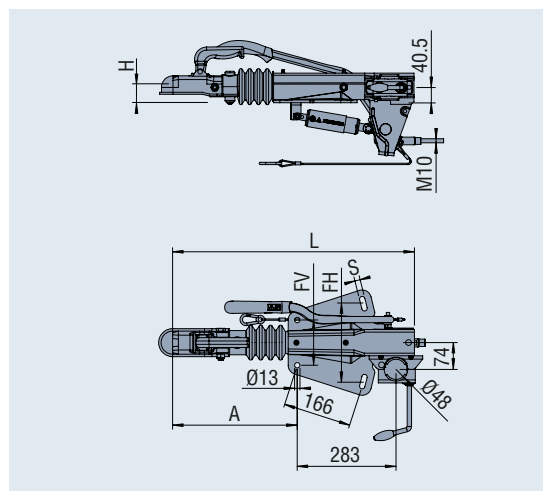


SAP: ZUGENRICHTUNG KPL ZAF 2,0-3

Permitted gross weight [kg]	Sales designation	Order No.	Reference No.	Dimensions [mm]								Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
				A	H	L	FH	FH2	FV	S						
1,250-2,000	ZAF 2.0-3	4014378	48.36.581.200	286	39	635	167-217	-	110	13	150	top/bottom	S1704-7 S2005-7 S2504-7	E1 55R-012078	15.3	
		4014379	48.36.581.201	286	41	635	167-217	-	120	13	150	top/bottom	S1704-7 S2005-7 S2504-7	E1 55R-012078	15.4	
		4014380	48.36.581.202	286	41	711	167-217	-	120	13	150	top/bottom	S1704-7 S2005-7 S2504-7	E1 55R-012078	17.1	

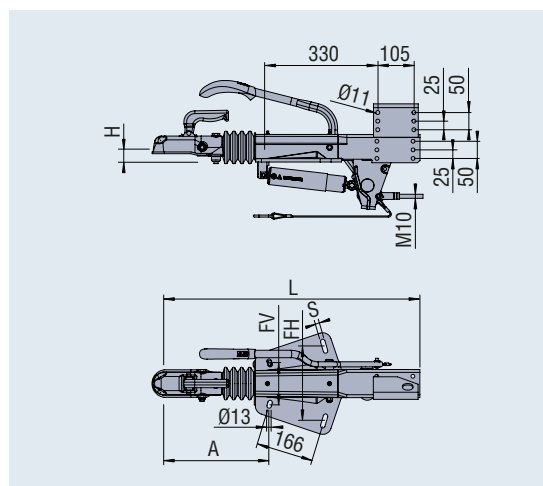
OVERRUN DEVICES V (TOWBAR CONNECTION PARTS)

ZAF, permitted gross weight 1,350 kg to 3,000 kg



SAP: ZUG EINRICHTUNG KPL ZAF 2,5-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Dimensions [mm]								Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
					A	H	L	FH	FH2	FV	S						
1,350-2,500	ZAF 3.5-3	-	402690	48.41.581.000	286	41	635	164-196	-	110	13	150	top	S2005-7 S2504-7	E1 55R-012016	16	

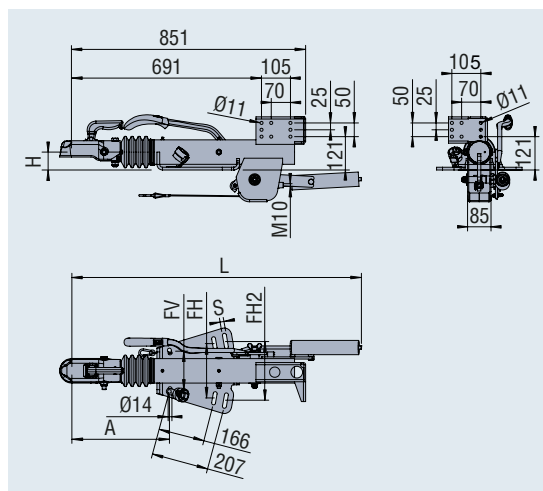


SAP: ZUG EINRICHTUNG KPL ZAF 3,0-3 AUSF. 2,8

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Dimensions [mm]								Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
					A	H	L	FH	FH2	FV	S						
1,800-2,800	ZAF 3,0-3	2,8	4014429	48.44.581.200	305	43	743	167-217	-	120	13	150	top/	S2005-7	E1 55R-012028	20,6	
			4014430	48.44.581.201	305	43	743	189-245	-	110-130	13	150	bot-	S2504-7	E1 55R-012028	20,6	
			4014431	48.44.581.202	305	43	743	189-245	-	110-130	13	150	tom	S3006-7	E1 55R-012028	20,6	
1,800-3,000	ZAF 3,0-3	3,0	4022305	48.46.581.010	311	43	665	167-223	-	130	13	150			E1 55R-012028	19,8	

OVERRUN DEVICES V (TOWBAR CONNECTION PARTS)

ZAF, permitted gross weight 2,500 kg to 3,500 kg



SAP: ZUG EINRICHTUNG KPL ZAF 3,5-3

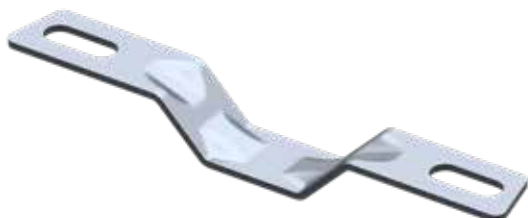
Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Dimensions [mm]							Perm. nose load [kg]	Drawbar installation version	Combined wheel brakes (PASK)	ECE test code	Weight [kg]
					A	H	L	FH	FH2	FV	S					
2,500-3,500	ZAF 3.5-3	A	4014465	48.51.581.006	358	65	1044	166-133	175-258	130-150	14	150	top	S2005-7 S2504-7 S3006-7	E1 55R-010976	29.5

CONVERSION KITS FROM 1,350 TO 3,000 KG

	Order No.
DIN drawbar eye 40.0	4011558
NATO drawbar eye 76.0	4011559
iSC 3.0 (stabiliser)	4011528

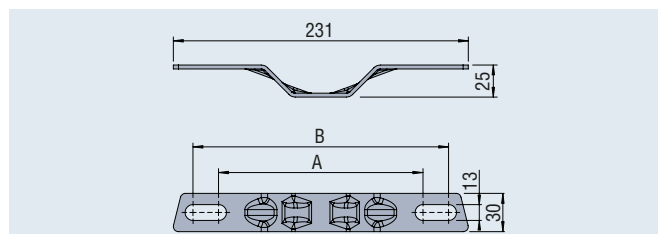
DRAWBAR EYES FOR ZAF 3.5-3 AND ZAAQ 3.5-3

	Order No.
DIN drawbar eye 40.0	4011524
NATO drawbar eye 76.0	4008524



REAR DRAWBAR SHAFT STRAP FOR ZAF 1,0-3 TO ZAF 3,0-3

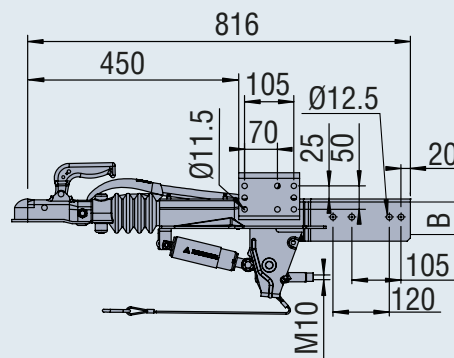
Dimension A	Dimension B	Order No.
160	200	4016571
185	245	4016566
160	220	4016565



3

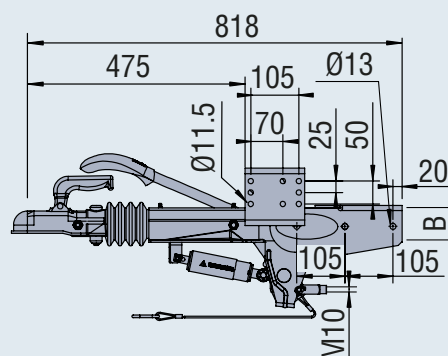
SQUARE OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

push-on fit ZAAQ, permitted gross weight 540 kg to 1,350 kg



SAP: ZUGEINRICHTUNG KPL ZAAQ 1,0-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
540-1,000	ZAAQ 1,0-3	WW13N	4014223	48.20.981.002	70	100	S1704-7 S2005-7	E1 55R-012007	13.2

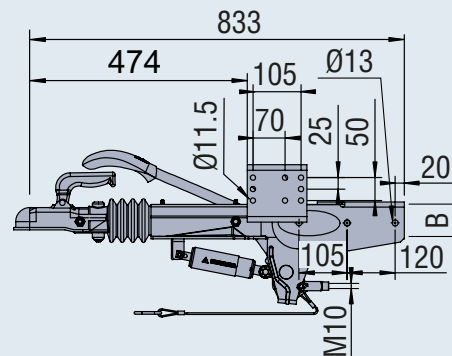


SAP: ZUGEINRICHTUNG KPL ZAAQ 1,35-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
750-1,350	ZAAQ 1,35-3	EM 150R Vers. B	4003587	48.25.981.000	70	100	S1704-7 S2005-7	E1 55R-012006	16.5

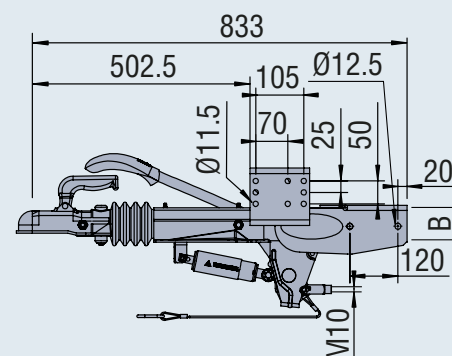
SQUARE OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

push-on fit ZAAQ, permitted gross weight 800 kg to 2,000 kg



SAP: ZUGEINRICHTUNG KPL ZAAQ 1,6-3 AUSF A

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
800-1,600	ZAAQ 1.6-3	EM 220R Vers. B	4014323	48.29.981.001	70	100	S1704-7 S2005-7 S2504-7	E1 55R-011997	16.4

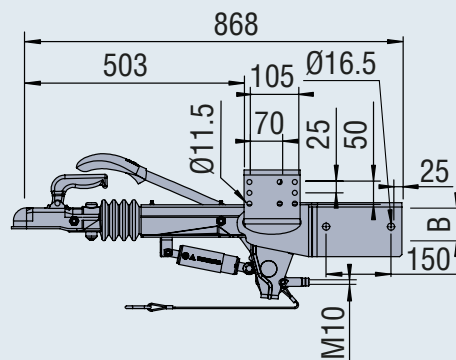


SAP: ZUGEINRICHTUNG KPL ZAAQ 2,0-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
1,250-2,000	ZAAQ 2.0-3	EM 220R Vers. B	4014402	48.36.981.000	80	100	S1704-7 S2005-7 S2504-7	E1 55R-012234	19.4

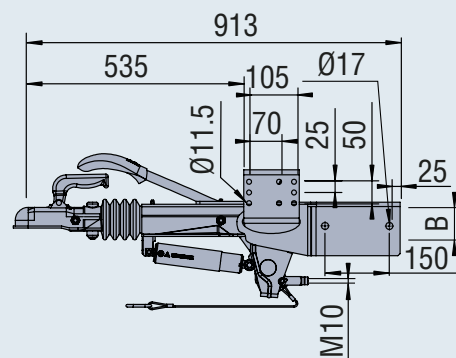
SQUARE OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

push-on fit ZAAQ, permitted gross weight 1,800 kg to 3,000 kg



SAP: ZUGEINRICHTUNG KPL ZAAQ 2,5-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
up to 2,500	ZAAQ 2.5-3	EM 300R-B	4022518	48.41.981.000	100	100	S2005-7 S2504-7	E1 55R-012233	19.1

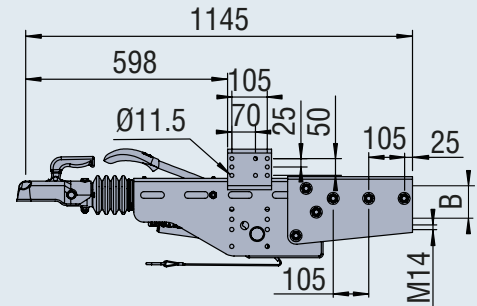


SAP: ZUGEINRICHTUNG KPL ZAAQ 3,0-3

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
1,800-3,000	ZAAQ 3.0-3	EM 300R-B	4014460	48.46.981.000	100	100	S2005-7 S2504-7 S3006-7	E1 55R-012235	23.0

SQUARE OVERRUN DEVICES (TOWBAR CONNECTION PARTS)

push-on fit ZAAQ, permitted gross weight 2,500 kg to 3,500 kg



3

SAP: ZUGEINRICHTUNG KPL ZAAQ 3,5-3 AUSF A

Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	Push-on fit on square tube [mm]	Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
2,500-3,500	ZAAQ 3.5-1	EM 350R-D	4014483	48.51.981.000	120	100	S2005-7 S2504-7 S3006-7	E1 55R-012521	43.6

CONVERSION KITS FROM 1,350 TO 3,000 KG

	Order No.
DIN drawbar eye 40.0	4011558
NATO drawbar eye 76.0	4011559
iSC 3.0 (stabiliser)	4011528

DRAWBAR EYES FOR ZAF 3.5-3 AND ZAAQ 3.5-3

	Order No.
DIN drawbar eye 40.0	4011524
NATO drawbar eye 76.0	4008524

OVERRUN DEVICES, REMOVABLE (DRAWBARS)

with removable coupling device ZAA,

permitted gross weight 650 kg to 3,500 kg

ZAA 1.3-1 / ZAA 2.0-1



ZAA 3.5-1



SAP: ZUG EINRICHTUNG KPL ZAA 1,3-1.1

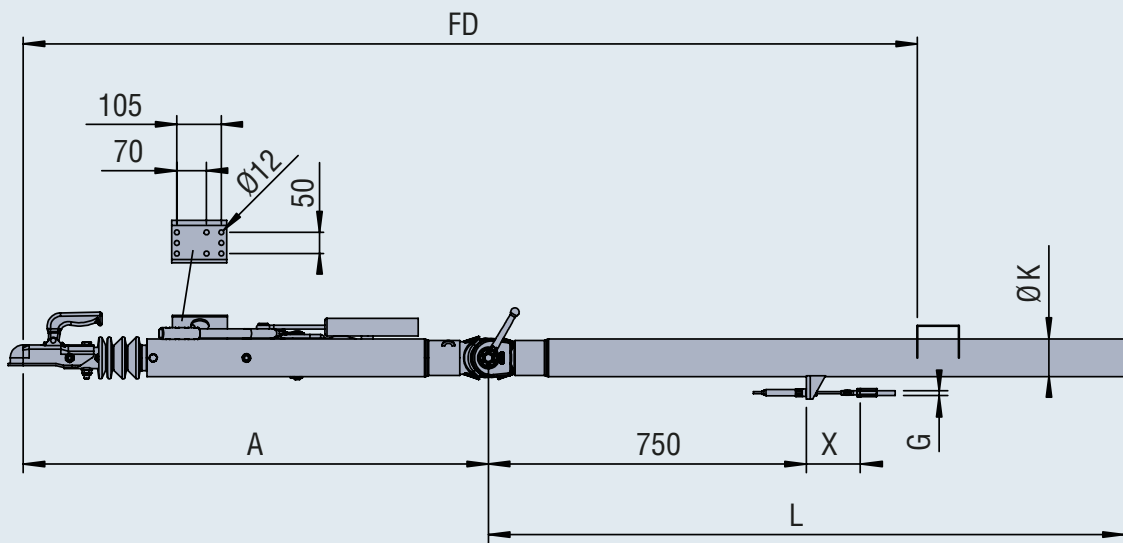
Permitted gross weight [kg]	Designation	Overrun device	Order No. incl. ball hitch	Reference No. incl. ball hitch	K	Dimensions [mm]					Perm. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
						A	L	G	X					
650-1,300	ZAA 1.3-1.1	AK 1308	4021541	47.24.181.001	Ø 88.9 x 5.6	1100	1500	M10	160	100	S1704-7 S2005-7	E1 55R-01 1268	48.9	
			4021542	47.24.181.002	Ø 88.9 x 5.6	1100	1700	M10	160	100			51.2	
			4021543	47.24.181.003	Ø 88.9 x 5.6	1100	1900	M10	160	100			53.5	
			4021544	47.24.181.004	Ø 88.9 x 5.6	1100	2500	M10	160	100			60.4	
1,300-2,000	ZAA 2.0-1.1	AK 2008	4014067	47.36.181.001	Ø 88.9 x 8.8	1100	1500	M10	160	100	S2005-7 S2504-7	E1 55R-01 1269	66.4	
			4021545	47.36.181.002	Ø 88.9 x 8.8	1100	1900	M10	160	100			73.4	
			4014068	47.36.181.003	Ø 88.9 x 8.8	1100	2500	M10	160	100			83.8	
			4021546	47.36.181.004	Ø 88.9 x 8.8	1100	2800	M10	160	100			89.0	
2,500-3,500	ZAA 3.5-1.1	AK 3510 A	4014130	47.51.181.001	sq. 120 x 6.3	1380	1500	M12	160	150	S2005-7 S2504-7 S3006-7	E1 55R-01 1256	112.6	
			4014131	47.51.181.002	sq. 120 x 6.3	1380	1900	M12	160	150			121.5	
			4021547	47.51.181.003	sq. 120 x 6.3	1380	2500	M12	160	150			134.8	
			4014132	47.51.181.004	sq. 120 x 6.3	1380	2800	M12	160	150			141.5	

CONVERSION KITS FROM BALL HITCHES TO DRAWBAR EYES

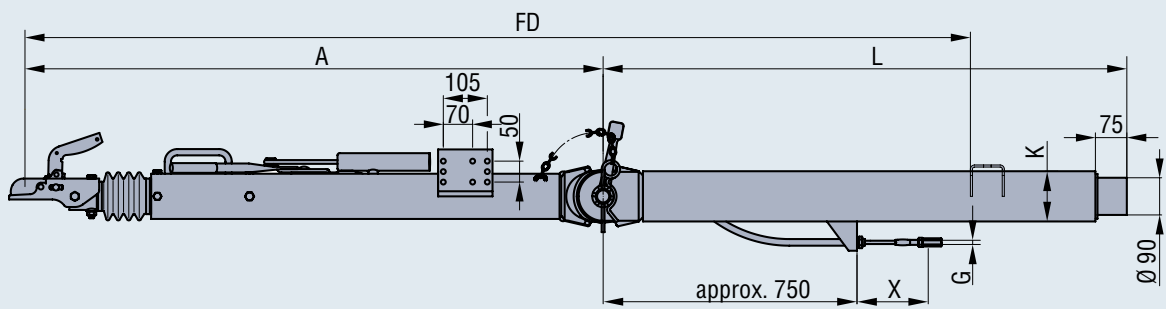
Permitted gross weight [kg]	Sales designation	Conversion kits			
		DIN drawbar eye (d=40 mm) Order No./ Reference No.	NATO drawbar eye (d=76.2 mm) Order No./ Reference No.	Italy drawbar eye (d=45 mm) Order No./ Reference No.	France drawbar eye (d=76.2 mm) Order No./ Reference No.
650-2,000	ZAA 1.3-1.1 + ZAA 2.0-1.1	4008334 05.801.90.37.0	4008862 09.870.00.32.0	4008340 05.801.90.74.0	4008341 05.801.90.77.0
2,500-3,500	ZAA 3.5-1.1	4008603 05.870.00.06.0	4008337 05.801.90.46.0	4021548 05.801.90.82.0	-

FD, see Technical information

ZAA 1.3-1 / ZAA 2.0-1



ZAA 3.5-1

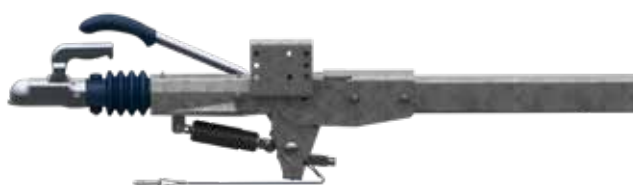
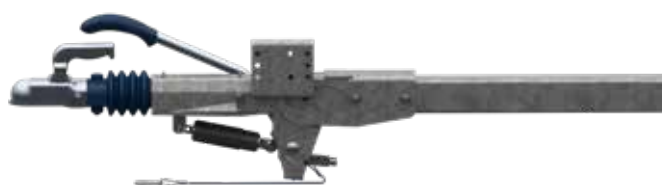


OVERRUN DEVICES WITH SQUARE TUBE (DRAWBARS)

with towbar connection, straight square version ZAAR,
without clamping mount, permitted gross weight 750 kg - 2,800 kg

ZAAR 1.35-1 / 1.6-1 / 2.0-1

ZAAR 3.0-1



Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	K	Dimensions [mm]			Perm. nose load [kg]	Combined wheel brakes (RASKY)	Weight [kg]
						HA	L				
750-1,350	ZAAR 1.35-1	ZAAQ1.35-3 / ZDG7-3	4014228	48.25.181.101	sq. 70 x 4.0	50	2100	100	S1704-7 S2005-7		37.4
			4014231	48.25.181.108	sq. 70 x 4.0	50	2300	100			39.4
			4014227	48.25.181.099	sq. 70 x 4.0	50	2500	100			41.3
			4014232	48.25.181.109	sq. 70 x 4.0	50	3000	100			46.3
			4014233	48.25.181.110	sq. 70 x 4.0	50	3500	100			51.2
800-1,600	ZAAR 1.6-1	ZAAQ1.6 / ZDG7-3	4014308	48.29.181.055	sq. 70 x 5.0	50	2100	100	S1704-7 S2005-7 S2504-7		38.15
			4014309	48.29.181.056	sq. 70 x 5.0	50	2300	100			40.15
			4021411	48.29.181.043	sq. 70 x 5.0	50	2500	100			42.05
			4014310	48.29.181.057	sq. 70 x 5.0	50	3000	100			47.05
			4020914	48.29.181.058	sq. 70 x 5.0	50	3500	100			51.95
1,250-2,000	ZAAR 2.0-1	ZAAQ2.0 / ZDG8-3	4021609	48.36.181.073	sq. 80 x 5.0	55	2100	100	S1704-7 S2005-7 S2504-7		40.7
			4014328	48.36.181.074	sq. 80 x 5.0	55	2300	100			43.6
			4014329	48.36.181.075	sq. 80 x 5.0	55	2500	100			46.4
			4014330	48.36.181.077	sq. 80 x 5.0	55	3000	100			53.4
			4014331	48.36.181.078	sq. 80 x 5.0	55	3000	100			60.4
1,800-2,800	ZAAR 3.0-1	ZAAQ3.0 / ZDG10-3	4014435	48.46.181.001	sq. 100 x 6.3	65	2100	100	S2005-7 S2504-7 S3006-7		49.0
			4014436	48.46.181.002	sq. 100 x 6.3	65	2300	100			52.6
			4014437	48.46.181.003	sq. 100 x 6.3	65	2500	100			56.2
			4014438	48.46.181.004	sq. 100 x 6.3	65	3000	100			65.2
			4014439	48.46.181.005	sq. 100 x 6.3	65	3500	100			74.2

FD, see Technical information

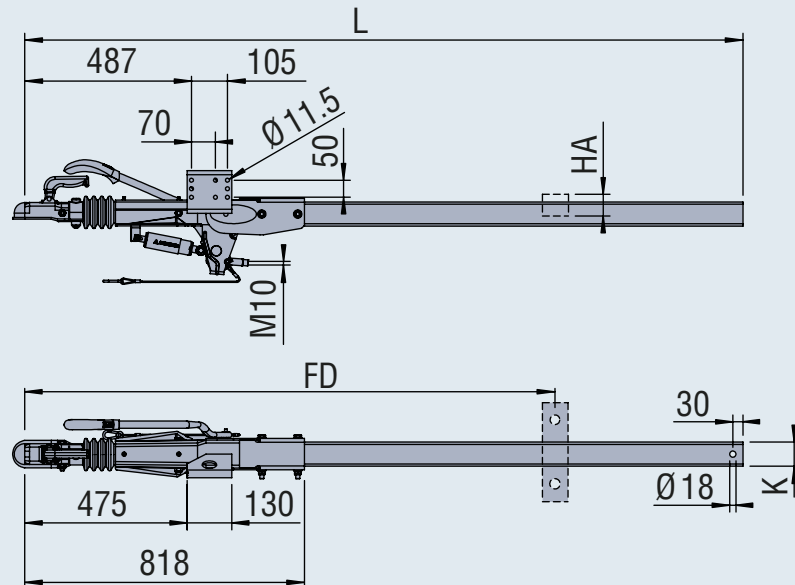
CONVERSION KITS FROM 1,350 TO 3,000 KG

	Order No.
DIN drawbar eye 40.0	4011558
NATO drawbar eye 76.0	4011559
iSC 3.0 (stabiliser)	4011528

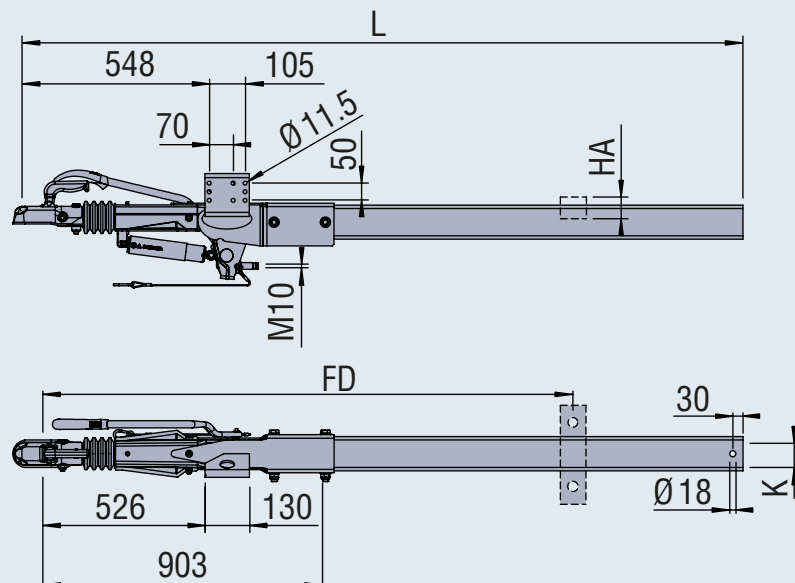
DETAILS

I The square profile offers high stability and ensures a secure connection in every application. The hot-dip galvanised surface provides permanent corrosion protection.

ZAAR 1.35-1 / 1.6-1 / 2.0-1



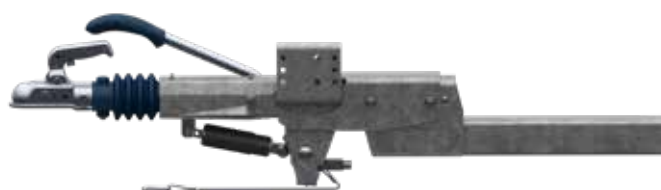
ZAAR 3.0-1



OVERRUN DEVICES WITH SQUARE TUBE (DRAWBARS)

with towbar connection, cropped square version ZAAR,
permitted gross weight 750 kg - 2,000 kg

ZAAR 1.35-3 / ZAAR 1.6-3



ZAAR 2.0-3



Permitted gross weight [kg]	Sales designation	Type	Order No.	Reference No.	K	Dimensions [mm]			Perm. nose load [kg]	Combined wheel brakes (RASK)	Weight [kg]
						HA	L				
750-1,350	ZAAR 1.35-3	ZAAQ 1.35-3 / ZDG7-3	4014236	48.25.381.059	sq. 70 x 5.0	50	2100	100	S1704-7 S2005-7		37.4
			4014237	48.25.381.060	sq. 70 x 5.0	50	2300	100			39.4
			4014238	48.25.381.061	sq. 70 x 5.0	50	2500	100			41.3
			4014239	48.25.381.062	sq. 70 x 5.0	50	3000	100			46.3
			4021602	48.25.381.063	sq. 70 x 5.0	50	3500	100			51.2
800-1,600	ZAAR 1.6-3	ZAAQ 1.6-3 / ZDG7-3	4021603		sq. 70 x 5.0	50	2100	100	S1704-7 S2005-7 S2504-7		38.15
			4021604		sq. 70 x 5.0	50	2300	100			40.15
			4021605		sq. 70 x 5.0	50	2500	100			42.05
			4021606		sq. 70 x 5.0	50	3000	100			47.05
			4021607		sq. 70 x 5.0	50	3500	100			51.95
1,250-2,000	ZAAR 2.0-3	ZAAQ 2.0-3 / ZDG8-3	4014335	48.36.381.086	sq. 80 x 5.0	55	2100	150	S1704-7 S2005-7 S2504-7		40.7
			4021608	48.36.381.087	sq. 80 x 5.0	55	2300	150			43.6
			4014336	48.36.381.088	sq. 80 x 5.0	55	2500	150			46.4
			4014337	48.36.381.089	sq. 80 x 5.0	55	3000	150			53.4
			4014338	48.36.381.090	sq. 80 x 5.0	55	3500	150			60.4

FD, see Technical information

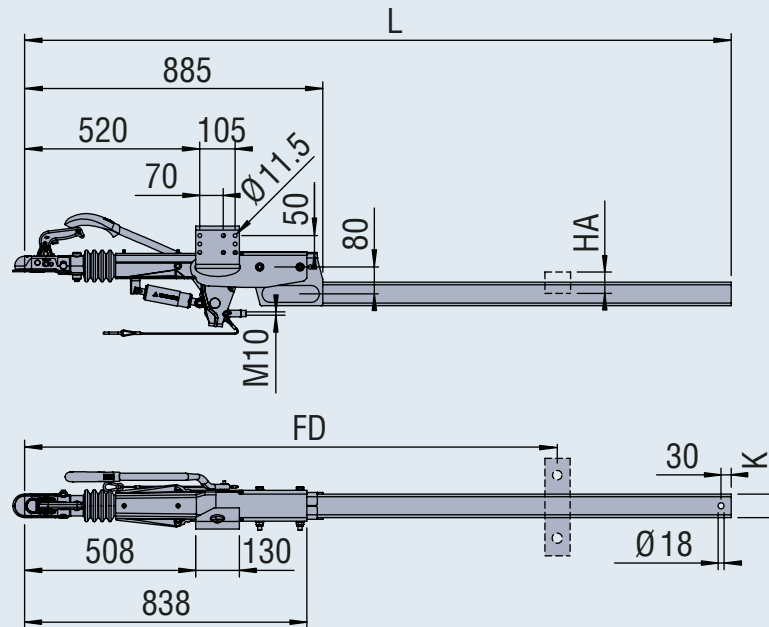
CONVERSION KITS FROM 1,350 TO 3,000 KG

	Order No.
DIN drawbar eye 40.0	4011558
NATO drawbar eye 76.0	4011559
iSC 3.0 (stabiliser)	4011528

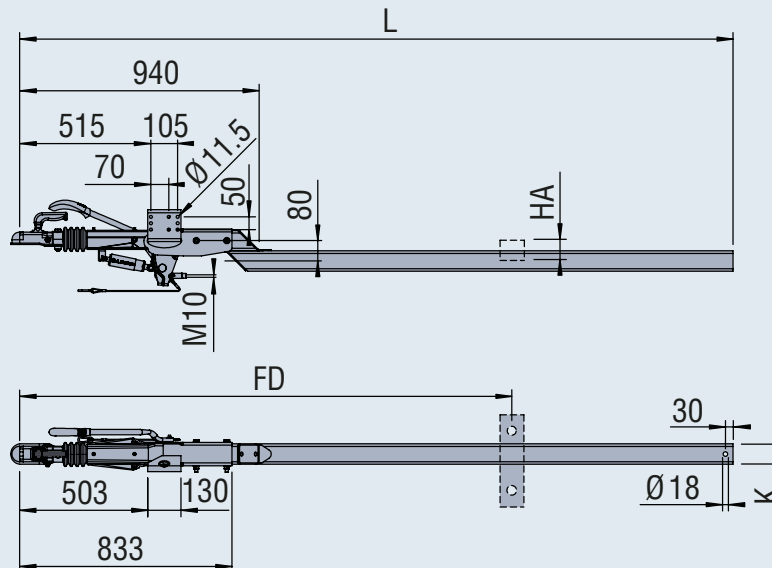
DETAILS

The classic square profile provides a secure connection between the trailer and the towing vehicle in a wide variety of applications. With permanent surface protection thanks to hot-dip galvanised surface.

ZAAR 1.35-3 / ZAAR 1.6-3



ZAAR 2.0-3



HEIGHT-ADJUSTABLE OVERRUN DEVICES

(DRAWBARS)

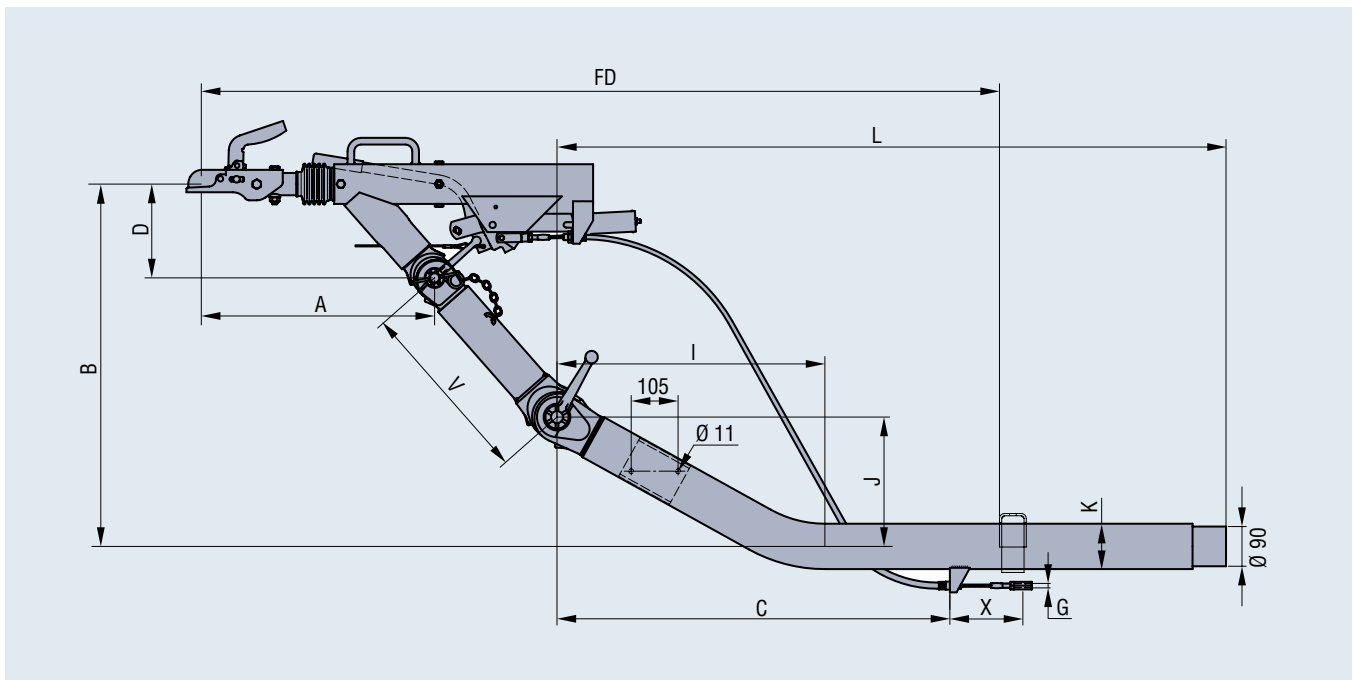
with ZKV towbar connection, with ball hitch,
permitted gross weight 650 kg - 3,500 kg



Optional: Hot-dip galvanising

Permitted gross weight [kg]	Sales designation	Overrun device	Order No. incl. ball hitch	Reference No. incl. ball hitch		Combined wheel brakes (RASK)	DIN drawbar eye, Order No.	NATO drawbar eye, Order No.	Italy drawbar eye, Order No.	France drawbar eye, Order No.
650-1,300	ZKV 13.1 B	AK 1308	4019790	47.24.471.086	S1704-7 S2005-7	4008334	4008862	4008340	4008341	
			4021570	47.24.471.087		4008334	4008862	4008340	4008341	
			4014050	47.24.471.088		4008334	4008862	4008340	4008341	
650-1,300	ZKV 13.1 A	AK 1308	4021571	47.24.471.081	S1704-7 S2005-7	4008334	4008862	4008340	4008341	
			4021572	47.24.471.082		4008334	4008862	4008340	4008341	
			4021573	47.24.471.083		4008334	4008862	4008340	4008341	
1,300-2,000	ZKV 20.1 A	AK 2008	4014093	47.36.471.031	S1704-7 S2005-7 S2504-7	4008334	4008862	4008340	4008341	
			4021574	47.36.471.032		4008334	4008862	4008340	4008341	
			4014094	47.36.471.033		4008334	4008862	4008340	4008341	
1,300-2,000	ZKV 20.1 B	AK 2008	4014092	47.36.471.021	S1704-7 S2005-7 S2504-7	4008334	4008862	4008340	4008341	
			4021575	47.36.471.022		4008334	4008862	4008340	4008341	
			4020841	47.36.471.023		4008334	4008862	4008340	4008341	
1,910-2,700	ZKV 25.1 B	AK 3510 B	4014123	47.43.471.001	S2005-7 S2504-7	4008603	4008862	4008340	4008341	
			4014124	47.43.471.002		4008603	4008862	4008340	4008341	
			4014125	47.43.471.003		4008603	4008862	4008340	4008341	
1,910-2,700	ZKV 25.1 D	AK 3510 B	4021577	47.43.471.011	S2005-7 S2504-7	4008603	4008337	4021548	-	
			4021578	47.43.471.012		4008603	4008337	4021548	-	
			4021579	47.43.471.013		4008603	4008337	4021548	-	
2,500-3,500	ZKV 35.1 B	AK 3510 A	4014158	47.51.471.010	S2005-7 S2504-7 S3006-7	4008603	4008337	4021548	-	
			4021580	47.51.471.011		4008603	4008337	4021548	-	
			4020462	47.51.471.012		4008603	4008337	4021548	-	

FD, see Technical information



K	Dimensions [mm]										Permi. nose load [kg]	ECE test code	Weight [kg]
	A	D	L	B	G	V	I	J	C	X			
Ø 88.9 x 8.8	513	210	1500	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	74
Ø 88.9 x 8.8	513	210	1700	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	77
Ø 88.9 x 8.8	513	210	2100	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	84
Ø 88.9 x 8.8	513	210	1500	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	75
Ø 88.9 x 8.8	513	210	1700	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	78
Ø 88.9 x 8.8	513	210	2100	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	85
Ø 101.6 x 8.8	513	210	1900	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	88
Ø 101.6 x 8.8	513	210	2500	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	100
Ø 101.6 x 8.8	513	210	2800	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	106
Ø 101.6 x 10	513	210	1900	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	96
Ø 101.6 x 10	513	210	2500	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	109
Ø 101.6 x 10	513	210	2800	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	116
sq. 120 x 6.3	541	225	1900	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	124
sq. 120 x 6.3	541	225	2500	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	137
sq. 120 x 6.3	541	225	2800	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	144
sq. 120 x 6.3	541	225	1900	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	128
sq. 120 x 6.3	541	225	2500	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	141
sq. 120 x 6.3	541	225	2800	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	148
sq. 120 x 10	541	230	1900	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	141
sq. 120 x 10	541	230	2500	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	155
sq. 120 x 10	541	230	2800	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	163

HEIGHT-ADJUSTABLE OVERRUN DEVICES

(DRAWBARS)

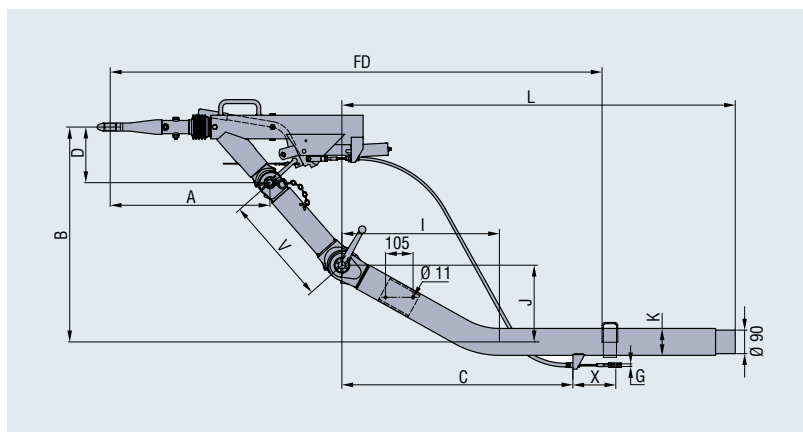
with ZKV towbar connection, with DIN drawbar eye,

permitted gross weight 650 kg - 3,500 kg



Permitted gross weight [kg]	Sales designation	Overrun device	Order No. incl. DIN drawbar eye	Reference No. incl. DIN drawbar eye		Combined wheel brakes (RASK)	DIN drawbar eye, Order No.	NATO drawbar eye, Order No.	Italy drawbar eye, Order No.	France drawbar eye, Order No.
650-1,300	ZKV 13.1 B	AK 1308	4014053	47.24.473.116	S1704-7 S2005-7		4008857	4008862	4008340	4008341
			4021581	47.24.473.117			4008857	4008862	4008340	4008341
			4014054	47.24.473.118			4008857	4008862	4008340	4008341
650-1,300	ZKV 13.1 A	AK 1308	4021582	47.24.473.111			4008857	4008862	4008340	4008341
			4021583	47.24.473.112			4008857	4008862	4008340	4008341
			4021584	47.24.473.113			4008857	4008862	4008340	4008341
1,300-2,000	ZKV 20.1 A	AK 2008	4014098	47.36.473.041	S1704-7 S2005-7		4008856	4008862	4008340	4008341
			4021585	47.36.473.042			4008856	4008862	4008340	4008341
			4014099	47.36.473.043			4008856	4008862	4008340	4008341
1,300-2,000	ZKV 20.1 B	AK 2008	4019792	47.36.473.031	S2504-7		4008856	4008862	4008340	4008341
			4021586	47.36.473.032			4008856	4008862	4008340	4008341
			4021587	47.36.473.033			4008856	4008862	4008340	4008341
1,910-2,700	ZKV 25.1 B	AK 3510 B	4021588	47.43.473.001	S2005-7 S2504-7		4008335	4008337	4021548	4008341
			4014126	47.43.473.002			4008335	4008337	4021548	4008341
			4021589	47.43.473.003			4008335	4008337	4021548	4008341
1,910-2,700	ZKV 25.1 D	AK 3510 B	4014127	47.43.473.011			4008335	4008337	4021548	4008341
			4021590	47.43.473.012			4008335	4008337	4021548	4008341
			4021591	47.43.473.013			4008335	4008337	4021548	4008341
2,500-3,500	ZKV 35.1 B	AK 3510 A	4014164	47.51.473.034	S2005-7		4008335	4008337	4021548	-
			4014165	47.51.473.035	S2504-7		4008335	4008337	4021548	-
			4022386	47.51.473.036	S3006-7		4008335	4008337	4021548	-

FD, see Technical information



DETAILS

I Comfortable and flexible: Thanks to simple changing between ball hitch and drawbar eye and the variable hitch height, this drawbar is the universal connection to cars, SUVs and light commercial vehicles. A handle on the housing serves as a manoeuvring aid. The primed surface, optionally also hot-dip galvanised, provides permanent protection against corrosion.

K	Dimensions [mm]											Perm. nose load [kg]	ECE test code	Weight [kg]
	A	D	L	B	G	V	I	J	C	X				
Ø 88.9 x 8.8	617	210	1500	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	75	
Ø 88.9 x 8.8	617	210	1700	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	78	
Ø 88.9 x 8.8	617	210	2100	210-521	M 10	415	-	-	900	160	100	E1 55R-010205	85	
Ø 88.9 x 8.8	617	210	1500	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	76	
Ø 88.9 x 8.8	617	210	1700	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	79	
Ø 88.9 x 8.8	617	210	2100	470-781	M 10	415	534	260	880	160	100	E1 55R-010205	86	
Ø 101.6 x 8.8	617	210	1900	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	89	
Ø 101.6 x 8.8	617	210	2500	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	101	
Ø 101.6 x 8.8	617	210	2800	210-521	M 10	415	-	-	900	160	100	E1 55R-010256	107	
Ø 101.6 x 10	617	210	1900	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	97	
Ø 101.6 x 10	617	210	2500	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	110	
Ø 101.6 x 10	617	210	2800	500-811	M 10	415	600	290	880	160	100	E1 55R-010256	117	
sq.120 x 6.3	635	225	1900	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	125	
sq.120 x 6.3	635	225	2500	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	139	
sq.120 x 6.3	635	225	2800	225-600	M 10	500	-	-	890	185	150	E1 55R-010307	146	
sq.120 x 6.3	635	225	1900	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	130	
sq.120 x 6.3	635	225	2500	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	143	
sq.120 x 6.3	635	225	2800	225-735	M 10	680	-	-	890	185	150	E1 55R-010307	150	
sq. 120 x 10	635	230	1900	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	143	
sq. 120 x 10	635	230	2500	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	157	
sq. 120 x 10	635	230	2800	230-643	M 12	550	-	-	840	185	150	E1 55R-010527	165	

HEIGHT-ADJUSTABLE OVERRUN DEVICES (DRAWBARS)

with ZAV towbar connection,
permitted gross weight 1,200 kg - 3,500 kg

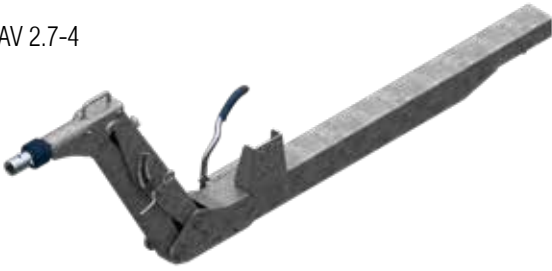
ZAV 1.6-5 / ZAV 2.0-5



Permitted Gross weight [kg]	Sales designation	Overrun device	Order No.	Reference No.	K	Dimensions [mm]					Permi. nose load [kg]	Combined wheel brakes (RASK)	ECE test code	Weight [kg]
						A	L	B	V					
1,200-1,600	ZAV 1.6-5	AE 2.7-1 D	4020607	47.29.470.065	sq.120	535	1900	0-693	800	150	S1704-7 S2005-7	E1 55R-01 1284	95.0	
			4020607	47.29.470.066	sq.120	535	2300	0-693	800	150		E1 55R-01 1284	103.0	
			4021592	47.29.470.067	sq.120	535	2500	0-693	800	150		E1 55R-01 1284	106.0	
			4021593	47.29.470.068	sq.120	535	2800	0-693	800	150		E1 55R-01 1284	113.0	
			4014059	47.29.470.064	sq.120	535	1900	0-520	600	150		E1 55R-01 1284	88.0	
			4020433	47.29.470.063	sq.120	535	2300	0-520	600	150		E1 55R-01 1284	96.0	
			4021594	47.29.470.062	sq.120	535	2500	0-520	600	150		E1 55R-01 1284	99.0	
			4021595	47.29.470.061	sq.120	535	2800	0-520	600	150		E1 55R-01 1284	106.0	
			4014079	47.36.470.115	sq.120	535	1900	0-693	800	150		S1704-7 S2005-7 S2504-7	E1 55R-01 1284	95.0
			4014078	47.36.470.114	sq.120	535	2300	0-693	800	150			E1 55R-01 1284	103.0
4021596	47.36.470.113	sq.120	535	2500	0-693	800	150	E1 55R-01 1284	106.0					
4021597	47.36.470.112	sq.120	535	2800	0-693	800	150	E1 55R-01 1284	113.0					
4014073	47.36.470.099	sq.120	535	1900	0-520	600	150	E1 55R-01 1284	88.0					
4014075	47.36.470.109	sq.120	535	2300	0-520	600	150	E1 55R-01 1284	96.0					
4014074	47.36.470.108	sq.120	535	2500	0-520	600	150	E1 55R-01 1284	99.0					
4021598	47.36.470.107	sq.120	535	2800	0-520	600	150	E1 55R-01 1284	106.0					
1,860-2,700	ZAV 2.7-4	AE 2.7-1 A	4014120	47.43.470.085	150x132	535	1900	0-693	800	150	S2005-7 S2504-7 S3006-5	E1 55R-01 1171	103.0	
			4021599	47.43.470.086	150x132	535	2280	0-693	800	150		E1 55R-01 1171	111.0	
			4021600	47.43.470.087	150x132	535	2500	0-693	800	150		E1 55R-01 1171	117.0	
			4014121	47.43.470.088	150x132	535	2800	0-693	800	150		E1 55R-01 1171	125.0	
			4014117	47.43.470.081	150x132	535	1900	0-520	600	150		E1 55R-01 1171	96.0	
			4022435	47.43.470.082	150x132	535	2280	0-520	600	150		E1 55R-01 1171	104.0	
			4014118	47.43.470.083	150x132	535	2500	0-520	600	150		E1 55R-01 1171	110.0	
			4014119	47.43.470.084	150x132	535	2800	0-520	600	150		E1 55R-01 1171	118.0	
			2,500-3,500	ZAV 3.5-1	AE 3.5-1 A	4014138	47.51.470.039	sq.120	535	1900		0-767	875	150
4014139	47.51.470.040	sq.120				535	2300	0-767	875	150	E1 55R-01 0798	148.0		
4014140	47.51.470.041	sq.120				535	2500	0-767	875	150	E1 55R-01 0798	153.0		
4014141	47.51.470.042	sq.120				535	2800	0-767	875	150	E1 55R-01 0798	162.0		

FD, see Technical information

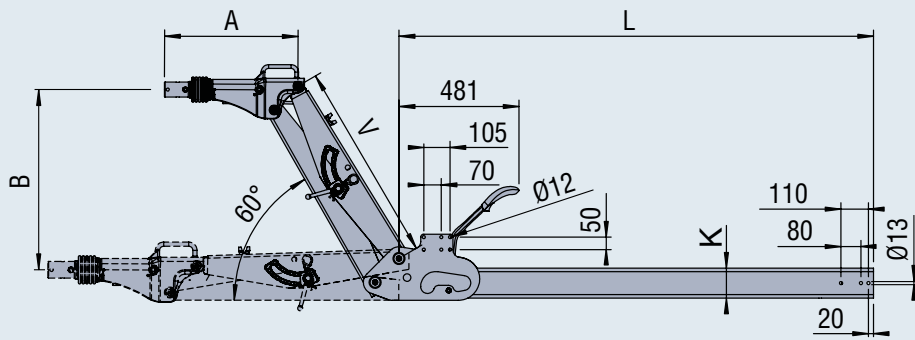
ZAV 2.7-4



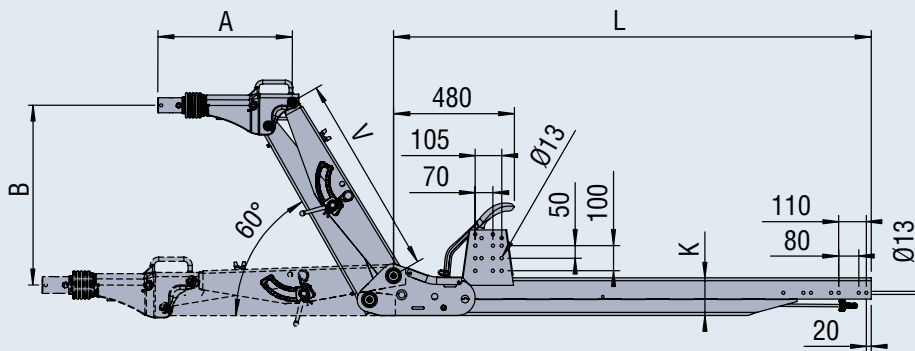
ZAV 3.5-1



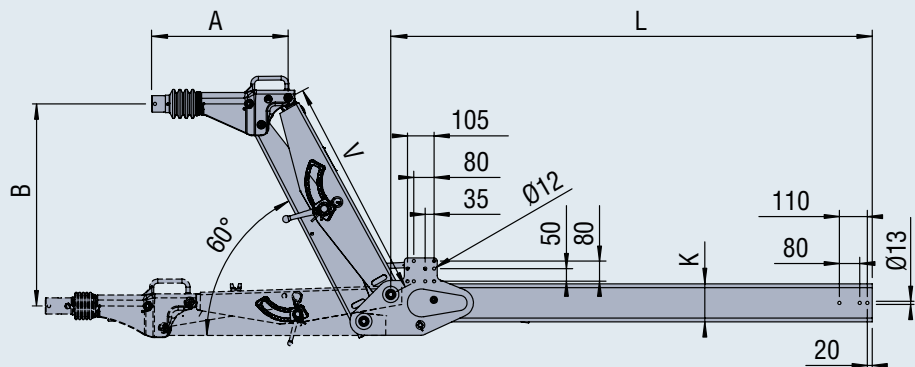
ZAV 1.6-5 / ZAV 2.0-5



ZAV 2.7-4



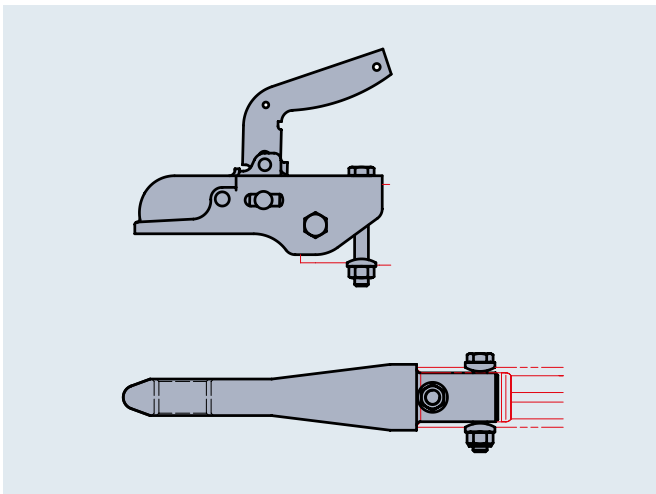
ZAV 3.5-1





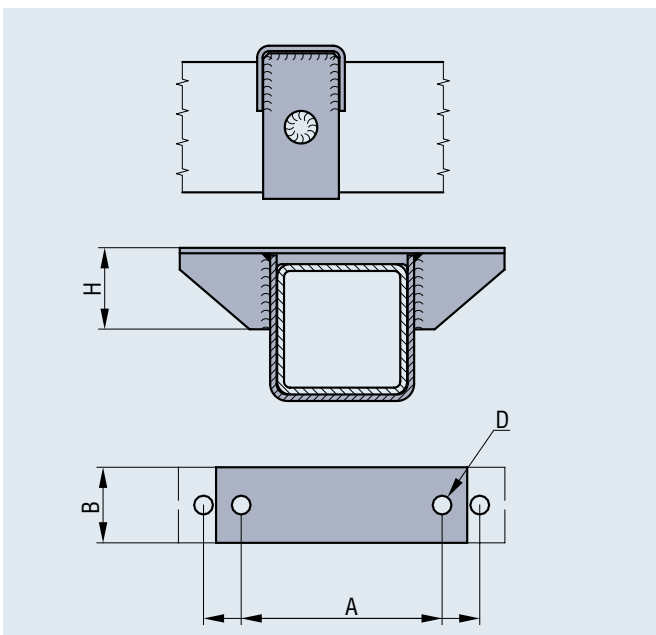
DETAILS

I The towbar connection for professionals: A protected inner transmission device with simple and quick height adjustment up to 1,100 mm hitch height (even with handbrake engaged) and integrated jockey wheel holder are just as much standard as the hot-dip galvanised surface. The whole unit is delivered ready for installation – and leaves nothing to be desired.



	ZAV 1.6-5; 2.0-5; 2.7-4 Order No./ Reference No.	ZAV 3.5-1 Order No./ Reference No.
Ball hitch	4008494 05.803.11.15.0	4008335 05.801.90.38.0
DIN drawbar eye 40.0	4008493 05.803.11.12.0	4008603 05.870.00.06.0
NATO drawbar eye 76.0	4008343 05.801.90.86.0	4008337 05.801.90.46.0
Italy drawbar eye 45.0	4008345 05.801.90.90.0	4021548 05.801.90.82.0
BNA drawbar eye 68.0	4008355 05.801.91.14.0	4008356 05.801.91.15.0

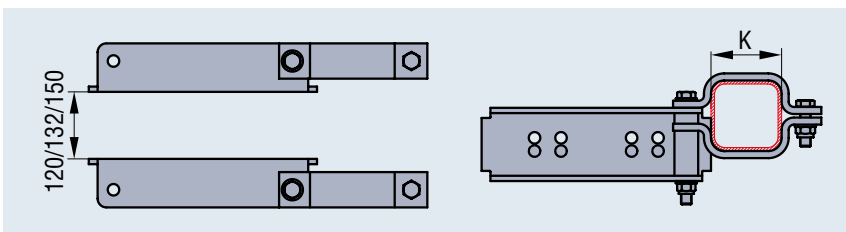
Clamping mount



For drawbar tube [mm]	Dimensions [mm]				Mounting part kit Clamping connection Order No./ Reference No.
	H	D	A	B	
square 120	80	18	220	82	4008347 05.801.90.92.0
150x132	95	18	200	82	4008346 05.801.90.91.0
square 150	95	18	220	82	4008336 05.801.90.45.0

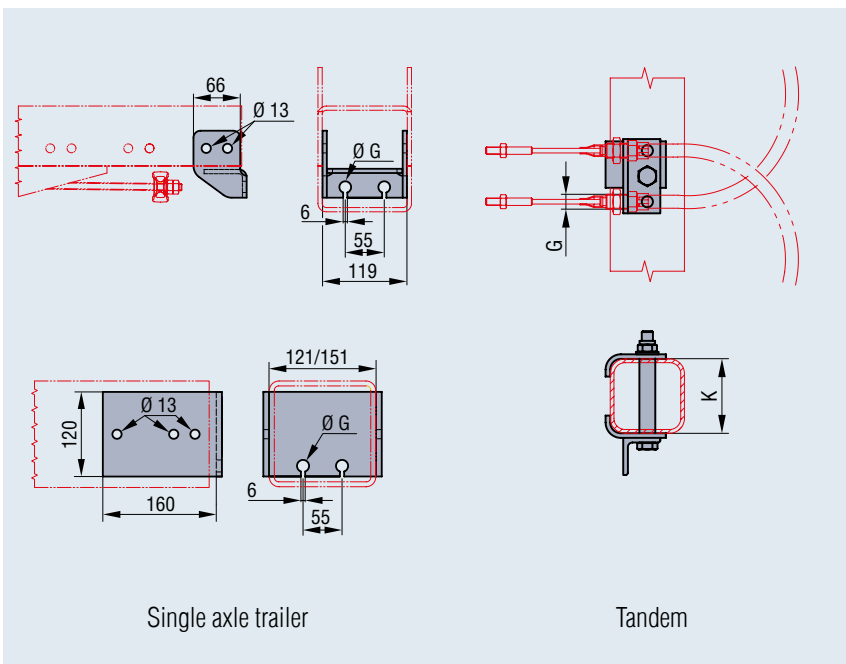


Axle connection



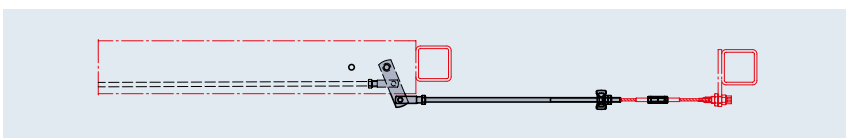
Axle tube K [mm]	Order No./ Reference No.
square 80	4008496 05.803.11.17.0
square 82	4008529 05.803.13.09.0
square 95	4008497 05.803.11.18.0
square 110	4008499 05.803.11.29.0

Cable conduit support



For drawbar tube [mm]	Axle tube K	G	Dimensions [mm]	Order No./ Reference No.
Single axle cable conduit support				
sq. 120 (ZAV 1.6-5; 2.0-5)	12.5		4021601	03.168.01.06.0
sq. 120 (ZAV 1.6-5; 2.0-5)	17		4015842	03.160.11.94.0
150x132 (ZAV 2.7-4)	17		4015824	03.160.10.99.0
sq. 150 (ZAV 3.5-1)	17		4003136	03.168.01.05.0
Tandem axle cable conduit support				
	sq. 80	12.5	4008590	05.820.50.31.0
	sq. 95	12.5	4008591	05.820.50.32.0

Tandem axle diagonal compensation



ZAV 1.6-5; 2.0-5; 2.7-4 Order No./ Reference	ZAV 3.5-1 Order No./ Reference No.
4006371 05.085.55.01.0	4006372 05.085.55.02.0
	4003522 05.085.55.08.0*

*for square axle tube 110

4. AXLES



4. AXLES

Braked axles, square (SWING rubber suspension axles) Axle load 850 kg – 3,000 kg	54 – 73
Braked axles with steel suspension (RONDO torsion bar axles) Axle load 1,050 kg – 3,500 kg	74 – 91
Braked axles, square with composite clamping mounts (SWING tandem axle rubber suspension) 2,100 kg – 2,700 kg	92 – 99
Lowering axles down to 180 mm (lowering units with swivel mechanism)	100 – 101
Lowering axles down to 200 mm (hydraulic tandem axle units)	102 – 103
Axle systems for mobile shop vehicles	104 – 105
Chassis technology for 2-axle vehicles	106 – 107
Tandem axle units with air suspension	108 – 109

BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 850 kg, wheel brake S 1704-7 RASK



FIRST AXLE incl. loose brake cables

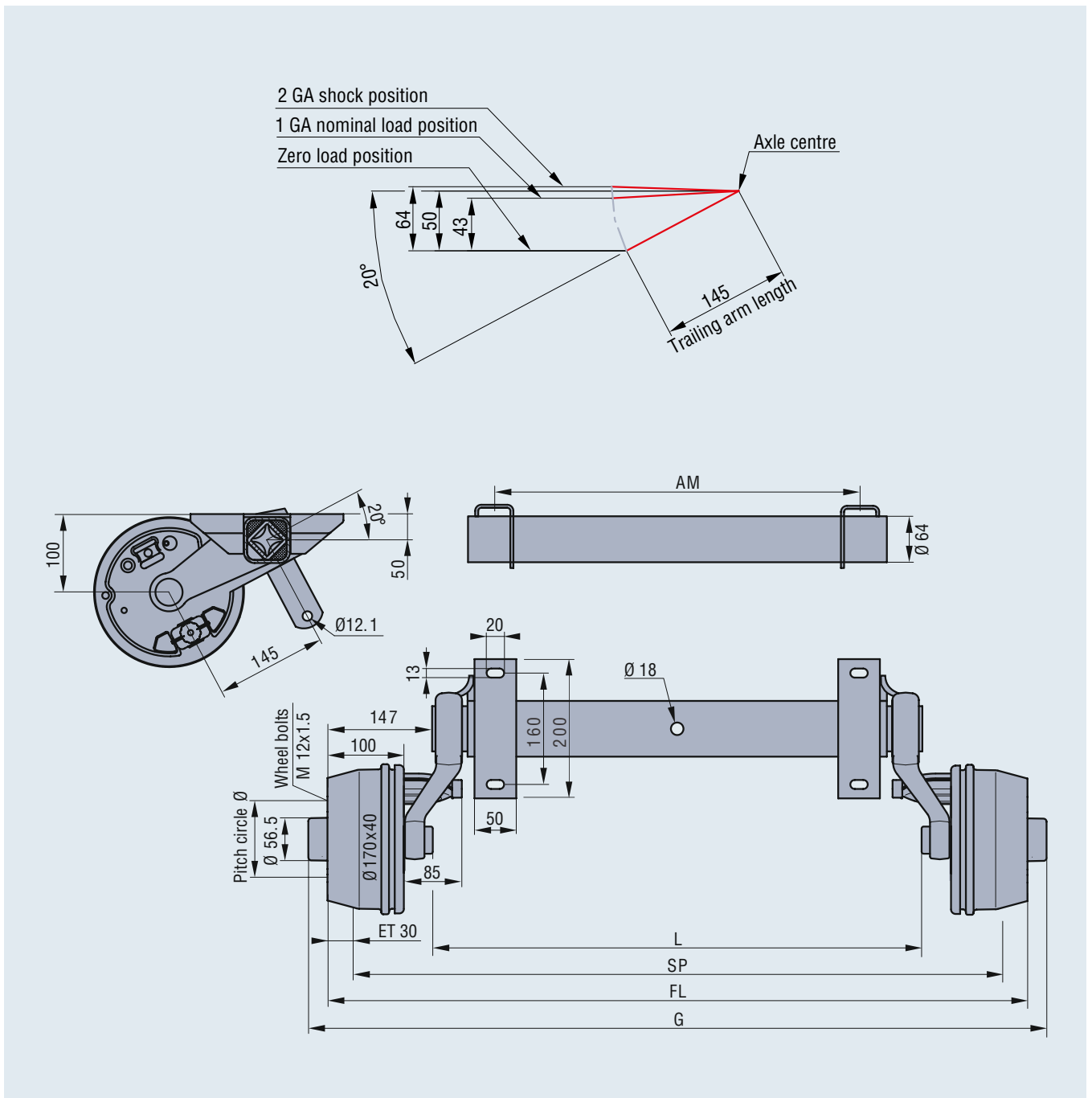
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. : according to wheel connection CB 854 4/ø100/60°	Reference No. : according to wheel connection CB 854 4/ø100/60°	Order No. : according to wheel connection CB 855 5/ø112/R12	Reference No. : according to wheel connection CB 855 5/ø112/R12	Order No. : according to wheel connection CB 854 4/ø100/60°	Reference No. : according to wheel connection CB 854 4/ø100/60°	Order No. : according to wheel connection CB 855 5/ø112/R12	Reference No. : according to wheel connection CB 855 5/ø112/R12	Dimensions [mm]					Weight [kg]
								FL	SP	AM	L	G	
4012705	46.16.382.010	4012713	46.16.382.030	4012717	46.16.382.050	4021020	46.16.382.070	1430	1370	1000	1162	1480	39.0
4012706	46.16.382.012	4021006	46.16.382.032	4021014	46.16.382.052	4021021	46.16.382.072	1530	1470	1100	1262	1580	39.6
4012708	46.16.382.014	4012714	46.16.382.034	4012719	46.16.382.054	4012725	46.16.382.074	1630	1570	1200	1362	1680	40.3
4012710	46.16.382.016	4021007	46.16.382.036	4012720	46.16.382.056	4021022	46.16.382.076	1730	1670	1300	1462	1780	40.9
4021000	46.16.382.018	4021008	46.16.382.038	4012722	46.16.382.058	4021023	46.16.382.078	1830	1770	1400	1562	1880	41.6
4021001	46.16.382.020	4021009	46.16.382.040	4021015	46.16.382.060	4021024	46.16.382.080	1930	1870	1500	1662	1980	42.2
4021002	46.16.382.022	4021010	46.16.382.042	4021016	46.16.382.062	4021025	46.16.382.082	2030	1970	1600	1762	2080	42.8
4021003	46.16.382.024	4021011	46.16.382.044	4021017	46.16.382.064	4021026	46.16.382.084	2130	2070	1700	1862	2180	43.5
4021004	46.16.382.026	4021012	46.16.382.046	4021018	46.16.382.066	4021027	46.16.382.086	2230	2170	1800	1962	2280	44.1
4021005	46.16.382.028	4021013	46.16.382.048	4021019	46.16.382.068	4021028	46.16.382.088	2330	2270	1900	2062	2380	44.8

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 4x98; 4x130 on demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 1,050 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

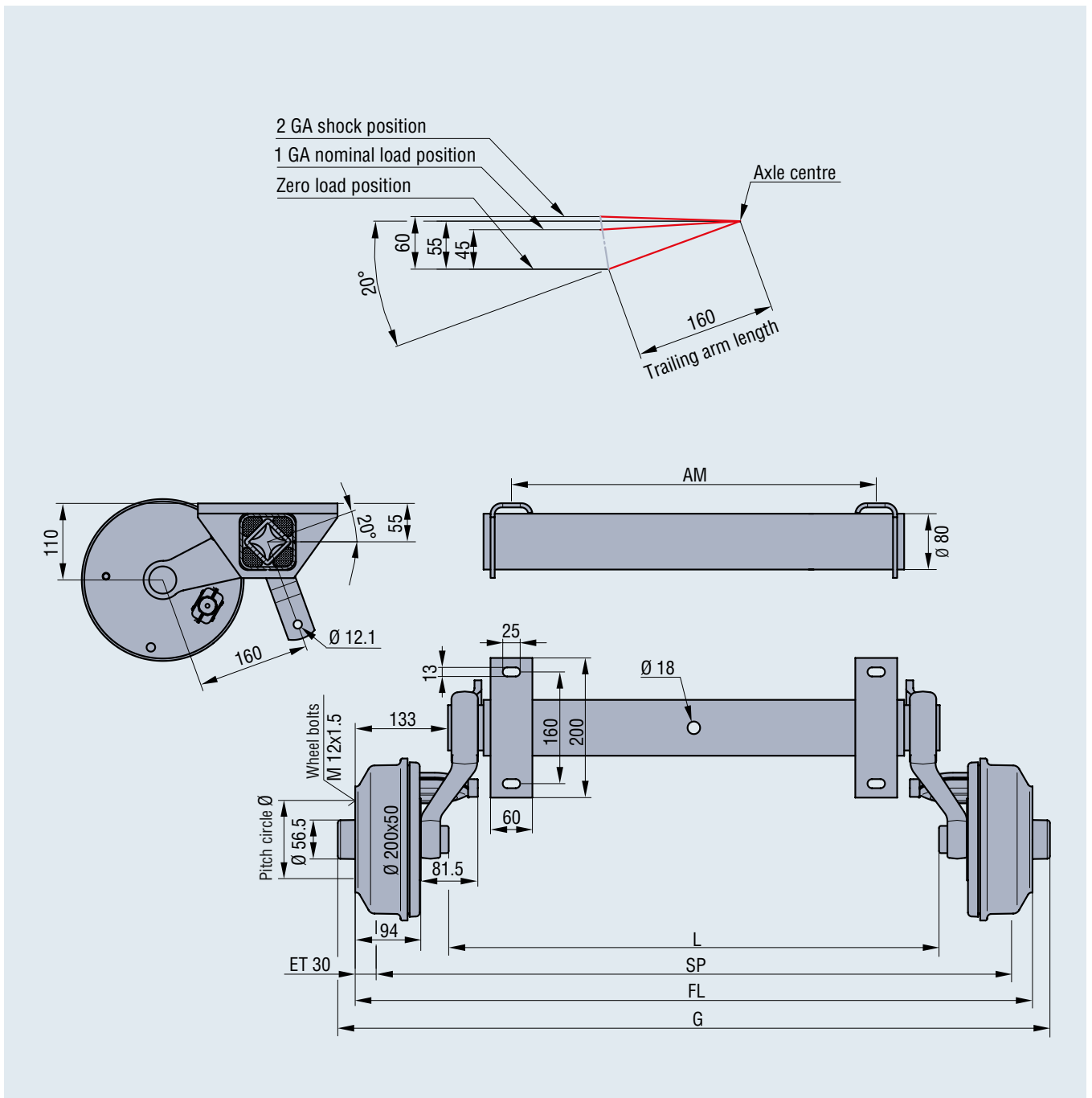
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No./ Reference No.: according to wheel connection CB 1054 4/12100/160°	Order No./ Reference No.: according to wheel connection CB 1055 5/12112/R12	Order No./ Reference No.: according to wheel connection CB 1055 5/12112/160°	Order No./ Reference No.: according to wheel connection CB 1054 4/12100/160°	Order No./ Reference No.: according to wheel connection CB 1055 5/12112/R12	Order No./ Reference No.: according to wheel connection CB 1055 5/12112/160°	Dimensions [mm]					Weight [kg]
						FL	SP	AM	L	G	
4012865 46.21.379.601	4020437 46.21.379.621	4021038 46.21.379.641	4012903 46.21.379.661	4019768 46.21.379.681	4021060 46.21.379.701	1500	1440	1050	1232	1550	51.3
4012867 46.21.379.603	4021033 46.21.379.623	4012893 46.21.379.643	4012904 46.21.379.663	4020184 46.21.379.683	4012926 46.21.379.703	1600	1540	1150	1332	1650	52.2
4012869 46.21.379.605	4012882 46.21.379.625	4021039 46.21.379.645	4021047 46.21.379.665	4012916 46.21.379.685	4021062 46.21.379.705	1700	1640	1250	1432	1750	53.1
4012871 46.21.379.607	4012884 46.21.379.627	4021040 46.21.379.647	4021048 46.21.379.667	4012918 46.21.379.687	4021063 46.21.379.707	1800	1740	1350	1532	1850	54.0
4021029 46.21.379.609	4021034 46.21.379.629	4020413 46.21.379.649	4012907 46.21.379.669	4020185 46.21.379.689	4020414 46.21.379.709	1900	1840	1450	1632	1950	54.9
4012874 46.21.379.611	4012887 46.21.379.631	4021041 46.21.379.651	4021051 46.21.379.671	4012921 46.21.379.691	4021065 46.21.379.711	2000	1940	1550	1732	2050	55.8
4012876 46.21.379.613	4012889 46.21.379.633	4021042 46.21.379.653	4012909 46.21.379.673	4012923 46.21.379.693	4012928 46.21.379.713	2100	2040	1650	1832	2150	56.7
4021030 46.21.379.615	4021035 46.21.379.635	4021043 46.21.379.655	4012910 46.21.379.675	4021055 46.21.379.695	4021068 46.21.379.715	2200	2140	1750	1932	2250	57.6
4021031 46.21.379.617	4021036 46.21.379.637	4021044 46.21.379.657	4021053 46.21.379.677	4021057 46.21.379.697	4021070 46.21.379.717	2300	2240	1850	2032	2350	58.5

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 1,350 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. / Reference No. : according to wheel connection CB 1354 4/ø100/60°	Order No. / Reference No. : according to wheel connection CB 1355 5/ø112/R12	Order No. / Reference No. : according to wheel connection CB 1355 5/ø112/60°	Order No. / Reference No. : according to wheel connection CB 1354 4/ø100/60°	Order No. / Reference No. : according to wheel connection CB 1355 5/ø112/R12	Order No. / Reference No. : according to wheel connection CB 1355 5/ø112/60°	FL	SP	Dimensions [mm]			Weight [kg]
								AM	L	G	
4021071 46.25.379.721	4013284 46.25.379.741	4021080 46.25.379.761	4021086 46.25.379.781	4013318 46.25.379.801	4021102 46.25.379.821	1500	1440	1050	1232	1550	57.1
4013275 46.25.379.723	4013286 46.25.379.743	4013303 46.25.379.763	4021088 46.25.379.783	4013320 46.25.379.803	4021104 46.25.379.823	1600	1540	1150	1332	1650	58.0
4021072 46.25.379.725	4013288 46.25.379.745	4013305 46.25.379.765	4021089 46.25.379.785	4013322 46.25.379.805	4021106 46.25.379.825	1700	1640	1250	1432	1750	58.9
4013278 46.25.379.727	4013290 46.25.379.747	4013307 46.25.379.767	4013316 46.25.379.787	4013324 46.25.379.807	4021108 46.25.379.827	1800	1740	1350	1532	1850	59.8
4013280 46.25.379.729	4013292 46.25.379.749	4013309 46.25.379.769	4021092 46.25.379.789	4013326 46.25.379.809	4013338 46.25.379.829	1900	1840	1450	1632	1950	60.7
4021074 46.25.379.731	4013294 46.25.379.751	4013311 46.25.379.771	4020092 46.25.379.791	4013328 46.25.379.811	4013339 46.25.379.831	2000	1940	1550	1732	2050	61.6
4013281 46.25.379.733	4013296 46.25.379.753	4021082 46.25.379.773	4021095 46.25.379.793	4013330 46.25.379.813	4021110 46.25.379.833	2100	2040	1650	1832	2150	62.5
4022185 46.25.379.735	4013298 46.25.379.755	4021083 46.25.379.775	4021097 46.25.379.795	4013332 46.25.379.815	4021112 46.25.379.835	2200	2140	1750	1932	2250	63.4
4021078 46.25.379.737	4013300 46.25.379.757	4013314 46.25.379.777	4021099 46.25.379.797	4013334 46.25.379.817	4021113 46.25.379.837	2300	2240	1850	2032	2350	64.3

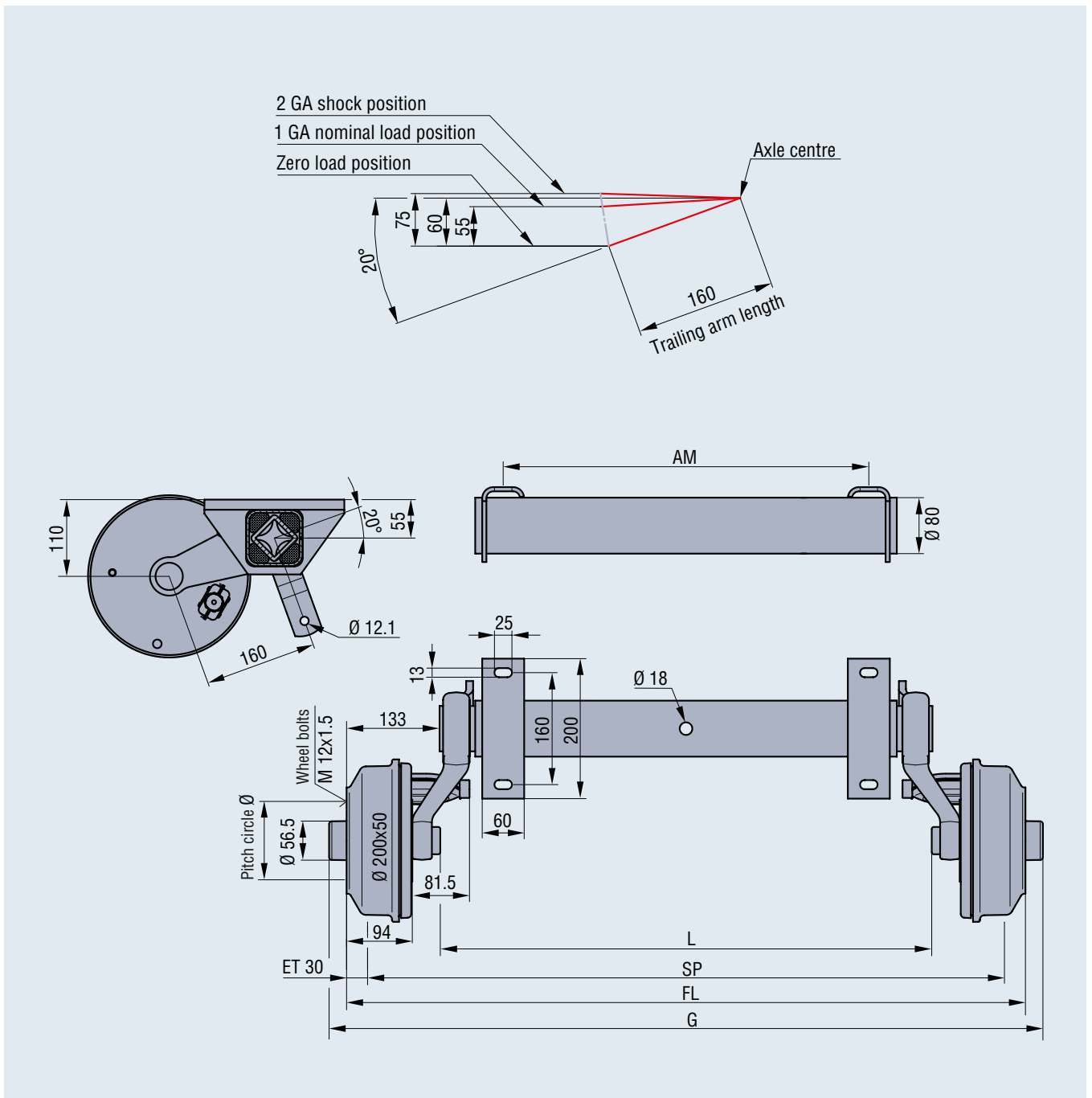
*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- | Speed up to 140 km/h
- | Drawbar connection: Clamping shells see Accessories
- | Wheel connections:
4x98; 4x130; 5x140 on demand
- | Special axle mounts and drawbar connections on demand
- | Also available with watertight bearings

- | Axle body fully hop-dip galvanised: Permanent surface protection
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Maintenance-free suspension: Lower maintenance costs
- | Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites

- | Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- | Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- | Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 1,500 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

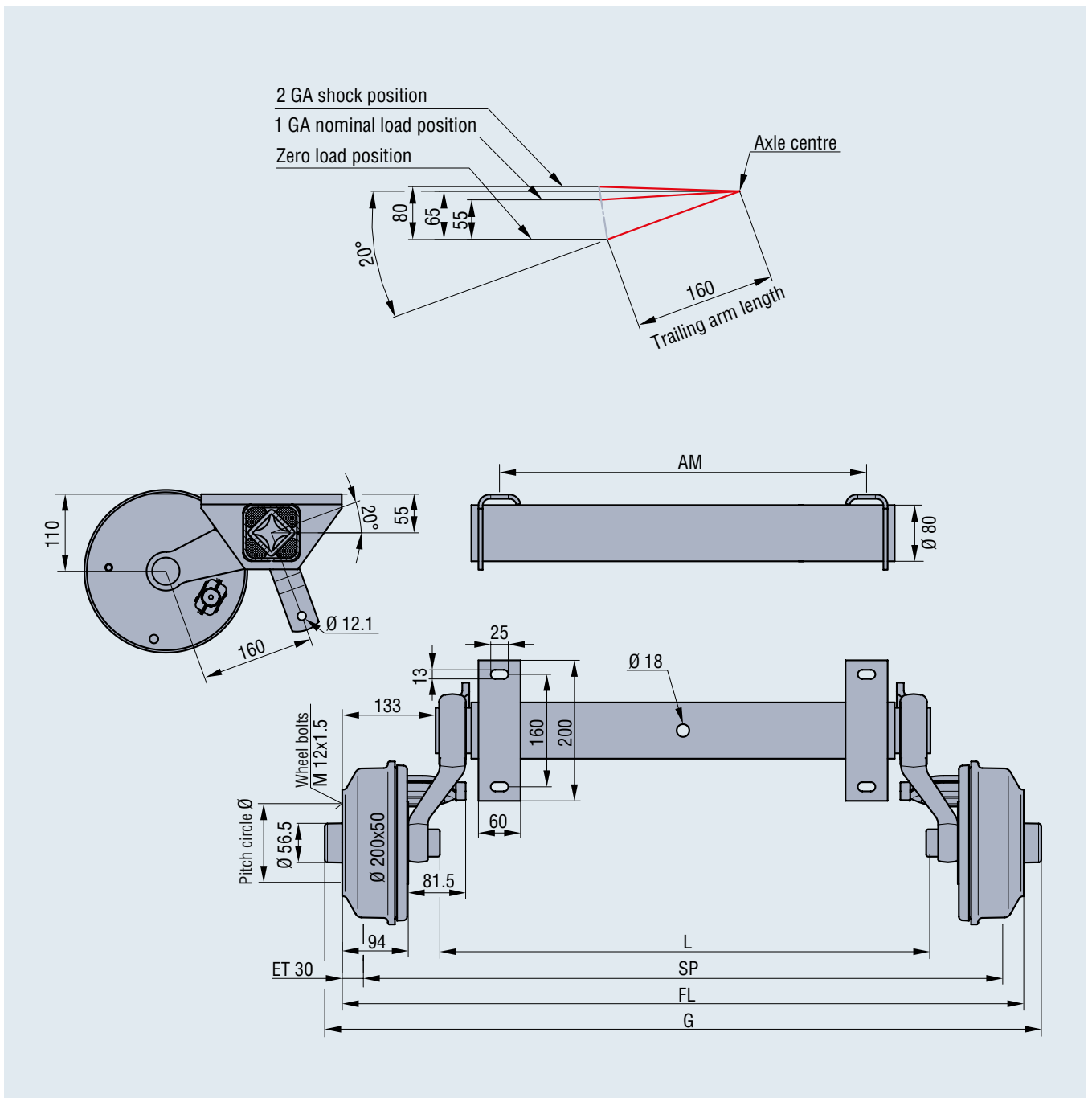
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. : according to wheel connection CB 1505 5/ø112/R12		Reference No. : according to wheel connection CB 1505 5/ø112/R12		Order No. : according to wheel connection CB 1505 5/ø112/60°		Reference No. : according to wheel connection CB 1505 5/ø112/60°		Order No. : according to wheel connection CB 1505 5/ø112/R12		Reference No. : according to wheel connection CB 1505 5/ø112/60°		Order No. : according to wheel connection CB 1505 5/ø112/R12		Reference No. : according to wheel connection CB 1505 5/ø112/60°		FL	SP	AM	L	G	Weight (kg)		
4020095	46.27.379.501	4021115	46.27.379.521	4013531	46.27.379.541	4021127	46.27.379.561	1500	1440	1050	1222	1550	57.5										
4013502	46.27.379.503	4021116	46.27.379.523	4013533	46.27.379.543	4021128	46.27.379.563	1600	1540	1150	1322	1650	58.5										
4013504	46.27.379.505	4021118	46.27.379.525	4020127	46.27.379.545	4021130	46.27.379.565	1700	1640	1250	1422	1750	59.5										
4013506	46.27.379.507	4013521	46.27.379.527	4013536	46.27.379.547	4021132	46.27.379.567	1800	1740	1350	1522	1850	60.5										
4013508	46.27.379.509	4021120	46.27.379.529	4013538	46.27.379.549	4021134	46.27.379.569	1900	1840	1450	1622	1950	61.5										
4013510	46.27.379.511	4021121	46.27.379.531	4013540	46.27.379.551	4021136	46.27.379.571	2000	1940	1550	1722	2050	62.5										
4013512	46.27.379.513	4013525	46.27.379.533	4013542	46.27.379.553	4021138	46.27.379.573	2100	2040	1650	1822	2150	63.5										
4013514	46.27.379.515	4013527	46.27.379.535	4021124	46.27.379.555	4021140	46.27.379.575	2200	2140	1750	1922	2250	64.5										
4013516	46.27.379.517	4021123	46.27.379.537	4013545	46.27.379.557	4021142	46.27.379.577	2300	2240	1850	2022	2350	65.5										

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
 Mounting part kit for single-axle brake rod, see Accessories
 Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 1,800 kg, wheel brake S 2504-7 RASK

Lightweight version



FIRST AXLE incl. loose brake cables

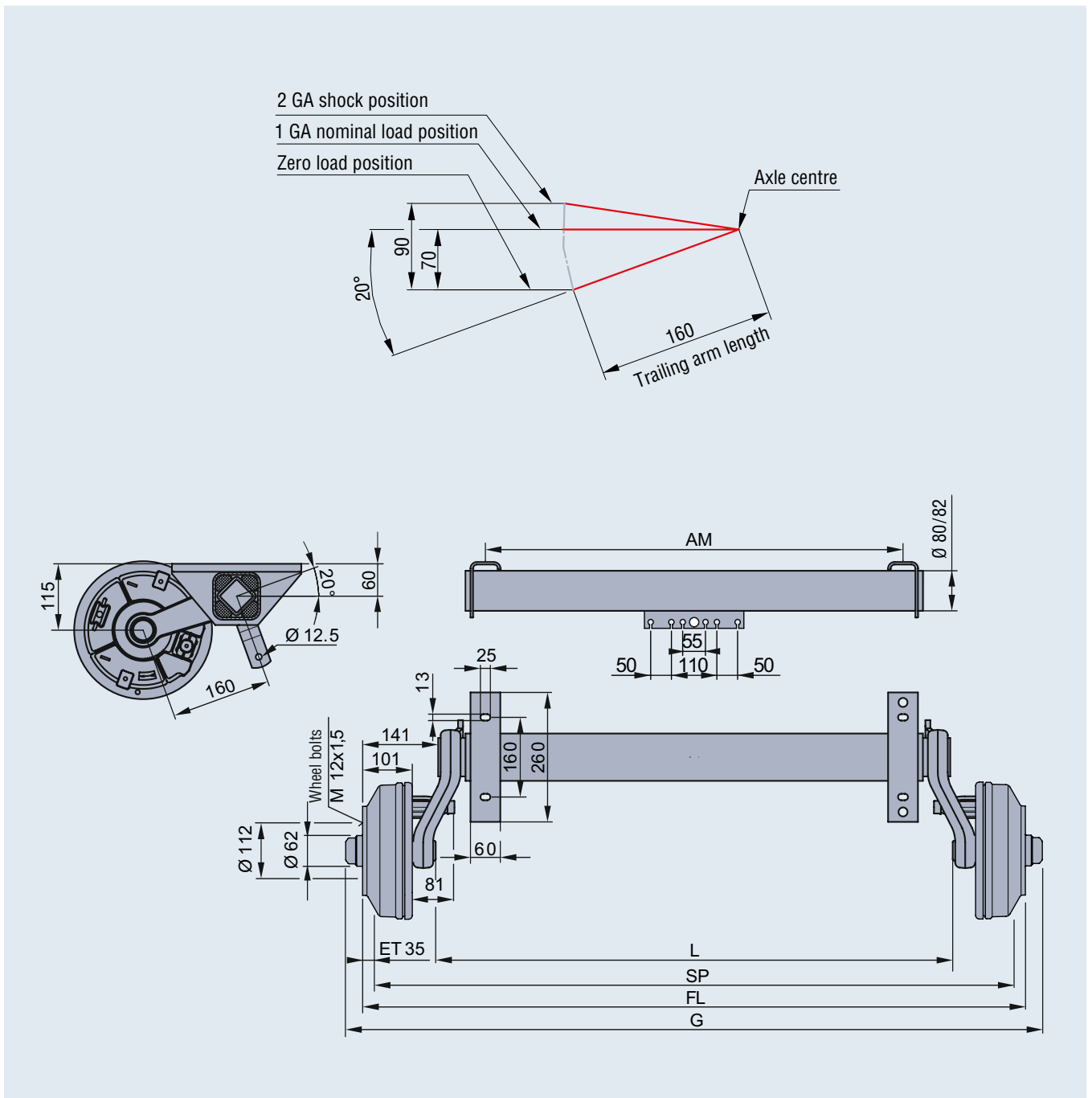
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. Axle incl. loose brake cables CB 1805 5/10112/R12	Reference No. Axle incl. loose brake cables CB 1805 5/10112/R12	Order No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/10112/R12	Reference No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/10112/R12	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4021144	–	4021154	–	1490	1420	1000	1197	1554	68
4021145	–	4021155	–	1590	1520	1100	1297	1654	69
4021146	–	4021156	–	1690	1620	1200	1397	1754	70
4021147	–	4021157	–	1790	1720	1300	1497	1854	71
4021148	–	4021158	–	1890	1820	1400	1597	1954	72
4021149	–	4021159	–	1990	1920	1500	1697	2054	73
4021150	–	4021160	–	2090	2020	1600	1797	2154	74
4021151	–	4021161	–	2190	2120	1700	1897	2254	75
4021152	–	4021162	–	2290	2220	1800	1997	2354	76
4021153	–	4021163	–	2390	2320	1900	2097	2454	77

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 1,800 kg, wheel brake S 2504-7 RASK

Heavy-duty version - VKT95



FIRST AXLE incl. loose brake cables

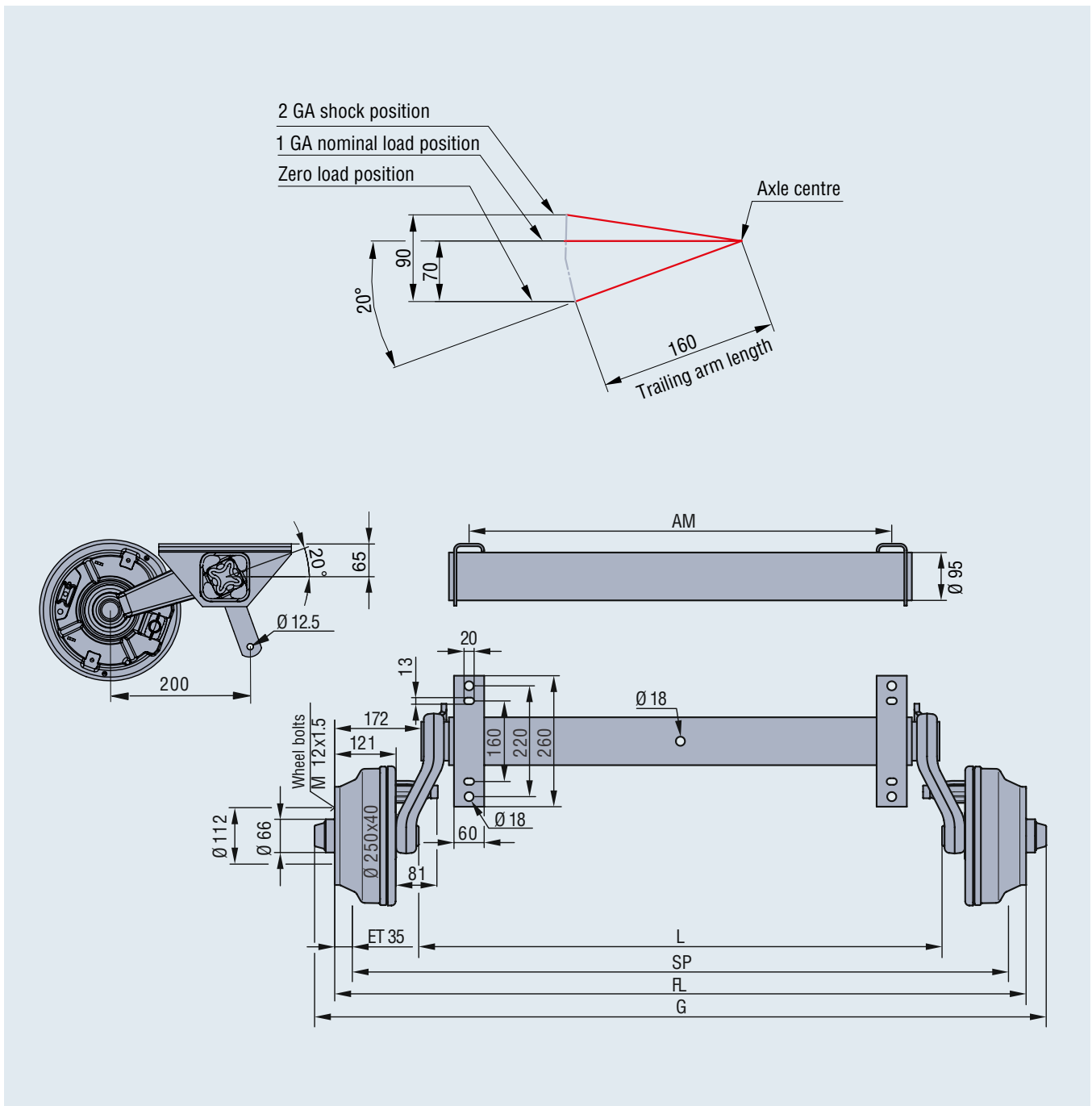
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. Axle incl. loose brake cables CB 1805 5/ø112/R12	Reference No. Axle incl. loose brake cables CB 1805 5/ø112/R12	Order No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/ø112/R12	Reference No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/ø112/R12	FL	SP	Dimensions [mm]				Weight [kg]
						AM	L	G		
4013764	46.32.368.400	4013784	46.32.368.420	1535	1465	1000	1200	1620		78.0
4013766	46.32.368.402	4013785	46.32.368.422	1635	1565	1100	1300	1720		79.0
4013768	46.32.368.404	4013786	46.32.368.424	1735	1665	1200	1400	1820		80.0
4013770	46.32.368.406	4013788	46.32.368.426	1835	1765	1300	1500	1920		81.0
4013772	46.32.368.408	4013790	46.32.368.428	1935	1865	1400	1600	2020		82.0
4013774	46.32.368.410	4013792	46.32.368.430	2035	1965	1500	1700	2120		83.0
4013776	46.32.368.412	4013794	46.32.368.432	2135	2065	1600	1800	2220		84.0
4013778	46.32.368.414	4013796	46.32.368.434	2235	2165	1700	1900	2320		85.0
4013780	46.32.368.416	4013798	46.32.368.436	2335	2265	1800	2000	2420		86.0

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 2,000 kg, wheel brake S 2505-7 RASK*



FIRST AXLE incl. loose brake cables

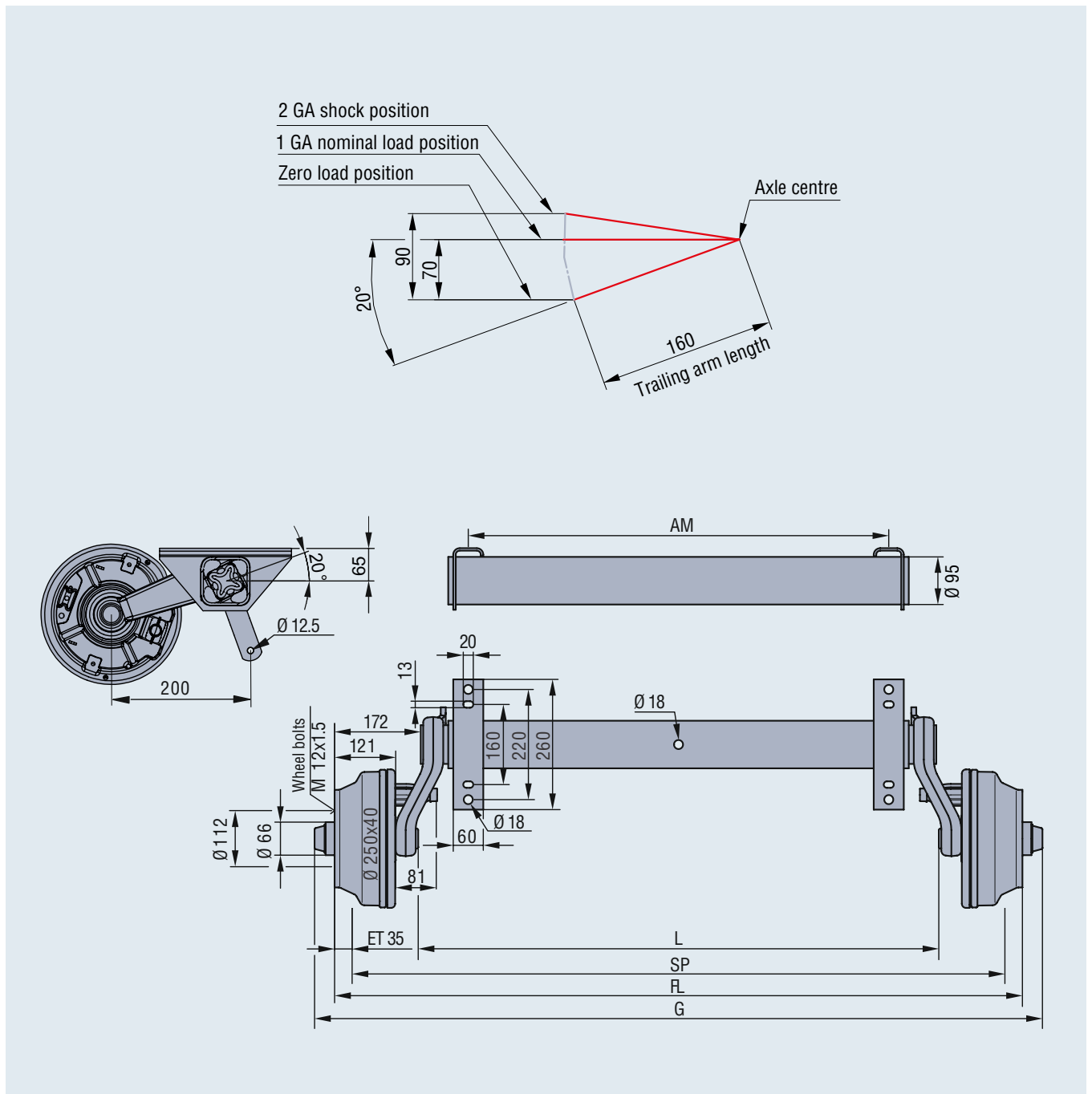
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. Axle incl. loose brake cables CB 1805 5/ø112/R12	Reference No. Axle incl. loose brake cables CB 1805 5/ø112/R12	Order No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/ø112/R12	Reference No. Second axle for tandem incl. welded adapter bracket (without brake cables)* CB 1805 5/ø112/R12	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4021508	–	4021517	–	1515	1445	1000	1180	1620	78
4021509	–	4021518	–	1615	1545	1100	1280	1720	79
4021510	–	4021519	–	1715	1645	1200	1380	1820	80
4021511	–	4021520	–	1815	1745	1300	1480	1920	81
4021512	–	4021521	–	1915	1845	1400	1580	2020	82
4021513	–	4021522	–	2015	1845	1500	1580	2120	83
4021514	–	4021523	–	2115	2045	1600	1680	2220	84
4021515	–	4021524	–	2215	2145	1700	1780	2320	85
4021516	–	4021525	–	2315	2245	1800	1980	2420	86

*only with limited tyre radius (Rmin = 0.27 m / Rmax = 0.321 m)
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hot-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 2,100 kg, wheel brake S 3006-7 RASK

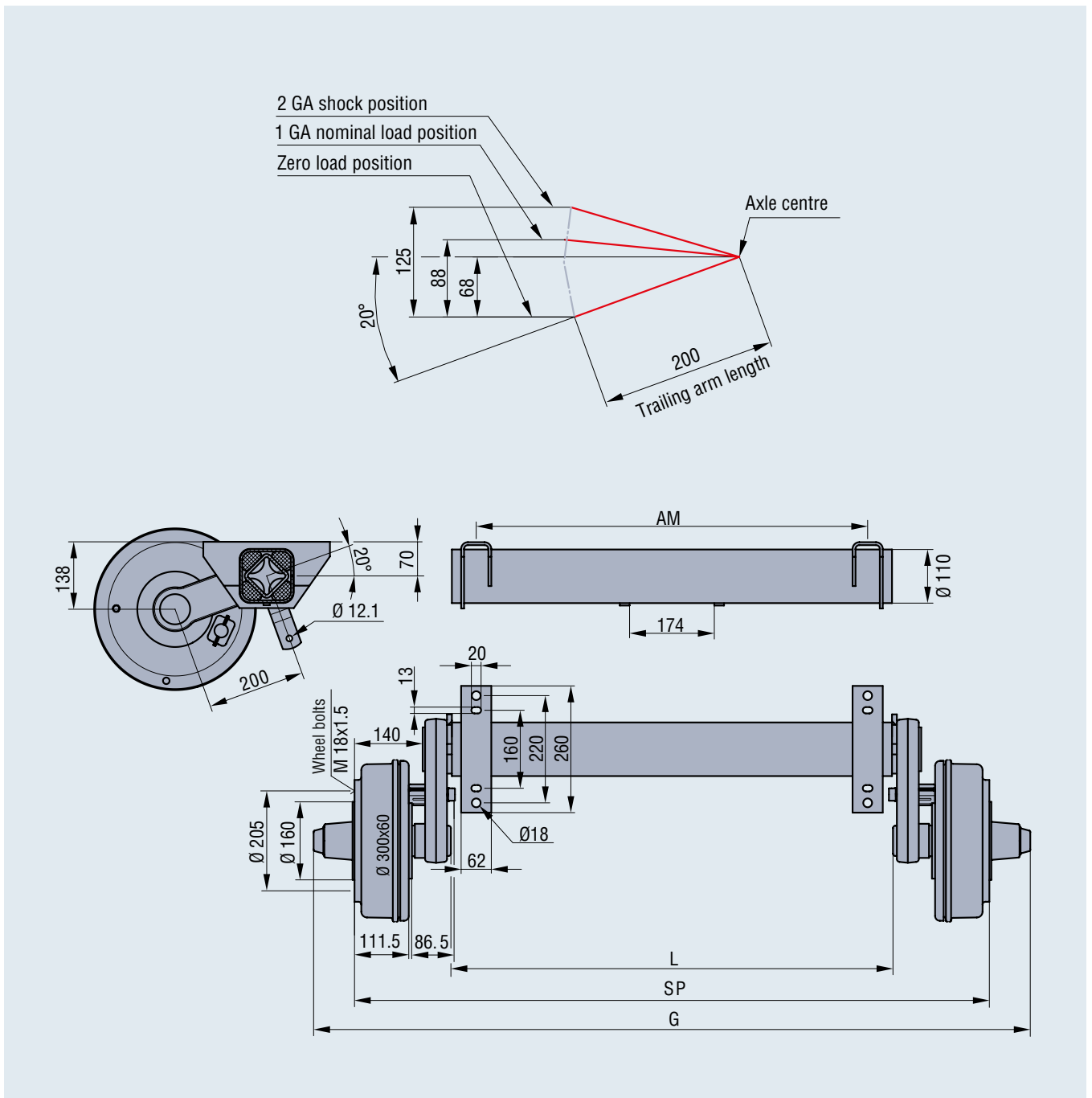


Order No. CS 2106 Ø160/16/Ø205	Reference No. CS 2106 Ø160/16/Ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4013994	46.37.373.100	1500	1000	1104	1668	101.0
4013995	46.37.373.101	1600	1100	1204	1768	103.0
4013996	46.37.373.102	1700	1200	1304	1868	105.0
4019787	46.37.373.103	1800	1300	1404	1968	107.0
4013997	46.37.373.104	1900	1400	1504	2068	109.0
4013998	46.37.373.105	2000	1500	1604	2168	111.0
4020116	46.37.373.106	2100	1600	1704	2268	113.0
4013999	46.37.373.107	2200	1700	1804	2368	115.0
4014000	46.37.373.108	2300	1800	1904	2468	117.0

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 2,500 kg, wheel brake S 3006-7 RASK



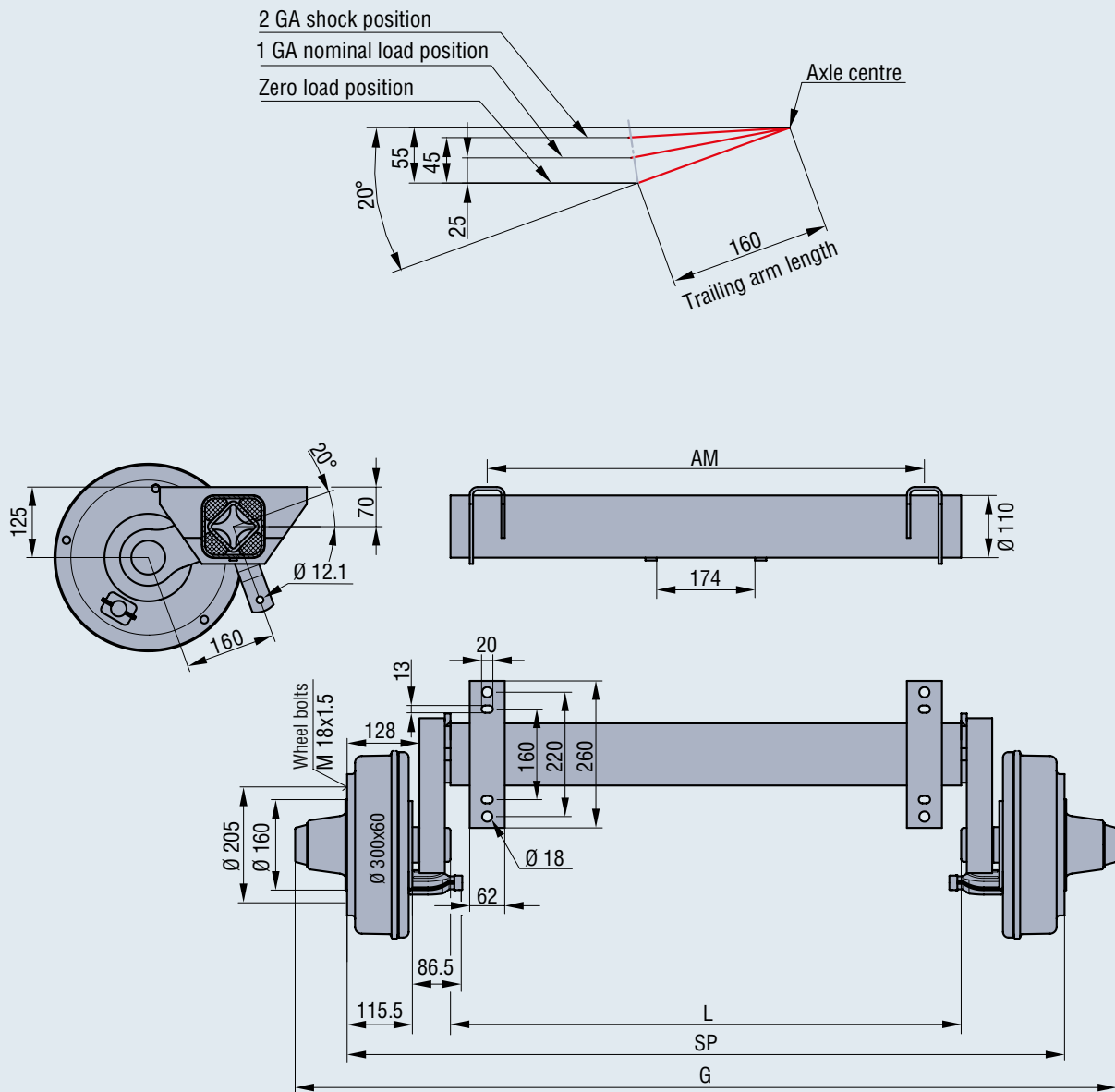
Order No. CS 2506 Ø160/16/205	Reference No. CS 2506 Ø160/16/205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4021164	46.41.373.100	1500	1000	1130	1684	118.0
4020274	46.41.373.101	1600	1100	1230	1784	120.0
4014009	46.41.373.102	1700	1200	1330	1884	122.0
4014010	46.41.373.103	1800	1300	1430	1984	124.0
4020821	46.41.373.104	1900	1400	1530	2084	126.0
4021165	46.41.373.105	2000	1500	1630	2184	128.0
4014011	46.41.373.106	2100	1600	1730	2284	130.0
4020688	46.41.373.107	2200	1700	1830	2384	132.0
4020681	46.41.373.108	2300	1800	1930	2484	134.0

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- | Speed up to 140 km/h
- | Drawbar connection: Clamping shells see Accessories
- | Wheel connections: On demand
- | Special axle mounts and drawbar connections on demand
- | Axle body fully hop-dip galvanised: Permanent surface protection
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Maintenance-free suspension: Lower maintenance costs
- | Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- | Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- | Incl. shock absorber bracket

4



BRAKED AXLES, SQUARE

(SWING RUBBER SUSPENSION AXLES)

Axle load 3,000 kg, wheel brake S 3006-7 RASK

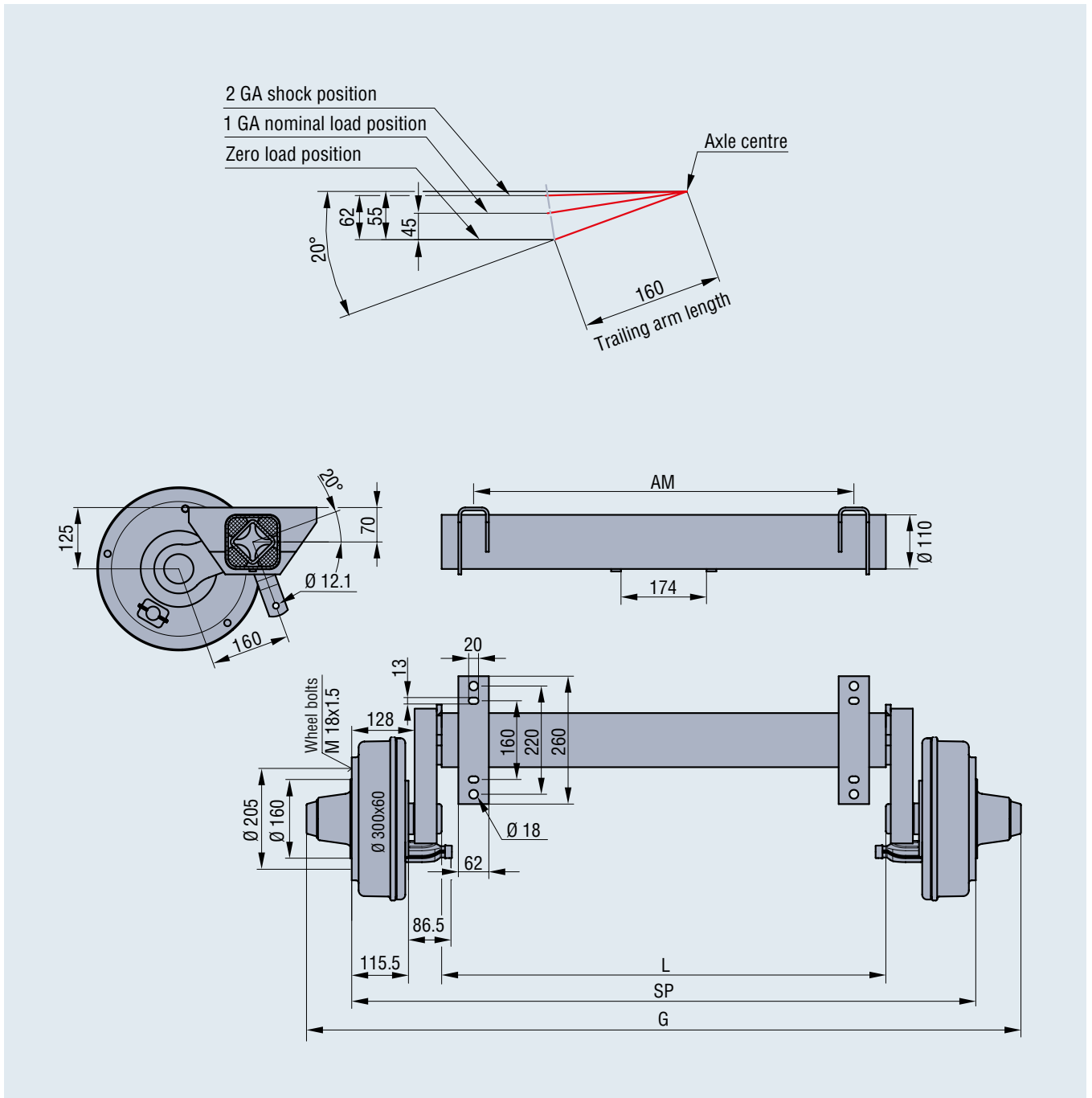


Order No. CS 3006 Ø160/6/ø205	Reference No. CS 3006 Ø160/6/ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4021166	46.46.373.100	1500	1000	1130	1684	120.0
4021167	46.46.373.101	1600	1100	1230	1784	122.0
4021168	46.46.373.102	1700	1200	1330	1884	124.0
4014016	46.46.373.103	1800	1300	1430	1984	126.0
4014017	46.46.373.104	1900	1400	1530	2084	128.0
4021169	46.46.373.105	2000	1500	1630	2184	130.0
4014018	46.46.373.106	2100	1600	1730	2284	132.0
4019788	46.46.373.107	2200	1700	1830	2384	134.0
4014019	46.46.373.108	2300	1800	1930	2484	136.0

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 1,050 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

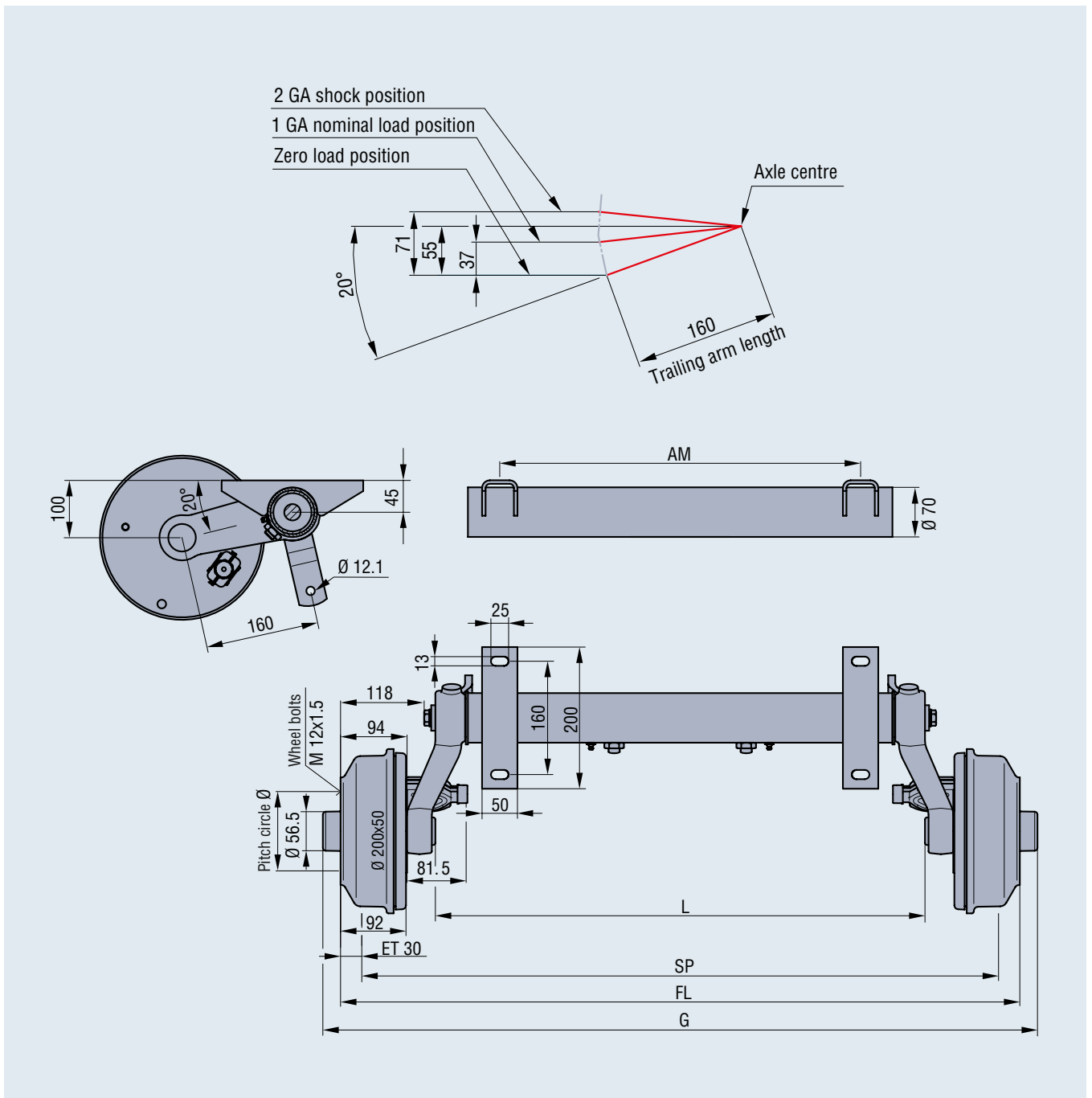
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No. / Reference No. : according to wheel connection DB 1054 4/10100/60°	Order No. / Reference No. : according to wheel connection DB 1055 5/10112/R-12	Order No. / Reference No. : according to wheel connection DB 1055 5/10112/R-12	Order No. / Reference No. : according to wheel connection DB 1054 4/10100/60°	Order No. / Reference No. : according to wheel connection DB 1054 4/10100/60°	Order No. / Reference No. : according to wheel connection DB 1055 5/10112/R-12	Dimensions [mm]					Weight [kg]
						FL	SP	AM	L	G	
4021170 45.21.379.510	4021180 45.21.379.530	4021189 45.21.379.550	4021198 45.21.379.570	4021208 45.21.379.590	4021218 45.21.379.610	1450	1390	1000	1182	1500	48.5
4021171 45.21.379.512	4021147 45.21.379.532	4021190 45.21.379.552	4021199 45.21.379.572	4021209 45.21.379.592	4021219 45.21.379.612	1550	1490	1100	1282	1600	49.2
4021172 45.21.379.514	4021181 45.21.379.534	4021191 45.21.379.554	4021200 45.21.379.574	4021210 45.21.379.594	4021220 45.21.379.614	1650	1590	1200	1382	1700	50.0
4021173 45.21.379.516	4021182 45.21.379.536	4021192 45.21.379.556	4021201 45.21.379.576	4021211 45.21.379.596	4021221 45.21.379.616	1750	1690	1300	1482	1800	50.7
4021174 45.21.379.518	4021183 45.21.379.538	4021193 45.21.379.558	4021202 45.21.379.578	4021212 45.21.379.598	4021222 45.21.379.618	1850	1790	1400	1582	1900	51.4
4021175 45.21.379.520	4021184 45.21.379.540	4021194 45.21.379.560	4021203 45.21.379.580	4021213 45.21.379.600	4021223 45.21.379.620	1950	1890	1500	1682	2000	52.1
4021176 45.21.379.522	4021185 45.21.379.542	4021195 45.21.379.562	4021204 45.21.379.582	4021214 45.21.379.602	4021224 45.21.379.622	2050	1990	1600	1782	2100	52.8
4021177 45.21.379.524	4021186 45.21.379.544	4021148 45.21.379.564	4021205 45.21.379.584	4021215 45.21.379.604	4021149 45.21.379.624	2150	2090	1700	1882	2200	53.5
4021178 45.21.379.526	4021187 45.21.379.546	4021196 45.21.379.566	4021206 45.21.379.586	4021216 45.21.379.606	4021225 45.21.379.626	2250	2190	1800	1982	2300	54.3
4021179 45.21.379.528	4021188 45.21.379.548	4021197 45.21.379.568	4021207 45.21.379.588	4021217 45.21.379.608	4021226 45.21.379.628	2350	2290	1900	2082	2400	55.0

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 1,350 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

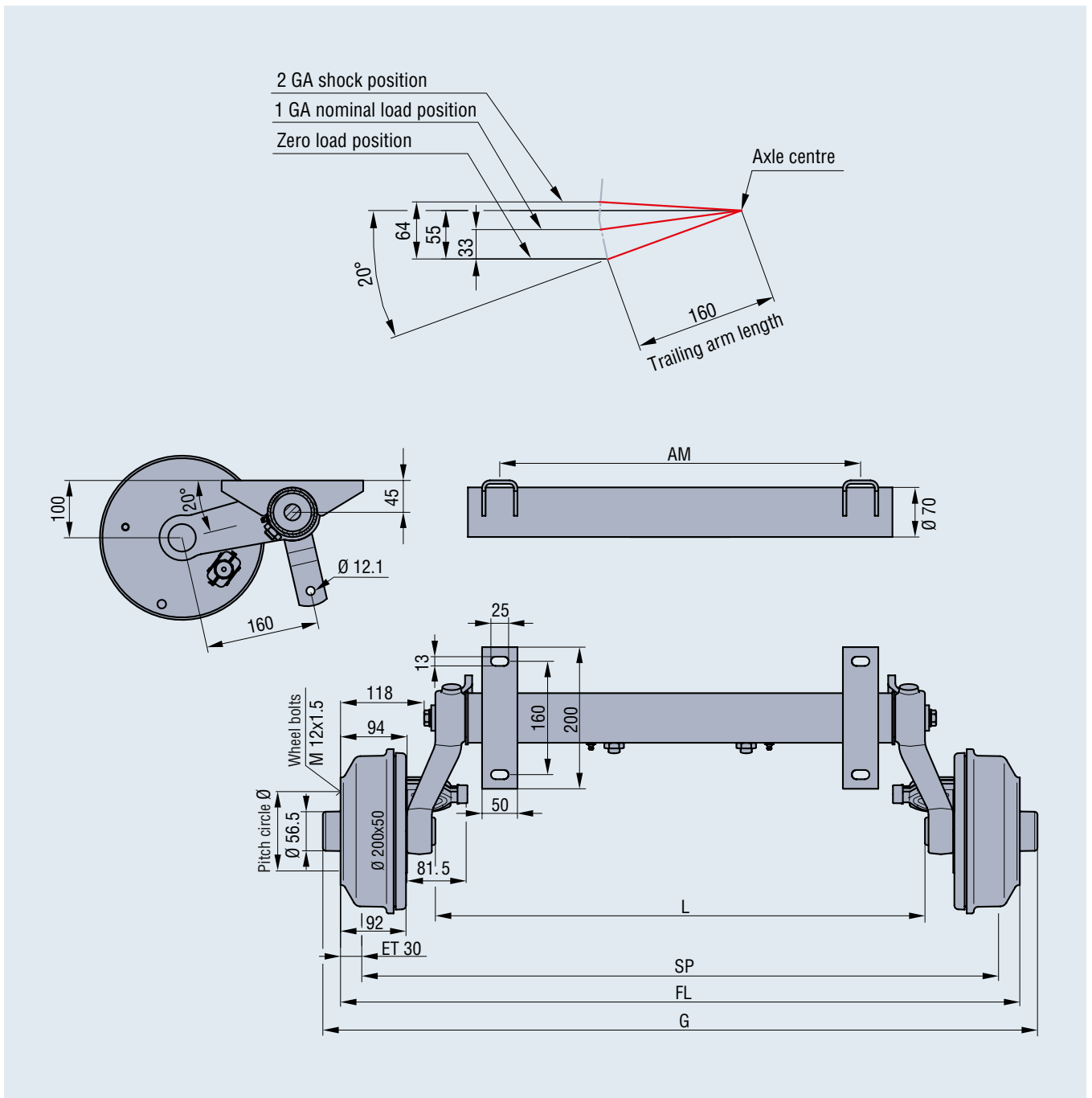
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No./ Reference No.: according to wheel connection DB 1334 4/10100/160°	Order No./ Reference No.: according to wheel connection DB 1335 5/10112/R12	Order No./ Reference No.: according to wheel connection DB 1335 5/10112/160°	Order No./ Reference No.: according to wheel connection DB 1334 4/10100/160°	Order No./ Reference No.: according to wheel connection DB 1335 5/10112/R12	Order No./ Reference No.: according to wheel connection DB 1335 5/10112/160°	Dimensions [mm]					Weight (kg)
						FL	SP	AM	L	G	
4012196 45.25.379.560	4012197 45.25.379.580	4012142 45.25.379.600	40121251 45.25.379.620	40121261 45.25.379.640	40121268 45.25.379.660	1450	1390	1000	1182	1500	48.5
4012227 45.25.379.562	40121236 45.25.379.582	40121243 45.25.379.602	40121252 45.25.379.622	4020420 45.25.379.642	40121269 45.25.379.662	1550	1490	1100	1282	1600	49.2
4012228 45.25.379.564	40121198 45.25.379.584	40121244 45.25.379.604	40121253 45.25.379.624	40121262 45.25.379.644	40121270 45.25.379.664	1650	1590	1200	1382	1700	50.0
4012229 45.25.379.566	40121237 45.25.379.586	40121245 45.25.379.606	40121254 45.25.379.626	40121263 45.25.379.646	40121271 45.25.379.666	1750	1690	1300	1482	1800	50.7
40121230 45.25.379.568	4020642 45.25.379.588	40121246 45.25.379.608	40121255 45.25.379.628	4012200 45.25.379.648	40121272 45.25.379.668	1850	1790	1400	1582	1900	51.4
40121231 45.25.379.570	40121238 45.25.379.590	40121247 45.25.379.610	40121256 45.25.379.630	40121264 45.25.379.650	40121273 45.25.379.670	1950	1890	1500	1682	2000	52.1
40121232 45.25.379.572	4020786 45.25.379.592	4020875 45.25.379.612	40121257 45.25.379.632	40121265 45.25.379.652	40121274 45.25.379.672	2050	1990	1600	1782	2100	52.8
40121233 45.25.379.574	40121239 45.25.379.594	40121248 45.25.379.614	40121258 45.25.379.634	4020086 45.25.379.654	40121275 45.25.379.674	2150	2090	1700	1882	2200	53.5
40121234 45.25.379.576	40121240 45.25.379.596	40121249 45.25.379.616	40121259 45.25.379.636	40121266 45.25.379.656	40121276 45.25.379.676	2250	2190	1800	1982	2300	54.3
40121235 45.25.379.578	40121241 45.25.379.598	40121250 45.25.379.618	40121260 45.25.379.638	40121267 45.25.379.658	40121277 45.25.379.678	2350	2290	1900	2082	2400	55.0

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 1,500 kg, wheel brake S 2005-7 RASK



FIRST AXLE incl. loose brake cables

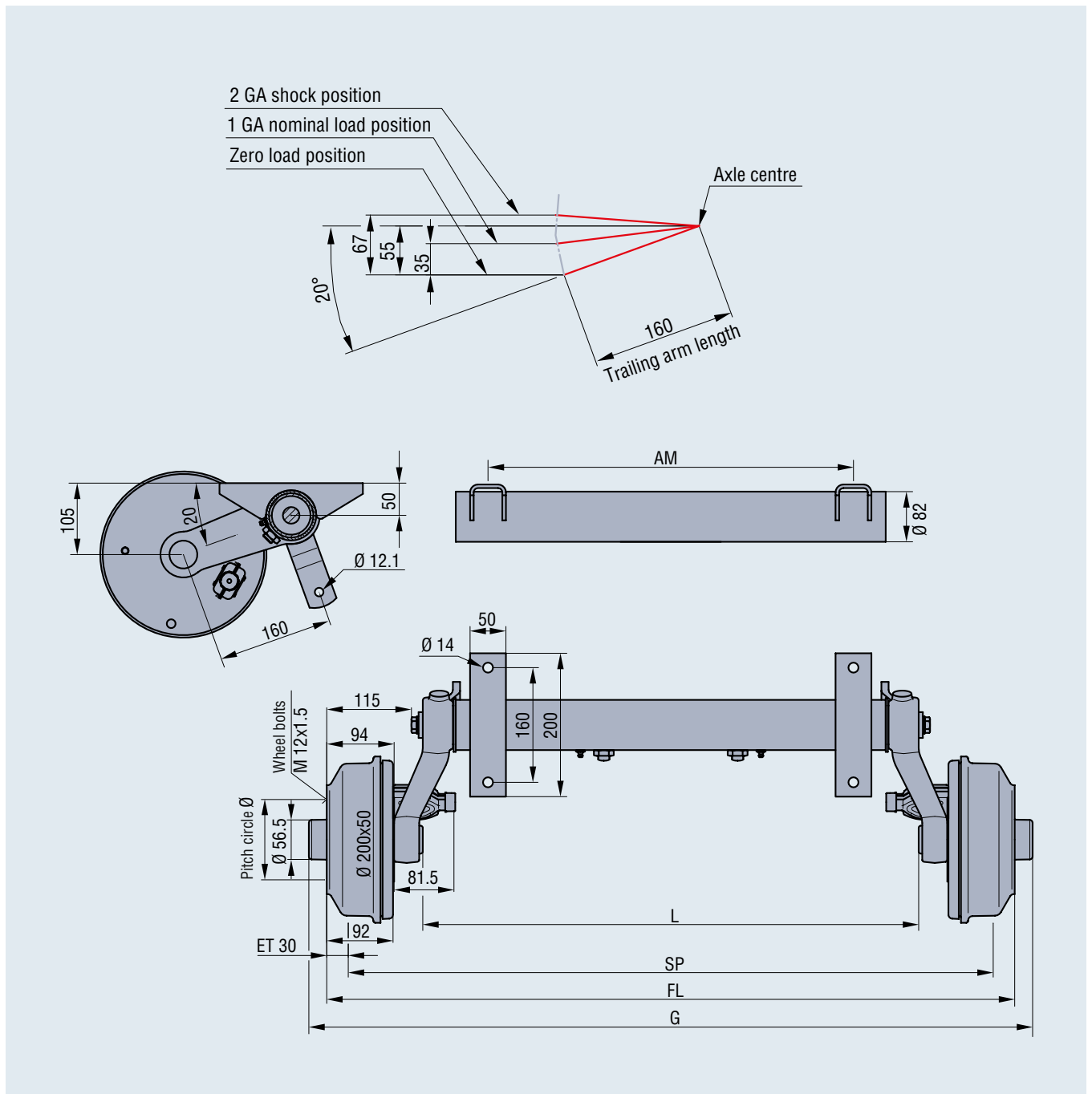
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No./ Reference No.: according to wheel connection DB 1505 5/ø112/R12	Order No./ Reference No.: according to wheel connection DB 1505 5/ø112/60°	Order No./ Reference No.: according to wheel connection DB 1505 5/ø112/R12	Order No./ Reference No.: according to wheel connection DB 1505 5/ø112/60°	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4021278 45.27.379.500	4012320 45.27.379.520	4021291 45.27.379.540	4021294 45.27.379.560	1550	1490	1100	1272	1600	54.6
4012315 45.27.379.502	4021285 45.27.379.522	4012325 45.27.379.542	4021295 45.27.379.562	1650	1590	1200	1372	1700	55.5
4021279 45.27.379.504	4012321 45.27.379.524	4012327 45.27.379.544	4021296 45.27.379.564	1750	1690	1300	1472	1800	56.3
4012317 45.27.379.506	4021286 45.27.379.526	4020417 45.27.379.546	4021297 45.27.379.566	1850	1790	1400	1572	1900	57.2
4021280 45.27.379.508	4021287 45.27.379.528	4012328 45.27.379.548	4021298 45.27.379.568	1950	1890	1500	1672	2000	58.0
4021281 45.27.379.510	4021288 45.27.379.530	4020255 45.27.379.550	4021299 45.27.379.570	2050	1990	1600	1772	2100	58.9
4021282 45.27.379.512	4012323 45.27.379.532	4021292 45.27.379.552	4021300 45.27.379.572	2150	2090	1700	1872	2200	59.7
4021283 45.27.379.514	4021289 45.27.379.534	4019754 45.27.379.554	4021301 45.27.379.574	2250	2190	1800	1972	2300	60.6
4021284 45.27.379.516	4021290 45.27.379.536	4021293 45.27.379.556	4021302 45.27.379.576	2350	2290	1900	2072	2400	61.4

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Also available with watertight bearings
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 1,800 kg, wheel brake S 2504-7 RASK

Lightweight version



FIRST AXLE incl. loose brake cables

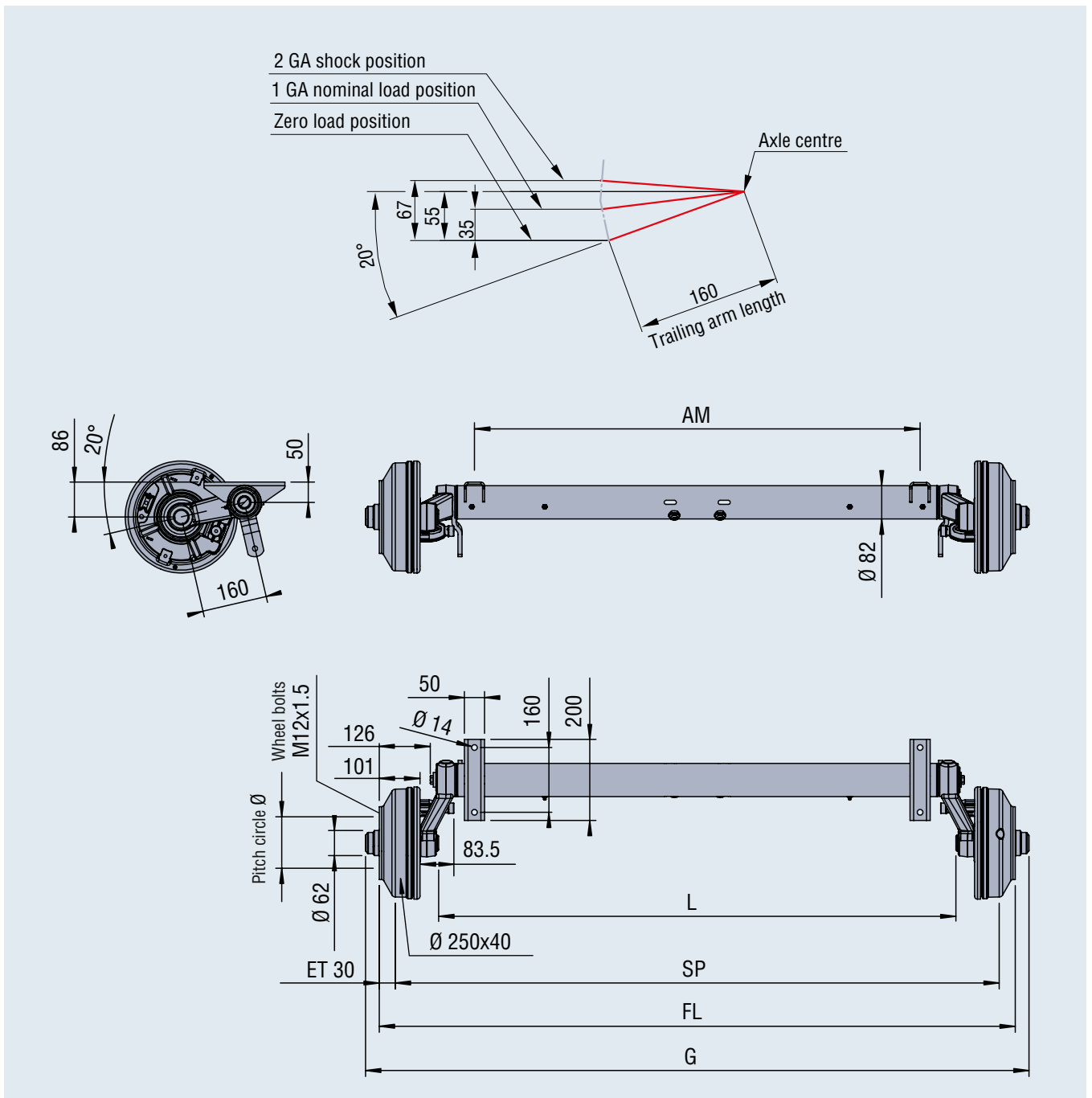
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No./ Axle incl. loose brake cables DB 1805 5/6T12/R12	Reference No. Axle incl. loose brake cables DB 1805 5/6T12/R12	Order No. Second axle for tandem incl. welded adapter bracket (without brake cables)* DB 1805 5/6T12/R12	Reference No. Second axle for tandem incl. welded adapter bracket (without brake cables)* DB 1805 5/6T12/R12	Dimensions [mm]					Weight [kg]
				FL	SP	AM	L	G	
4021466	-	4021475	-	1470	1400	1000	1155	1534	58
4021467	-	4021476	-	1570	1500	1100	1255	1634	59
4021468	-	4021477	-	1670	1600	1200	1355	1734	60
4021469	-	4021478	-	1770	1700	1300	1455	1834	61
4021470	-	4021479	-	1870	1800	1400	1555	1934	62
4021471	-	4021480	-	1970	1900	1500	1655	2034	63
4021472	-	4021481	-	2070	2000	1600	1755	2134	64
4021473	-	4021482	-	2170	2100	1700	1855	2234	65
4021474	-	4021483	-	2270	2200	1800	1955	2334	66

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 1,800 kg, wheel brake S 2504-7 RASK

Heavy-duty version



FIRST AXLE incl. loose brake cables

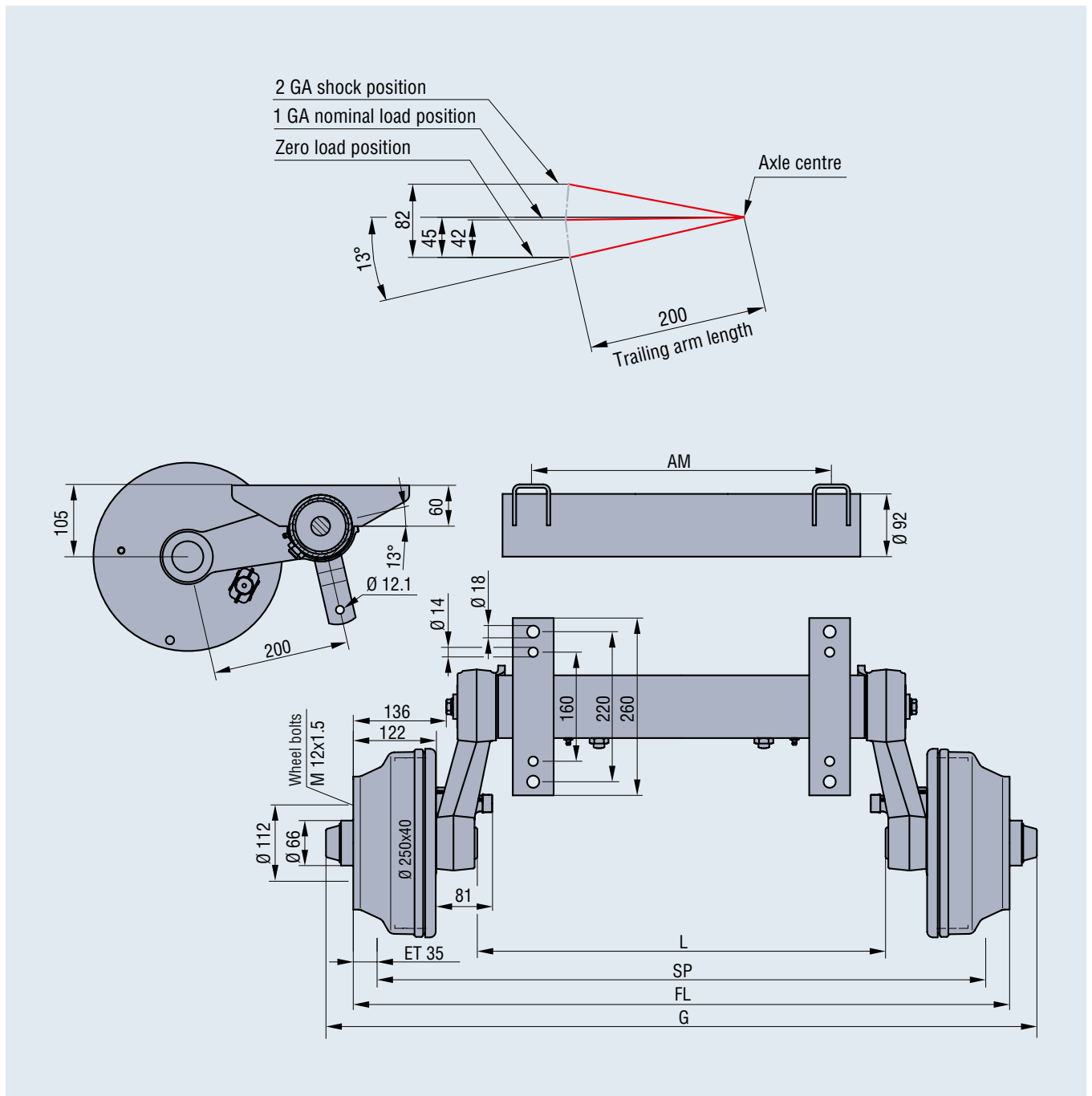
SECOND AXLE FOR TANDEM incl. welded adapter bracket (without brake cables)*

Order No./ Axle incl. loose brake cables DB 1805 5/6T12/R12	Reference No. Axle incl. loose brake cables DB 1805 5/6T12/R12	Order No. Second axle for tandem incl. welded adapter bracket (without brake cables)* DB 1805 5/6T12/R12	Reference No. Second axle for tandem incl. welded adapter bracket (without brake cables)* DB 1805 5/6T12/R12	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4012418	45.32.368.600	4021305	45.32.368.620	1500	1430	1000	1136	1585	69.0
4012419	45.32.368.602	4012427	45.32.368.622	1600	1530	1100	1236	1685	70.1
4012421	45.32.368.604	4012428	45.32.368.624	1700	1630	1200	1336	1785	71.1
4021303	45.32.368.606	4012429	45.32.368.626	1800	1730	1300	1436	1885	72.2
4020271	45.32.368.608	4020270	45.32.368.628	1900	1830	1400	1536	1985	73.3
4021304	45.32.368.610	4012431	45.32.368.630	2000	1930	1500	1636	2085	74.4
4012423	45.32.368.612	4012432	45.32.368.632	2100	2030	1600	1736	2185	75.4
4012425	45.32.368.614	4012434	45.32.368.634	2200	2130	1700	1836	2285	76.5
4012426	45.32.368.616	4021306	45.32.368.636	2300	2230	1800	1936	2385	77.6

*Brake cables for tandem operation dependent on axle spacing and flange dimensions of the axle. Brake cables incl. tandem compensation, see Accessories
Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- | Speed up to 140 km/h
- | Drawbar connection: Clamping shells see Accessories
- | Wheel connections: 5x140 on demand
- | Special axle mounts and drawbar connections on demand
- | Axle body fully hop-dip galvanised: Permanent surface protection
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Maintenance-free suspension: Lower maintenance costs
- | Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- | Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- | Incl. shock absorber bracket
- | Taper roller bearing



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 2,100 kg, wheel brake S 3006-7 RASK

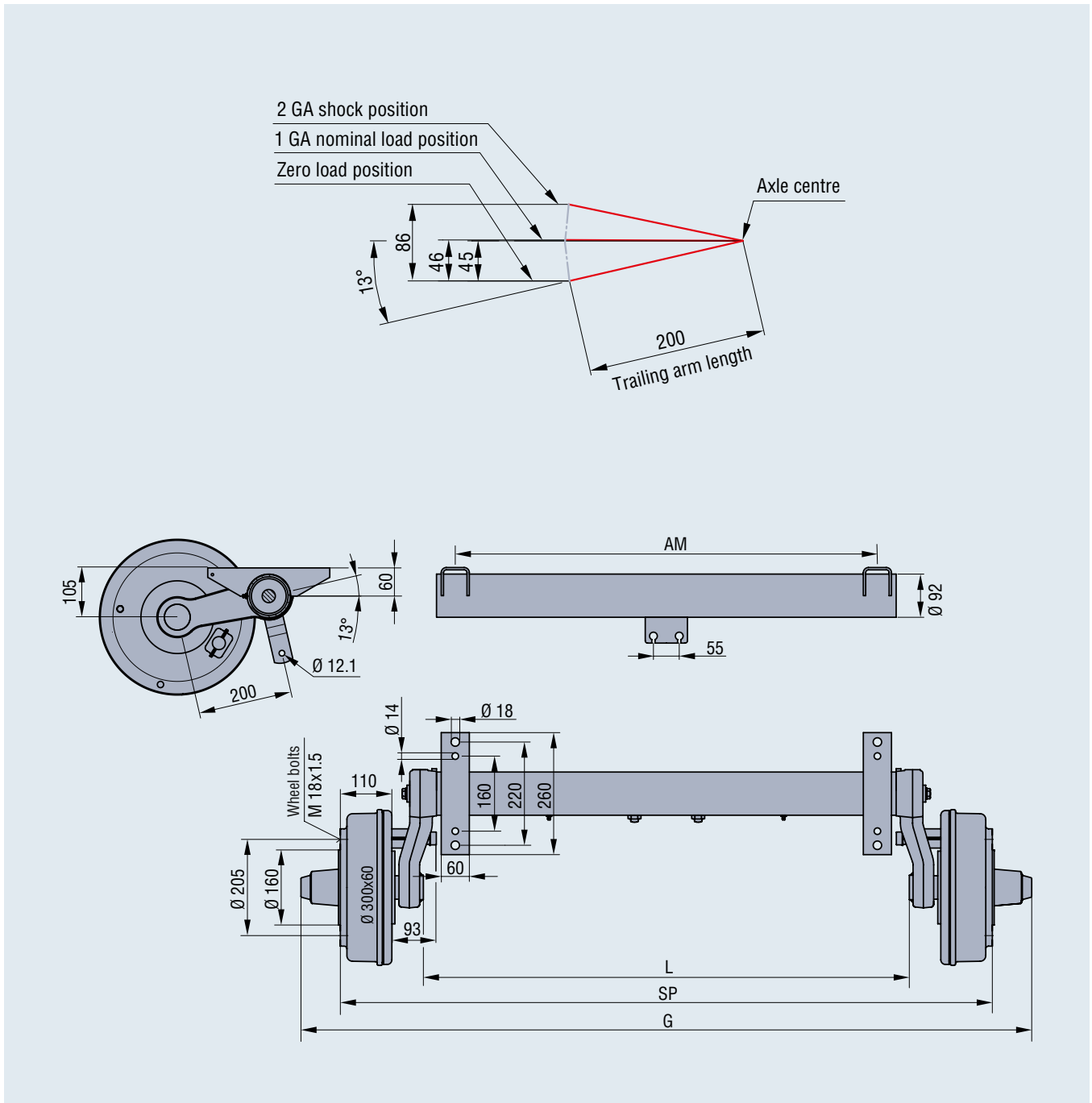


Order No. DS 2106 Ø160/6/ø205	Reference No. DS 2106 Ø160/6/ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4012495	45.37.373.410	1500	1000	1146	1668	92.0
4021307	45.37.373.411	1600	1100	1246	1768	93.1
4012496	45.37.373.412	1700	1200	1346	1868	94.2
4012497	45.37.373.413	1800	1300	1446	1968	95.3
4012498	45.37.373.414	1900	1400	1546	2068	96.4
4021308	45.37.373.415	2000	1500	1646	2168	97.5
4021309	45.37.373.416	2100	1600	1746	2268	98.6
4012499	45.37.373.417	2200	1700	1846	2368	99.7
4021310	45.37.373.418	2300	1800	1946	2468	100.8

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Wheel connections: 5x140 on demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 2,500 kg, wheel brake S 3006-7 RASK

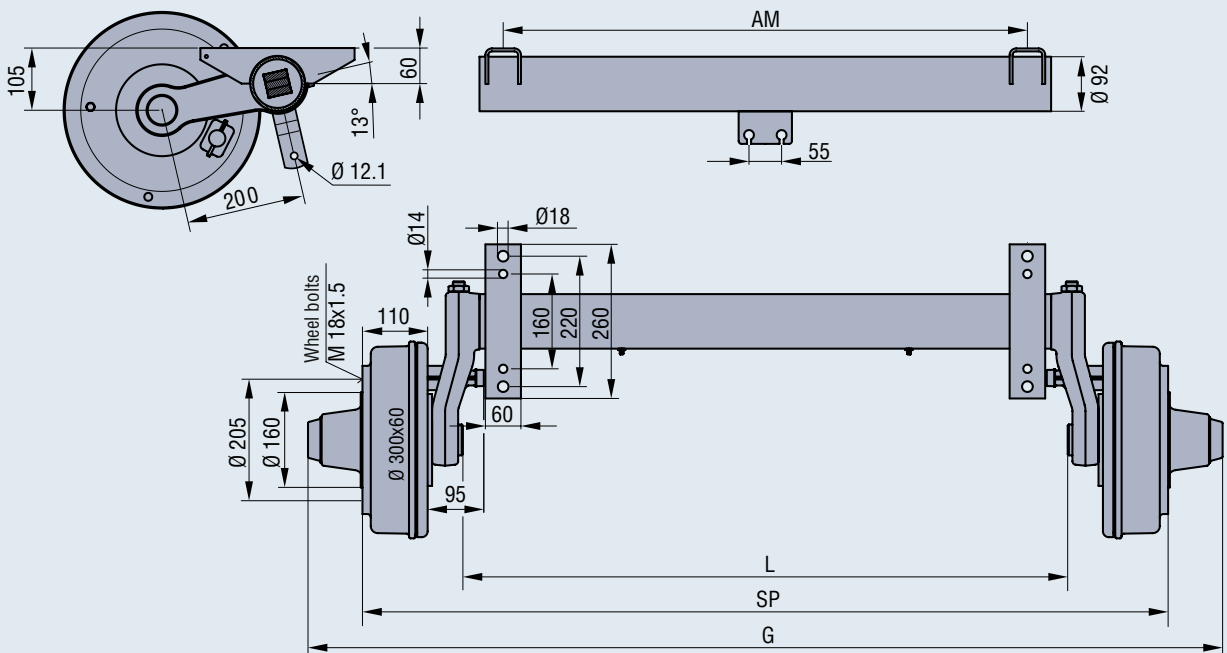
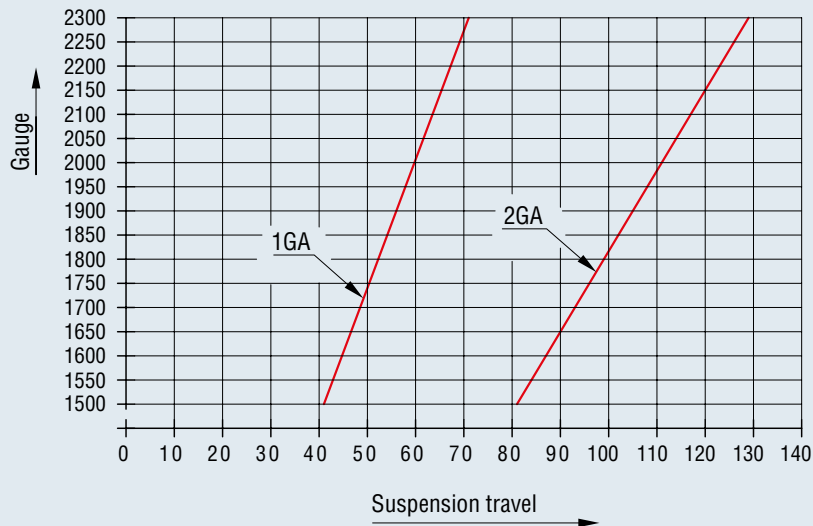


Order No. DS 2506 Ø160/6/Ø205	Reference No. DS 2506 Ø160/6/Ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4012513	45.41.373.030	1500	1000	1161	1684	112.0
4012514	45.41.373.031	1600	1100	1261	1784	113.1
4012515	45.41.373.032	1700	1200	1361	1884	114.1
4012516	45.41.373.033	1800	1300	1461	1984	115.2
4019762	45.41.373.034	1900	1400	1561	2084	116.3
4021311	45.41.373.035	2000	1500	1661	2184	117.4
4012517	45.41.373.036	2100	1600	1761	2284	118.4
4021312	45.41.373.037	2200	1700	1861	2384	119.5
4021313	45.41.373.038	2300	1800	1961	2484	120.6

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 3,000 kg, wheel brake S 3006-7 RASK



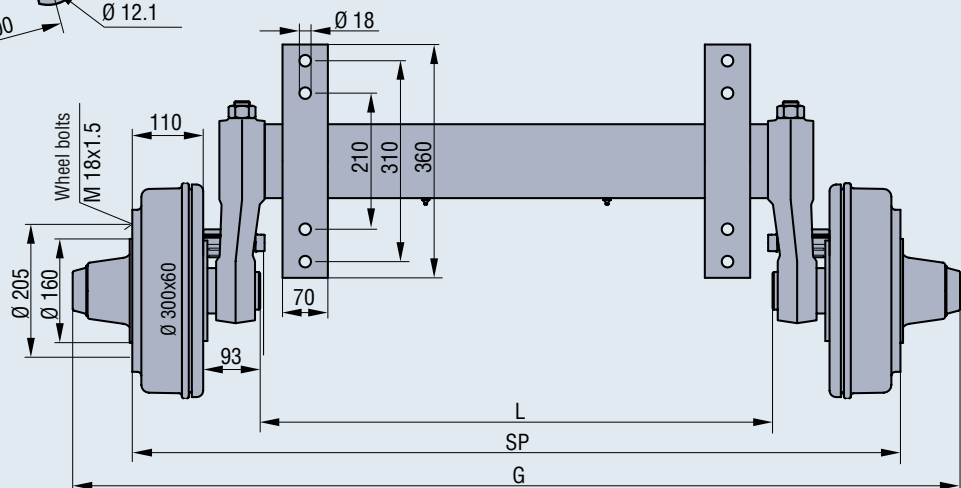
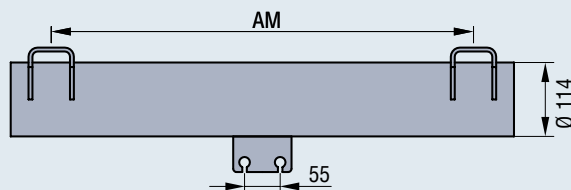
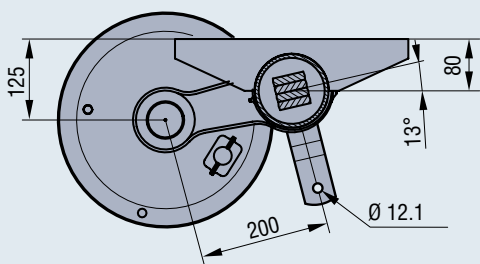
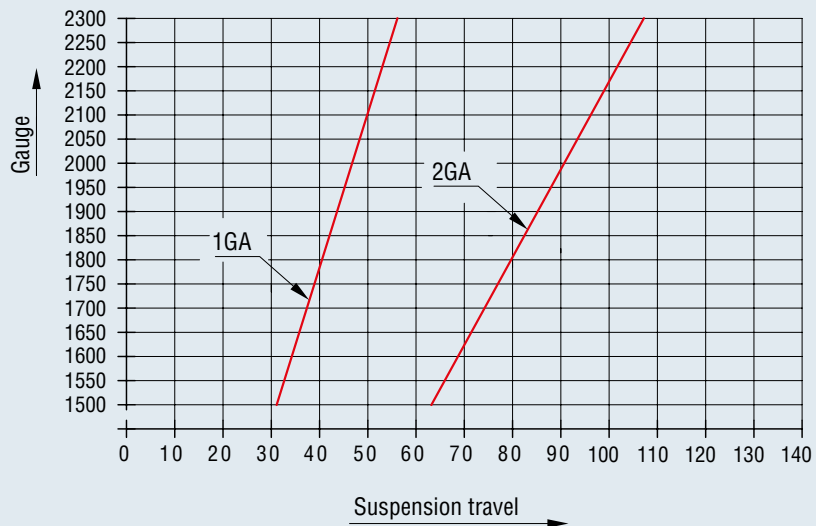
Order No. DS 3006 Ø160/6/Ø205	Reference No. DS 3006 Ø160/6/Ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4021314	45.46.373.220	1500	1000	1104	1684	119.0
4021315	45.46.373.221	1600	1100	1204	1784	120.6
4012528	45.46.373.222	1700	1200	1304	1884	122.2
4021316	45.46.373.223	1800	1300	1404	1984	123.8
4021317	45.46.373.224	1900	1400	1504	2084	125.4
4021318	45.46.373.225	2000	1500	1604	2184	127.0
4021319	45.46.373.226	2100	1600	1704	2284	128.6
4012529	45.46.373.227	2200	1700	1804	2384	130.2
4021320	45.46.373.228	2300	1800	1904	2484	131.8

Mounting part kit for single-axle brake rod, see Accessories

Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

Axle load 3,500 kg, wheel brake 3081

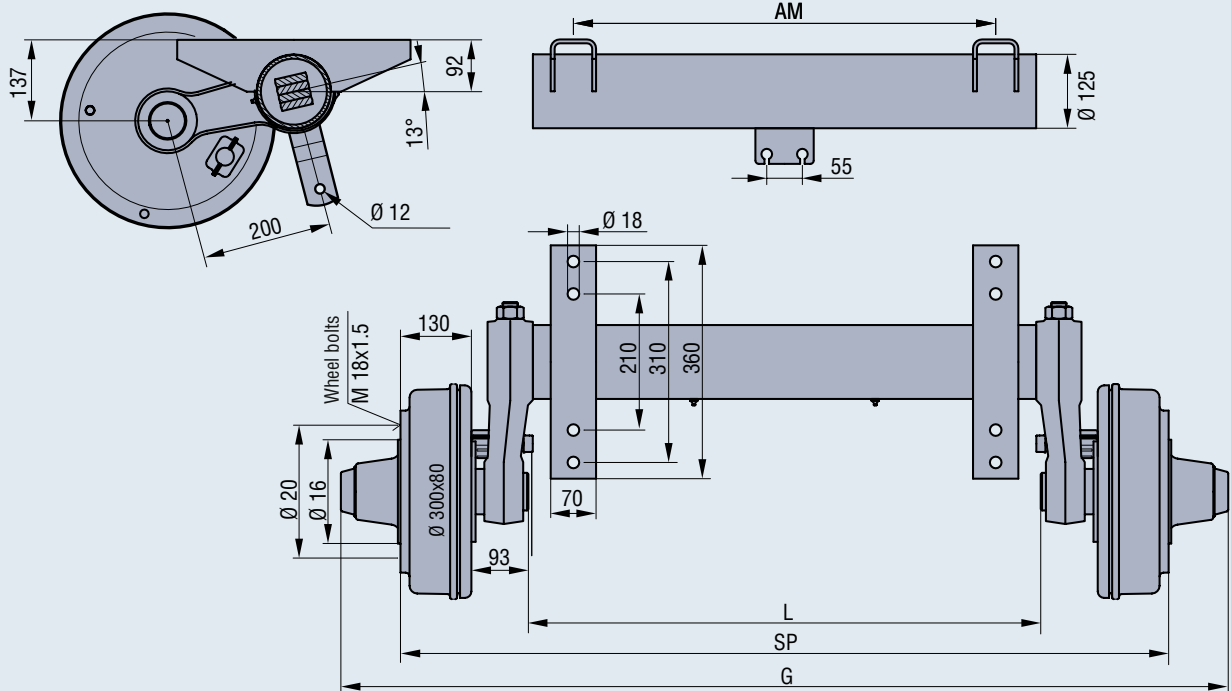
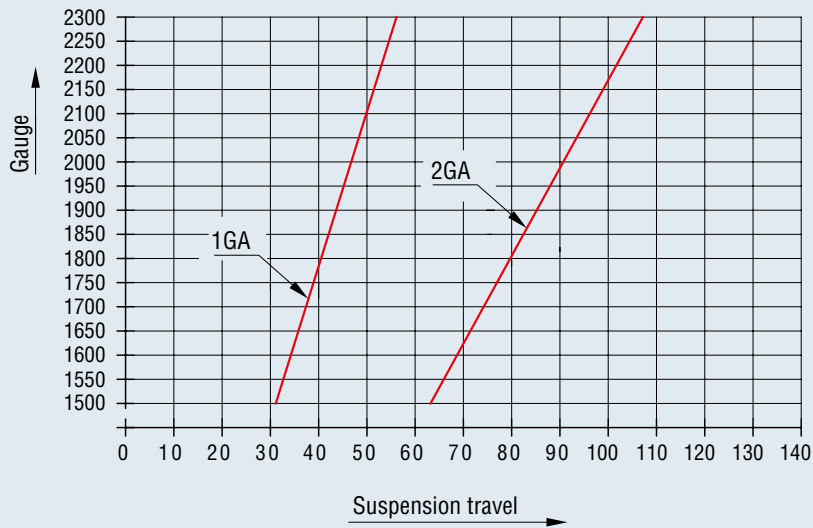


Order No. DS-3006 ø160/6/ø205	Reference No. DS-3006 ø160/6/ø205	SP	AM	Dimensions [mm]		Weight [kg]
				L	G	
4021499	–	1520	1000	1090	1718	200.0
4021500	–	1620	1100	1190	1818	202.2
4021501	–	1720	1200	1290	1918	204.4
4021502	–	1820	1300	1390	2018	206.6
4021503	–	1920	1400	1490	2118	208.8
4021504	–	2020	1500	1590	2218	211.0
4021505	–	2120	1600	1690	2318	213.2
4021506	–	2220	1700	1790	2418	215.4
4021507	–	2320	1800	1890	2518	217.6

Mounting part kit for single-axle brake rod, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-free spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Incl. shock absorber bracket
- I Taper roller bearing



BRAKED AXLES, SQUARE

(SWING TANDEM AXLE RUBBER SUSPENSION)

with composite clamping mounts, permitted gross weight 2,100 kg,
wheel brake S 2005-7 RASK

On request:

Also available as tandem torsion bar
for 2,100 / 2,500 / 3,000 / 3,500 kg

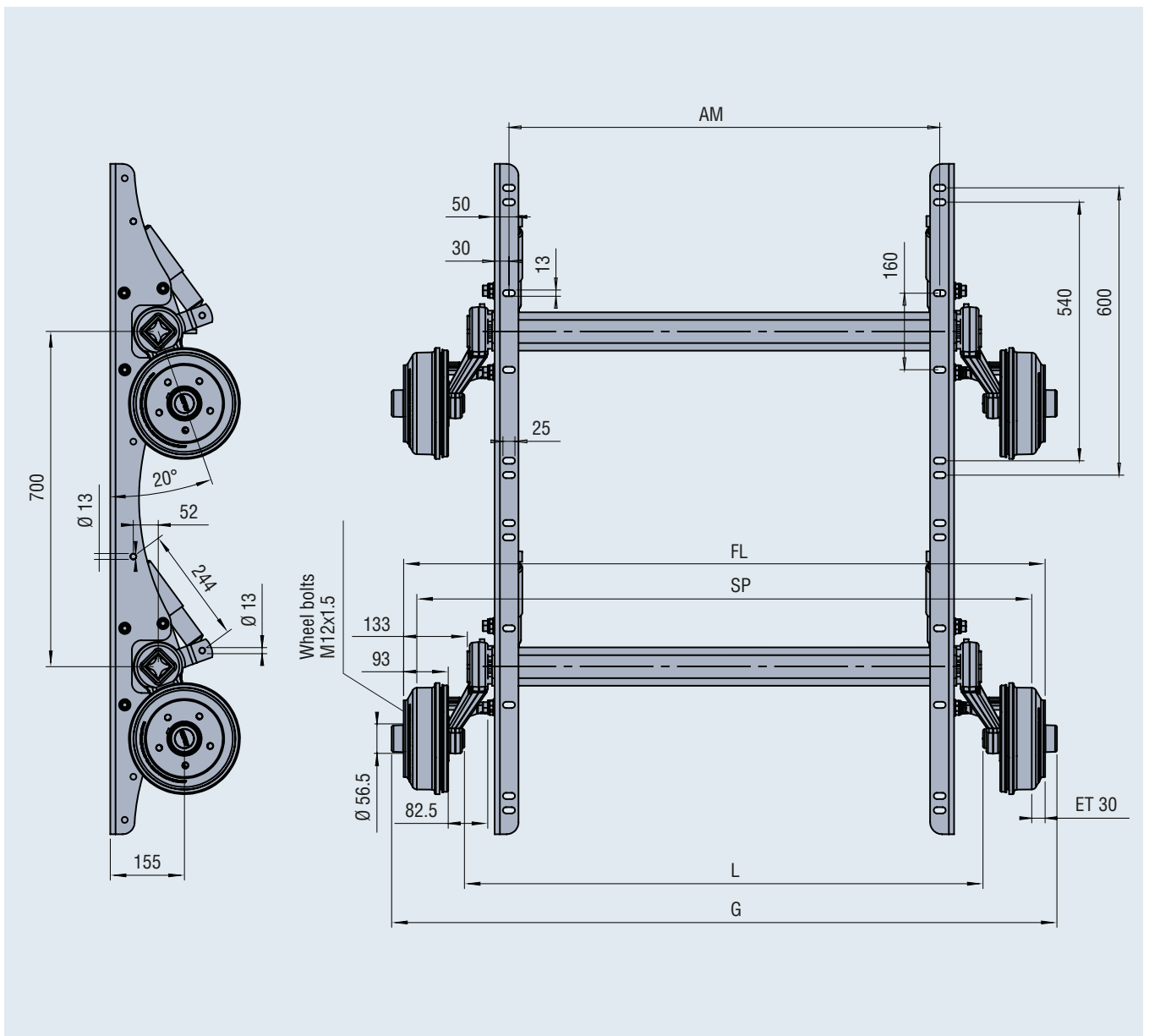


Order No.: according to wheel connection CB 2/1034 4/ø100/60°	Order No.: according to wheel connection CB 2/1035 5/ø112/R12	Order No.: according to wheel connection CB 2/1035 5/ø112/R12	FL	SP	Dimensions [mm]			Weight [kg]
					AM	L	G	
4021321	4021331	4021340	1450	1390	1000	1172	1500	120.0
4021322	4021332	4021341	1550	1490	1100	1272	1600	122.0
4021323	4014494	4021342	1650	1590	1200	1372	1700	124.0
4021324	4021333	4021343	1750	1690	1300	1472	1800	126.0
4021325	4021334	4021344	1850	1790	1400	1572	1900	128.0
4021326	4021335	4014495	1950	1890	1500	1672	2000	130.0
4021327	4021336	4014496	2050	1990	1600	1772	2100	132.0
4021328	4021337	4021345	2150	2090	1700	1872	2200	134.0
4021329	4021338	4021346	2250	2190	1800	1972	2300	136.0
4021330	4021339	4021347	2350	2290	1900	2072	2400	138.0

Brake cables for rear axle, incl. tandem compensation, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-friendly spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING TANDEM AXLE RUBBER SUSPENSION)

with composite clamping mounts, permitted gross weight 2,500 kg,
wheel brake S 2005-7 RASK

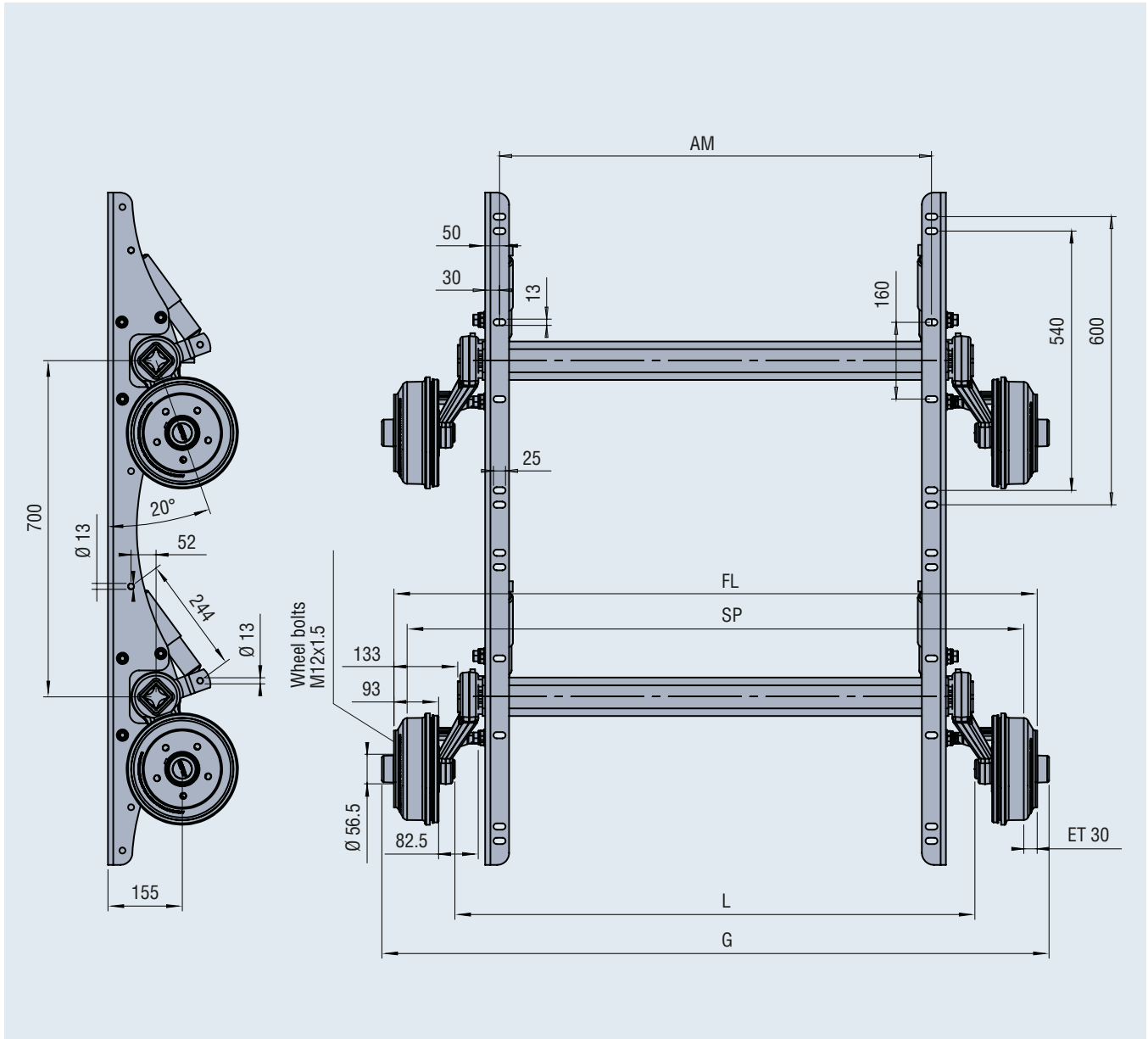


Order No.: according to wheel connection CB 2/1334 4/Ø100/60°	Order No.: according to wheel connection CB 2/1335 5/Ø112/R12	Order No.: according to wheel connection CB 2/1355 5/Ø112/60°	FL	SP	Dimensions [mm]			Weight [kg]
					AM	L	G	
4021348	4014501	4021365	1450	1390	1000	1172	1500	120.0
4021349	4021358	4021366	1550	1490	1100	1272	1600	122.0
4021350	4021359	4021367	1650	1590	1200	1372	1700	124.0
4021351	4021360	4021368	1750	1690	1300	1472	1800	126.0
4021352	4021361	4021369	1850	1790	1400	1572	1900	128.0
4021353	4021362	4021370	1950	1890	1500	1672	2000	130.0
4021354	4021363	4021371	2050	1990	1600	1772	2100	132.0
4021355	4014502	4021372	2150	2090	1700	1872	2200	134.0
4021356	4021364	4021373	2250	2190	1800	1972	2300	136.0
4021357	4020386	4021374	2350	2290	1900	2072	2400	138.0

Brake cables for rear axle, incl. tandem compensation, see Accessories
Shock absorbers, see Accessories

DETAILS

- | Speed up to 140 km/h
- | Drawbar connection: Clamping shells see Accessories
- | Special wheel connections: On demand
- | Special axle mounts and drawbar connections on demand
- | Axle body fully hop-dip galvanised: Permanent surface protection
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Maintenance-free suspension: Lower maintenance costs
- | Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- | Sturdy, maintenance-friendly spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- | Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- | Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING TANDEM AXLE RUBBER SUSPENSION)

with composite clamping mounts, permitted gross weight 3,000 kg,
wheel brake S 2005-7 RASK

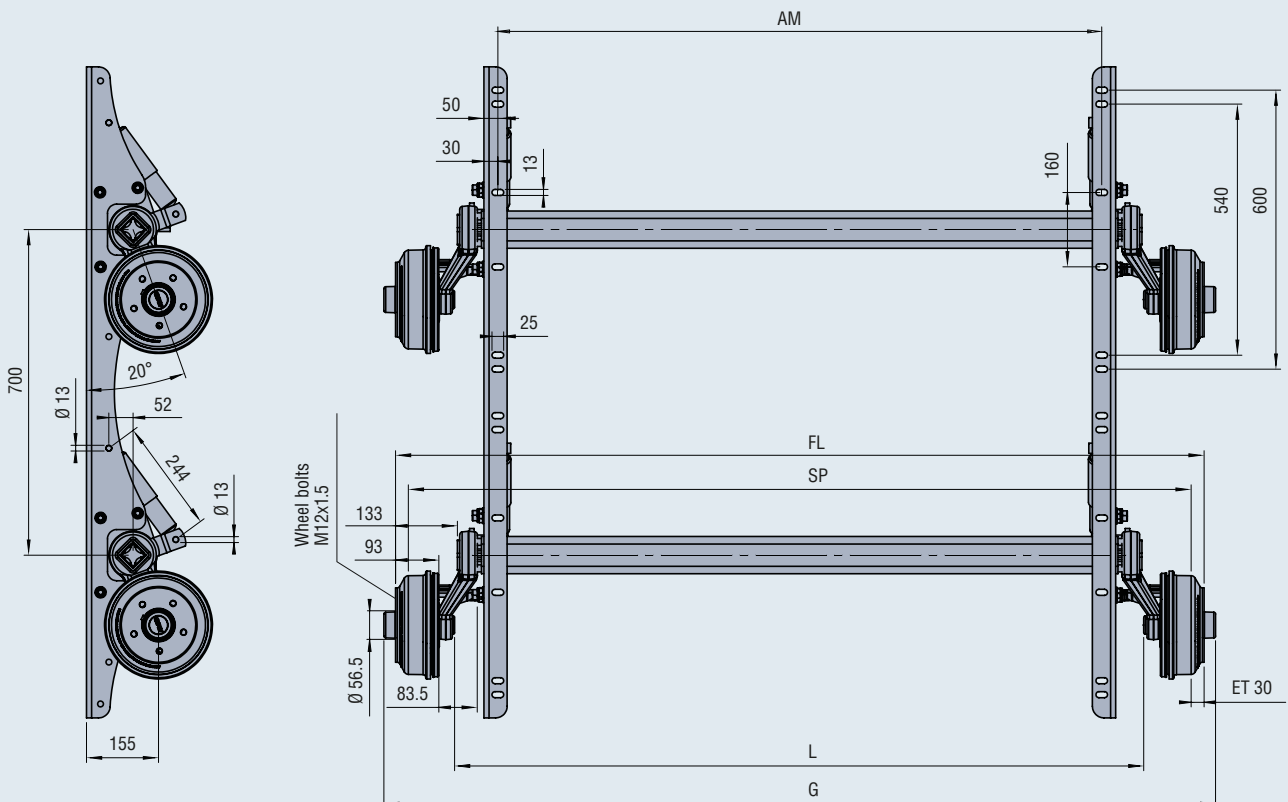


Order No.: according to wheel connection CB 2/1505 5/ø112/R12	Reference No.: according to wheel connection CB 2/1505 5/ø112/R12	Order No.: according to wheel connection CB 2/1505 5/ø112/ø120°	Reference No.: according to wheel connection CB 2/1505 5/ø112/ø120°	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4021489	–	4021494	–	1570	1470	1000	1247	1608	122
4021490	–	4021495	–	1740	1670	1200	1447	1808	126
4021491	–	4021496	–	1940	1870	1400	1647	2008	130
4021492	–	4021497	–	2140	2070	1600	1847	2208	134
4021493	–	4021498	–	2340	2270	1800	2047	2408	138

Brake cables for rear axle, incl. tandem compensation, see Accessories
Shock absorbers, see Accessories

DETAILS

- I Speed up to 140 km/h
- I Drawbar connection: Clamping shells see Accessories
- I Special wheel connections: On demand
- I Special axle mounts and drawbar connections on demand
- I Axle body fully hop-dip galvanised: Permanent surface protection
- I Independent wheel suspension: Optimum compensation of uneven road surfaces
- I Maintenance-free suspension: Lower maintenance costs
- I Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- I Sturdy, maintenance-friendly spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- I Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- I Incl. shock absorber bracket



BRAKED AXLES, SQUARE

(SWING TANDEM AXLE RUBBER SUSPENSION)

with composite clamping mounts, permitted gross weight 3,500 kg,
wheel brake S 2504-7 RASK

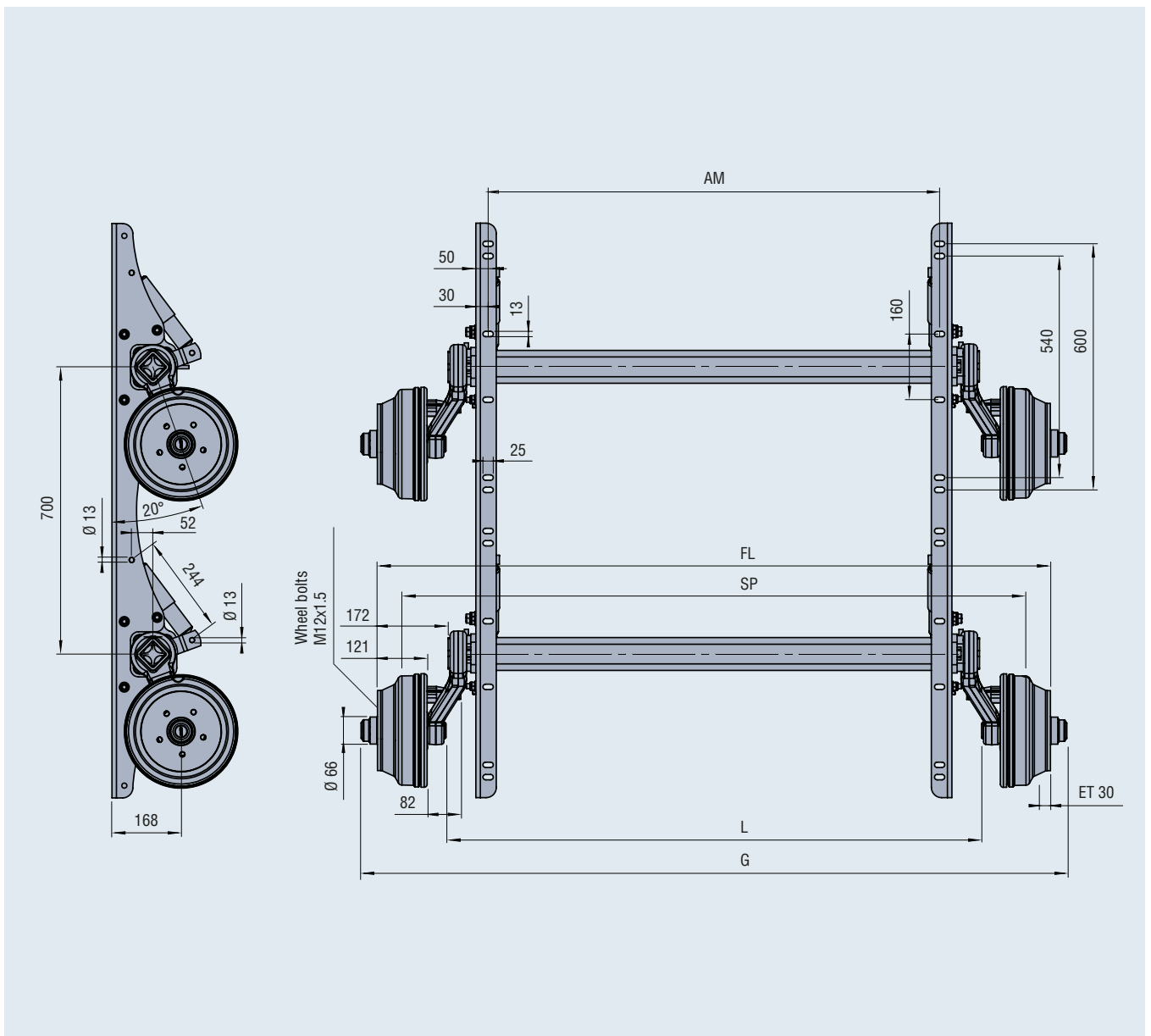


Order No.: according to wheel connection CB 2/1805 5/ø112/R12	Reference No.: according to wheel connection CB 2/1805 5/ø112/R12	Order No.: according to wheel connection CB 2/1805 5/ø112/R12	Reference No.: according to wheel connection CB 2/1805 5/ø112,00°	FL	SP	Dimensions [mm]			Weight [kg]
						AM	L	G	
4021531	–	4021536	–	1440	1380	1000	1182	1490	153
4021532	–	4021537	–	1640	1580	1200	1382	1690	157
4021533	–	4021538	–	1840	1780	1400	1582	1890	161
4021534	49.32.368.020	4021539	–	2040	1980	1600	1782	2090	165
4021535	–	4021540	–	2240	2180	1800	1982	2290	169

Brake cables for rear axle, incl. tandem compensation, see Accessories
Shock absorbers, see Accessories

DETAILS

- | Speed up to 140 km/h
- | Drawbar connection: Clamping shells see Accessories
- | Special wheel connections: On demand
- | Special axle mounts and drawbar connections on demand
- | Axle body fully hop-dip galvanised: Permanent surface protection
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Maintenance-free suspension: Lower maintenance costs
- | Sturdy axle construction: Suitable for extreme loads such as off-road or construction sites
- | Sturdy, maintenance-friendly spread-lever brakes with auto-reverse: Simple adjustment of the brake from outside the wheel, subsequent connection of the brake cables possible without removal of the brake drum
- | Compact bearings (standard in the automotive industry): Maintenance-free, long service life, protected against dirt and water, lubricated for life with special grease
- | Incl. shock absorber bracket



LOWERING AXLES DOWN TO 180 MM (LOWERING UNITS WITH SWIVEL MECHANISM)

Swivel axle for single-axle chassis

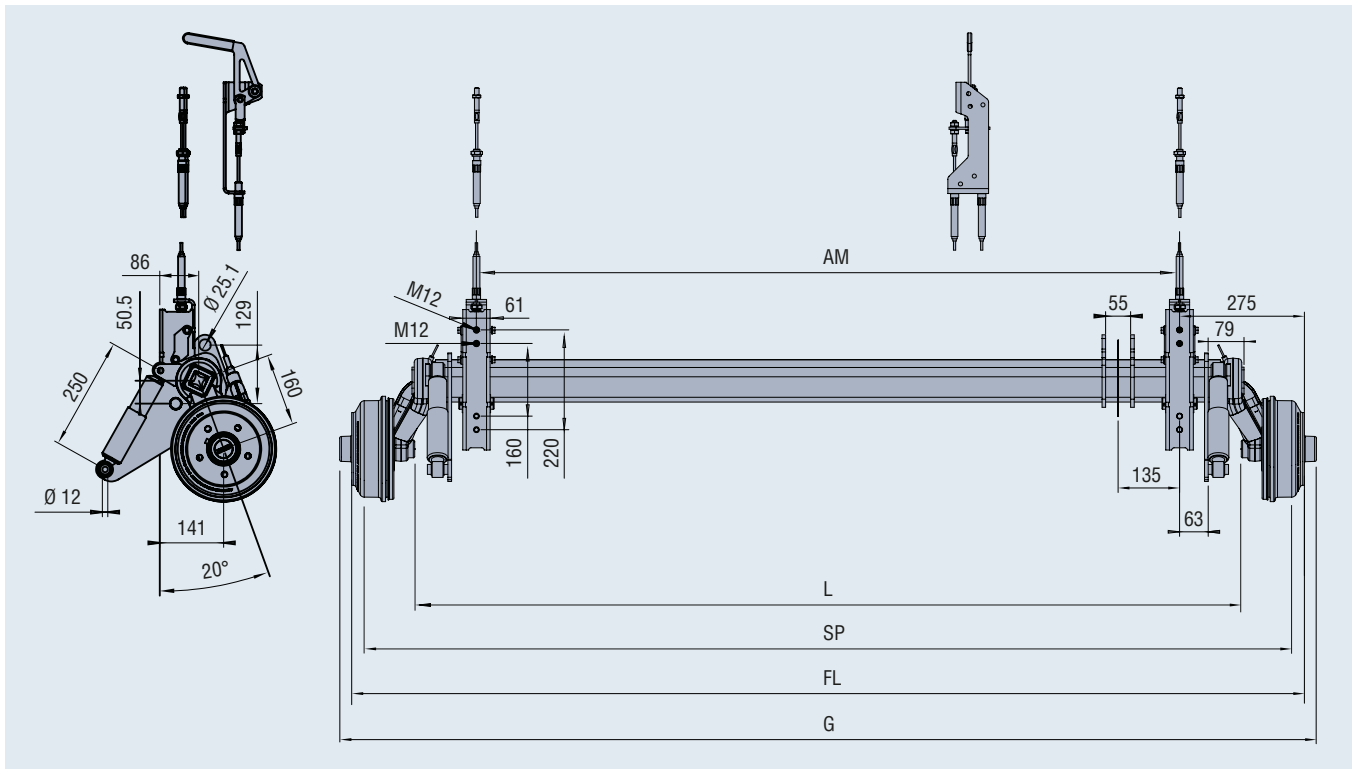
Cost-optimised overall system for single-axle chassis in the weight ranges 750 kg, 1,050 kg, 1,350 kg, 1,500 kg and 1,800 kg



Permitted gross weight [kg]	Order No.	Reference No.	Dimensions [mm]					Weight [kg]
			FL	SP	AM	L	G	
Lowering unit with swivel mechanism, wheel brake S1704-7 RASK								
750	4021386	–	1550	1480	1000	1296	1600	60
	4021387	–	1750	1680	1200	1496	1800	62
	4021388	–	1950	1880	1400	1696	2000	64
	4021389	–	2150	2080	1600	1896	2200	66
	4021390	–	2350	2280	1800	2096	2400	68
Lowering unit with swivel mechanism, wheel brake S2005-7 RASK								
1,050	4021391	–	1550	1490	1000	1272	1600	75
	4021392	–	1750	1690	1200	1472	1800	77
	4021393	–	1950	1890	1400	1672	2000	79
	4021394	–	2150	2090	1600	1872	2200	81
	4021395	–	2350	2290	1800	2072	2400	83
Lowering unit with swivel mechanism, wheel brake S2005-7 RASK								
1,350	4021396	–	1550	1490	1000	1272	1600	76
	4021397	–	1750	1690	1200	1472	1800	78
	4021398	–	1950	1890	1400	1672	2000	80
	4021399	–	2150	2090	1600	1872	2200	82
	4021400	–	2350	2290	1800	2072	2400	84

DETAILS

- I Our swivel axle: An attractive alternative to classic lowering units
- I Less complexity, less weight: Reduction in the complexity and weight by elimination of several bulky hydraulic components.
- I Convenient operation: Simple release of the lock and opening of the hydraulic valve. Lowering is effected by the weight of the trailer, raising is possible electrically (12 V) or manual.
- I Maximum lowering by up to 180 mm: The special lowering mechanism allows the loading sill of the trailer to be lowered practically to ground level for comfortable loading and unloading.
- I Maintenance-free suspension and bearings: The rubber suspension axles used are maintenance-free and have lifetime-lubricated compact bearings.
- I Safety during operation: Compared with conventional lowering axles, the mechanical lock prevents lowering during operation even in the event of a leak in the hydraulic system.



Permitted gross weight [kg]	Order No.	Reference No.	Dimensions [mm]					Weight [kg]
			FL	SP	AM	L	G	
Lowering unit with swivel mechanism, wheel brake S2005-7 RASK								
1,500	4021401	-	1550	1490	1000	1272	1600	77
	4021402	-	1750	1690	1200	1472	1800	79
	4021403	-	1950	1890	1400	1672	2000	81
	4021404	-	2150	2090	1600	1872	2200	83
	4021405	-	2350	2290	1800	2072	2400	85
Lowering unit with swivel mechanism, wheel brake S2504-7 RASK								
1,800	4021406	-	1565	1495	1000	1272	1615	78
	4021407	-	1765	1695	1200	1472	1815	80
	4021408	-	1965	1895	1400	1672	2015	82
	4021409	-	2165	2095	1600	1872	2215	84
	4021410	-	2365	2295	1800	2072	2415	86

LOWERING AXLES DOWN TO 200 MM

(HYDRAULIC TANDEM AXLE UNITS), raising and lowering

Permitted gross weight up to 3,500 kg,

wheel brake S 2005-7 RASK / S 2504-7 RASK



Permitted gross weight [kg]	Order No.	Reference No.	Dimensions [mm]								Dimensions [mm]				Lowering	Weight [kg]
			FL	SP	AM	RL	G	L1	L2	Front axle		Rear axle				
											A	B	A	B		
RONDO axle unit DB2/1355, wheel brake S2005-7 RASK																
2,700	4021375	49.25.379.500	1670	1610	1200	1280	1720	1368	890	1030	1283	1430	1683	t1	120.0	
	4019122	49.25.379.501	1770	1710	1300	1380	1820	1468	990	1030	1283	1430	1683	t2	121.5	
	4021376	49.25.379.502	1870	1810	1400	1480	1920	1568	1090	1130	1383	1530	1783	ET	123.0	
	4021377	49.25.379.503	1970	1910	1500	1580	2020	1668	1190	1130	1383	1530	1783	AH	124.5	
	4019123	49.25.379.504	2070	2010	1600	1680	2120	1768	1290	1230	1483	1630	1883	FH	126.0	
	4019124	49.25.379.505	2170	2110	1700	1780	2220	1868	1390	1230	1483	1630	1883	AB	127.5	
	4019125	49.25.379.506	2270	2210	1800	1880	2320	1968	1490	1330	1583	1730	1983	1GA	129.0	
	4019126	49.25.379.507	2370	2310	1900	1980	2420	2068	1590	1330	1583	1730	1983	2GA	130.5	
RONDO axle unit DB2/1505, wheel brake S2005-7 RASK																
3,000	4021378	49.27.379.500	1685	1625	1200	1300	1735	1397	921	1030	1283	1430	1683	t1	132.0	
	4021379	49.27.379.501	1785	1725	1300	1400	1835	1497	1021	1030	1283	1430	1683	t2	134.0	
	4020105	49.27.379.502	1885	1825	1400	1500	1935	1597	1121	1130	1383	1530	1783	ET	136.0	
	4021380	49.27.379.503	1985	1925	1500	1600	2035	1697	1221	1130	1383	1530	1783	AH	138.0	
	4021381	49.27.379.504	2085	2025	1600	1700	2135	1797	1321	1230	1483	1630	1883	FH	140.0	
	4021382	49.27.379.505	2185	2125	1700	1800	2235	1897	1421	1230	1483	1630	1883	AB	142.0	
	4021383	49.27.379.506	2285	2225	1800	1900	2335	1997	1521	1330	1583	1730	1983	1GA	144.0	
	4021384	49.27.379.507	2385	2325	1900	2000	2435	2097	1621	1330	1583	1730	1983	2GA	146.0	
RONDO axle unit DB2/1805, wheel brake S2504-7 RASK																
3,500	4021385	49.32.368.500	1740	1670	1200	1300	1820	1306	890	1030	1283	1430	1683	t1	160.0	
	4019150	49.32.368.501	1840	1770	1300	1400	1920	1406	990	1030	1283	1430	1683	t2	162.0	
	4019151	49.32.368.502	1940	1870	1400	1500	2020	1506	1090	1130	1383	1530	1783	ET	164.0	
	4019152	49.32.368.503	2040	1970	1500	1600	2120	1606	1190	1130	1383	1530	1783	AH	166.0	
	4019153	49.32.368.504	2140	2070	1600	1700	2220	1706	1290	1230	1483	1630	1883	FH	168.0	
	4019154	49.32.368.505	2240	2170	1700	1800	2320	1806	1390	1230	1483	1630	1883	AB	170.0	
	4019155	49.32.368.506	2340	2270	1800	1900	2420	1906	1490	1330	1583	1730	1983	1GA	172.0	
	4020865	49.32.368.507	2440	2370	1900	2000	2520	2006	1590	1330	1583	1730	1983	2GA	174.0	

Compact bearings

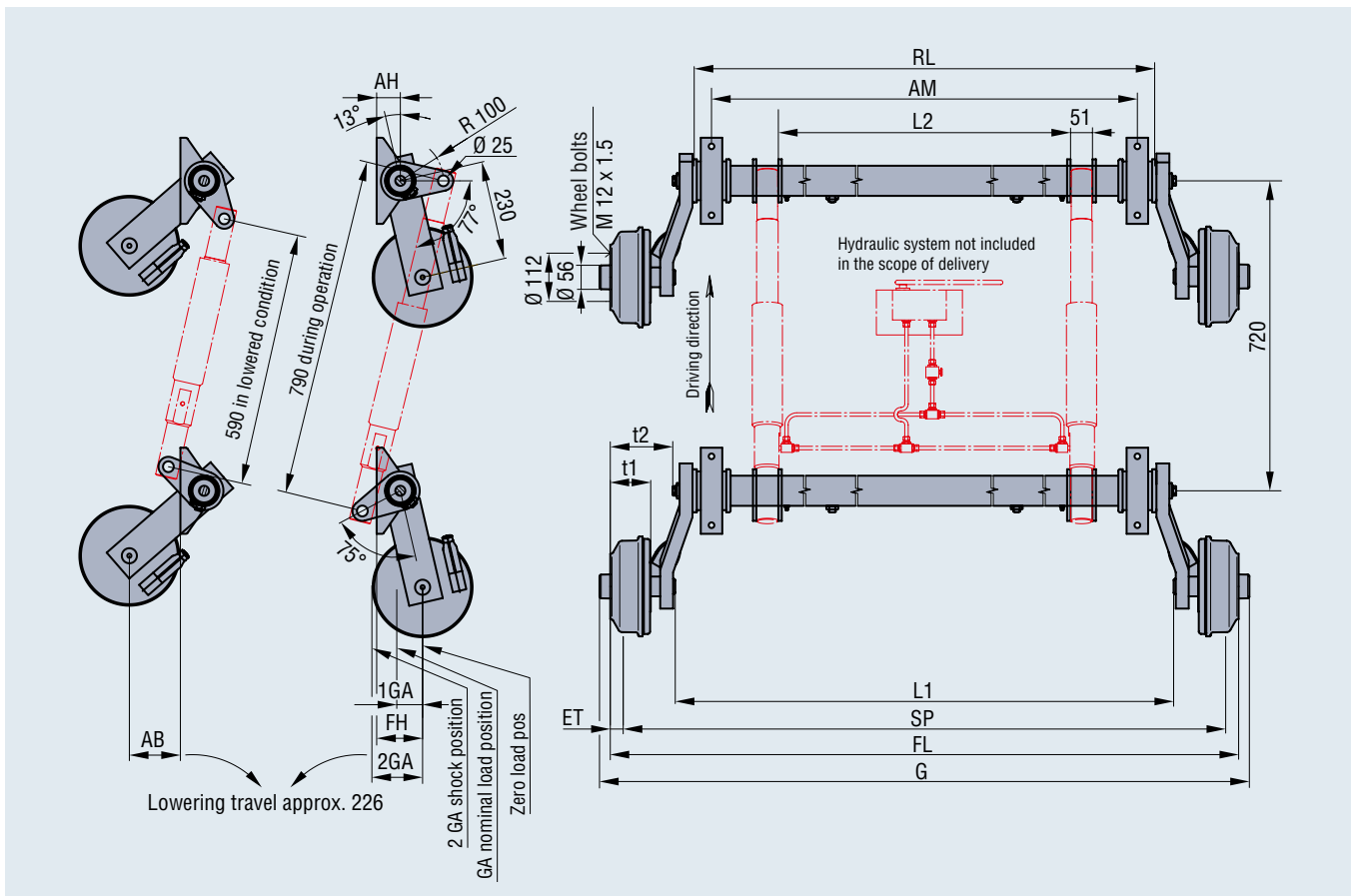
Taper roller bearings

DETAILS

- | Torsion bar with individual wheel suspension: Optimum compensation of uneven road surfaces for high driving stability
- | Practically infinite adjustment of the trailing arms: Variable setting of the ride height during body construction
- | Raising and lowering function via easily operated hydraulic lift cylinders with hard chrome-plated piston rods; optionally with electric (12 V) or manual control
- | Locked ride height thanks to lockable non-return valve:
High driving stability, even in the event of a failure of the hydraulic system
- | Lowering of the vehicle by switching the hydraulics to depressurised
- | Lowering by up to 200 mm: Simple loading and unloading and low counter height for sales vehicles

APPLICATION

- | Mobile shop vehicles (hydraulic brake system, optionally with ABS sensor)
- | Semi-trailers (hydro-pneumatic brake system)
- | Trailers (mechanical brake system, over-run brakes)



Accessories

Order No.	Reference No.	Designation
4003592	02.0130.44.00	Hydraulic power pack, complete with controller and cylinder (12 V electric motor)
4003591	02.0130.43.00	Hydraulic power pack, complete with controller and cylinder (hand pump)
4014946	02.4905.31.00	Cylinder: 200 mm stroke/axle spacing 720 mm
4008385	05.803.02.22.0	Mounting part kit for cylinders (mounting kit)
4008361	05.803.00.46.0	Mounting part kit for shock absorber kit

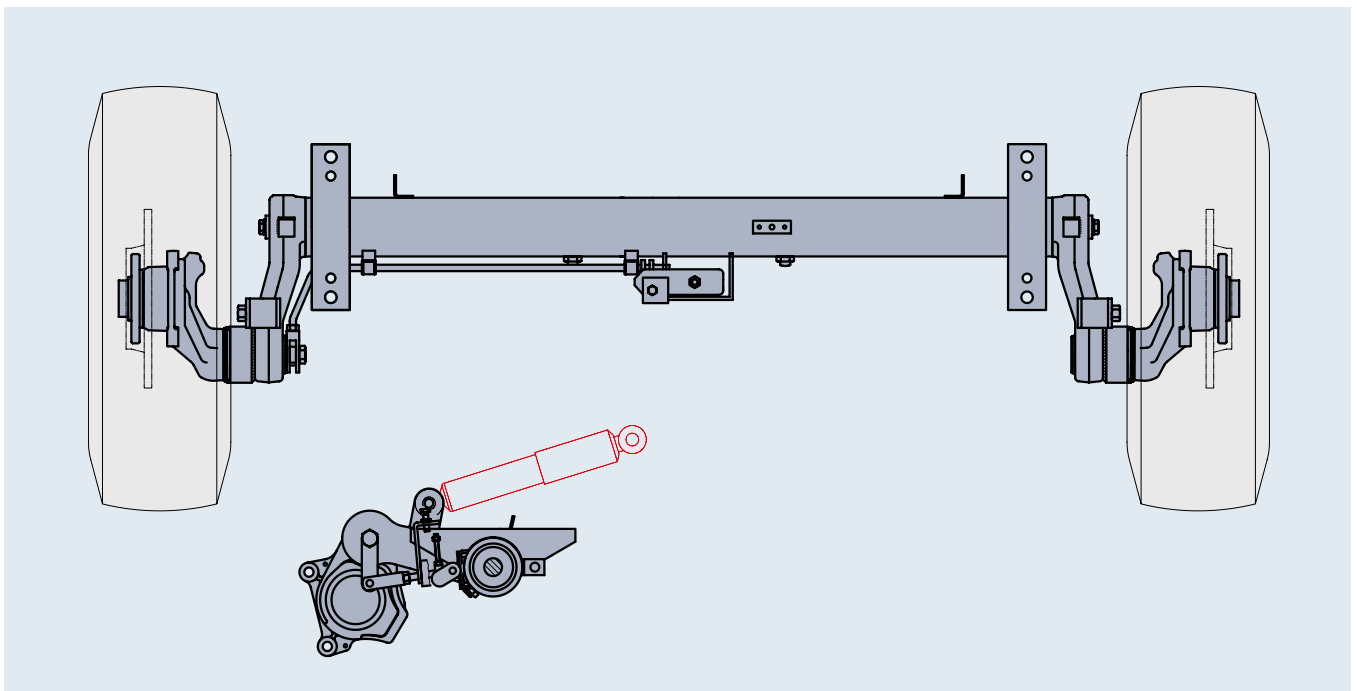
AXLE SYSTEMS FOR MOBILE SHOP VEHICLES

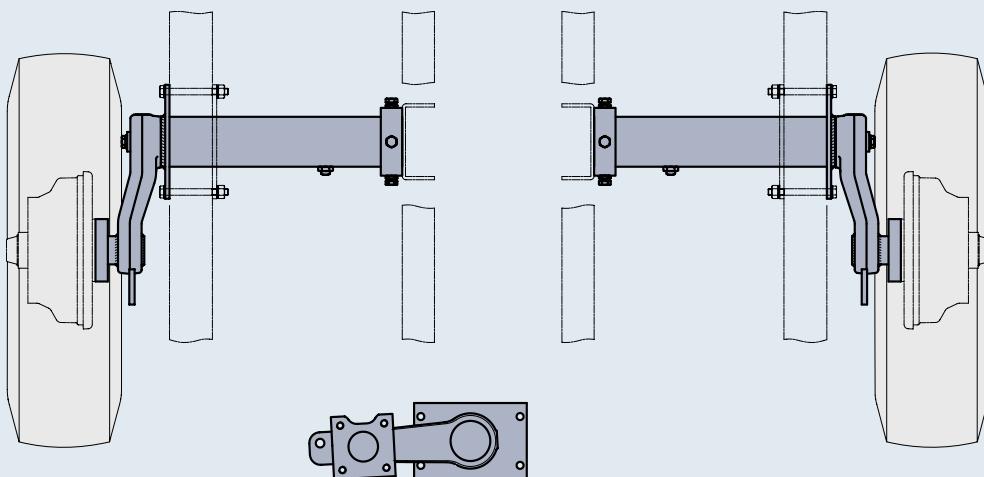
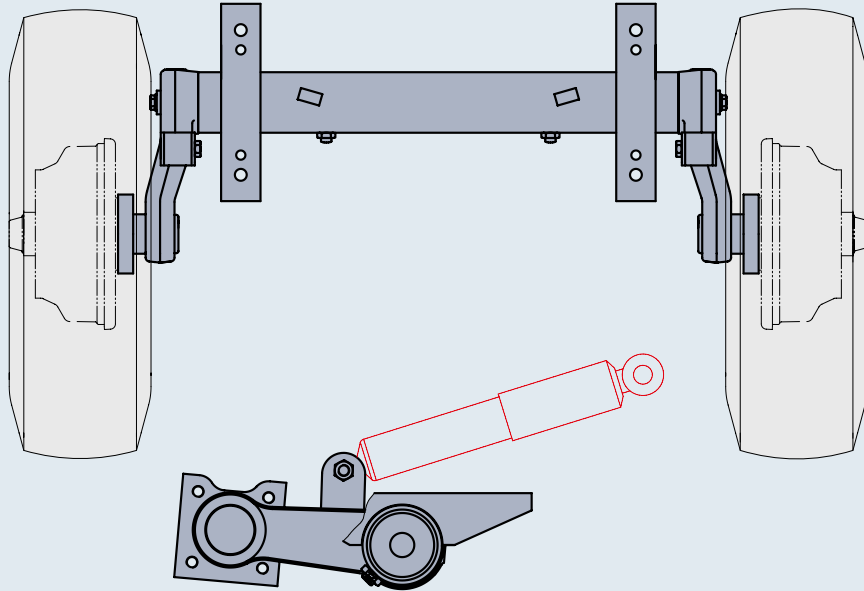


From valuables transporters through platform, box body and refrigerated vehicles up to car transporters, rescue and sales vehicles. We offer solutions with outstanding properties for the most common mobile shop vehicles, such as Fiat Ducato and Renault Master:

DETAILS

- | Reduction in the overall height: Optimum entry level, maximum standing height, optimum loading and unloading possibilities, high driving stability thanks to low centre of gravity
- | Variable body dimensions thanks to the wide range of wheelbases and gauges
- | Delivered ready for installation: Reduction in installation times
- | Practically infinite adjustment of the trailing arms: Variable setting of the ride height during body construction





CHASSIS TECHNOLOGY FOR 2-AXLE VEHICLES

Permitted gross weight up to 9,000 kg



DETAILS

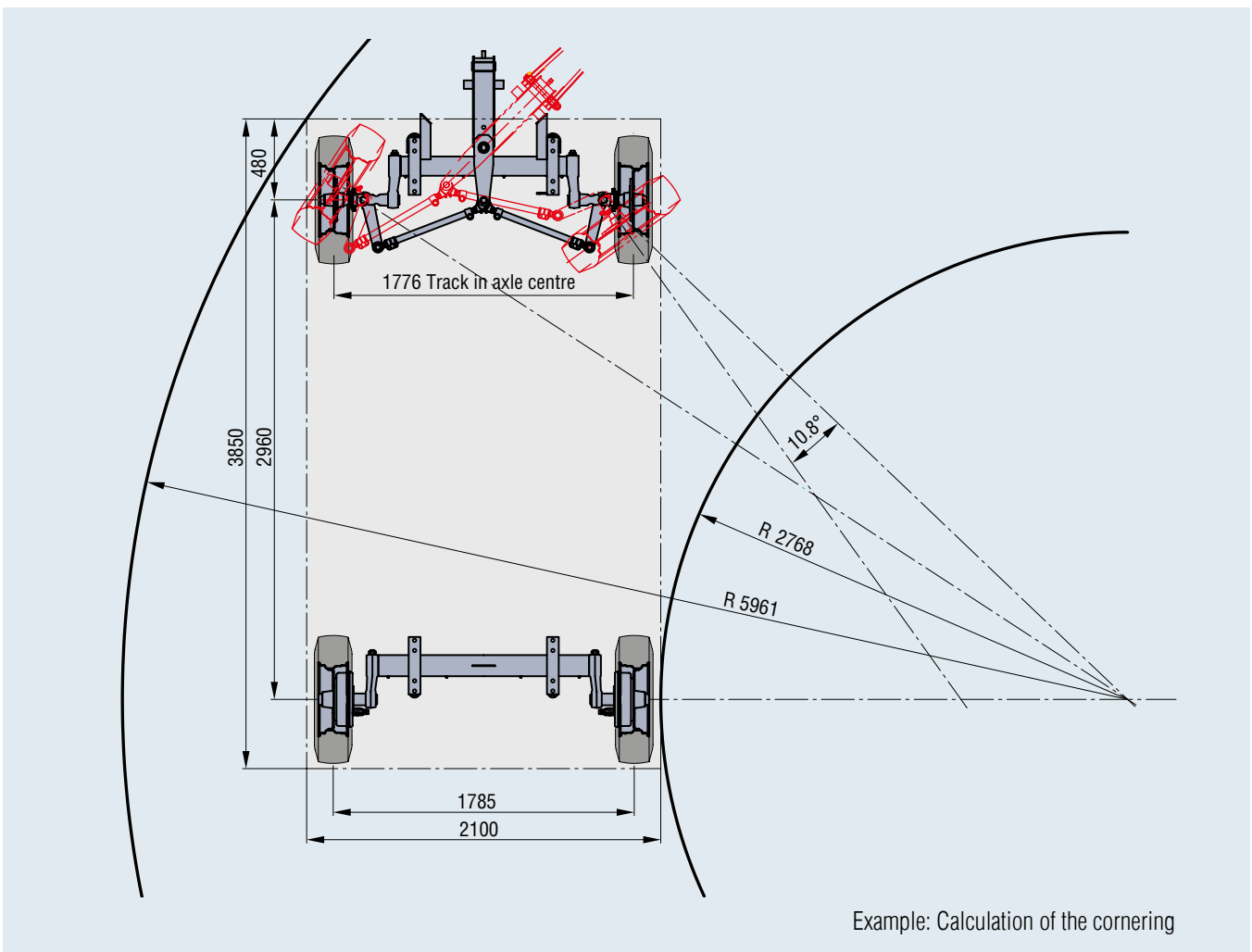
I Torsion bar steering axles with steering knuckle (4-point steering with steering angle limiter); wheel spacings are changed only minimally during turning
High stability even with extreme steering angles and off-road applications with high manoeuvrability

I Torsion bar suspension: High comfort and driving stability with simultaneous protection of the body

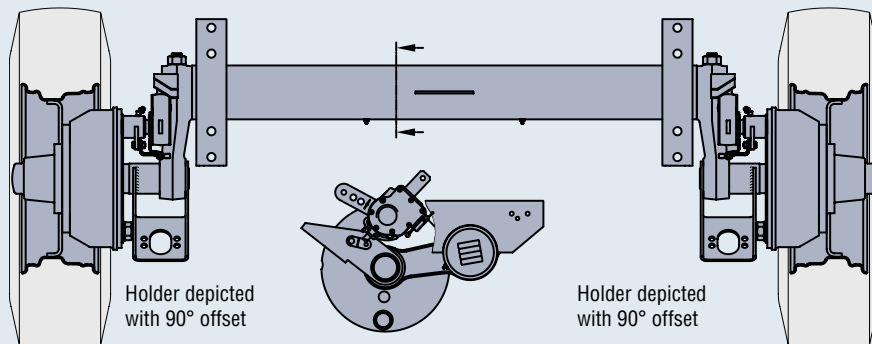
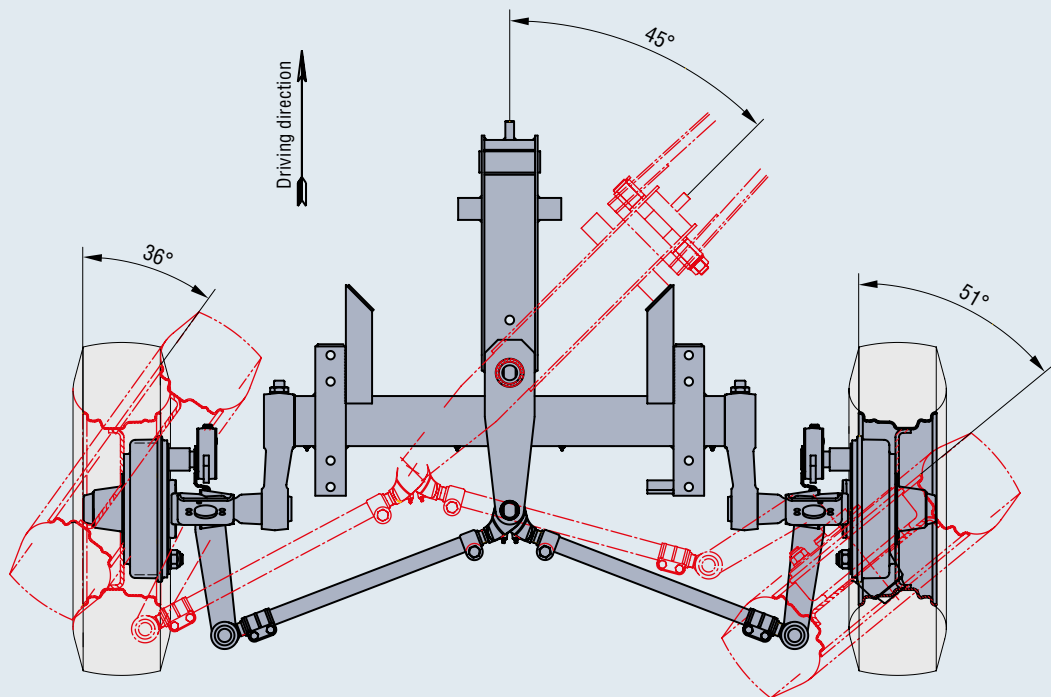
I Base plate including automatic slack adjuster mounted on steering housing: Braking force transmission with very high efficiency, with ABS sensors

I Drawbars with parking brake and optional Klemmfix: Variable hitch height

I Chassis technology for 2-axle vehicles also available for in-house transport vehicles



Example: Calculation of the cornering



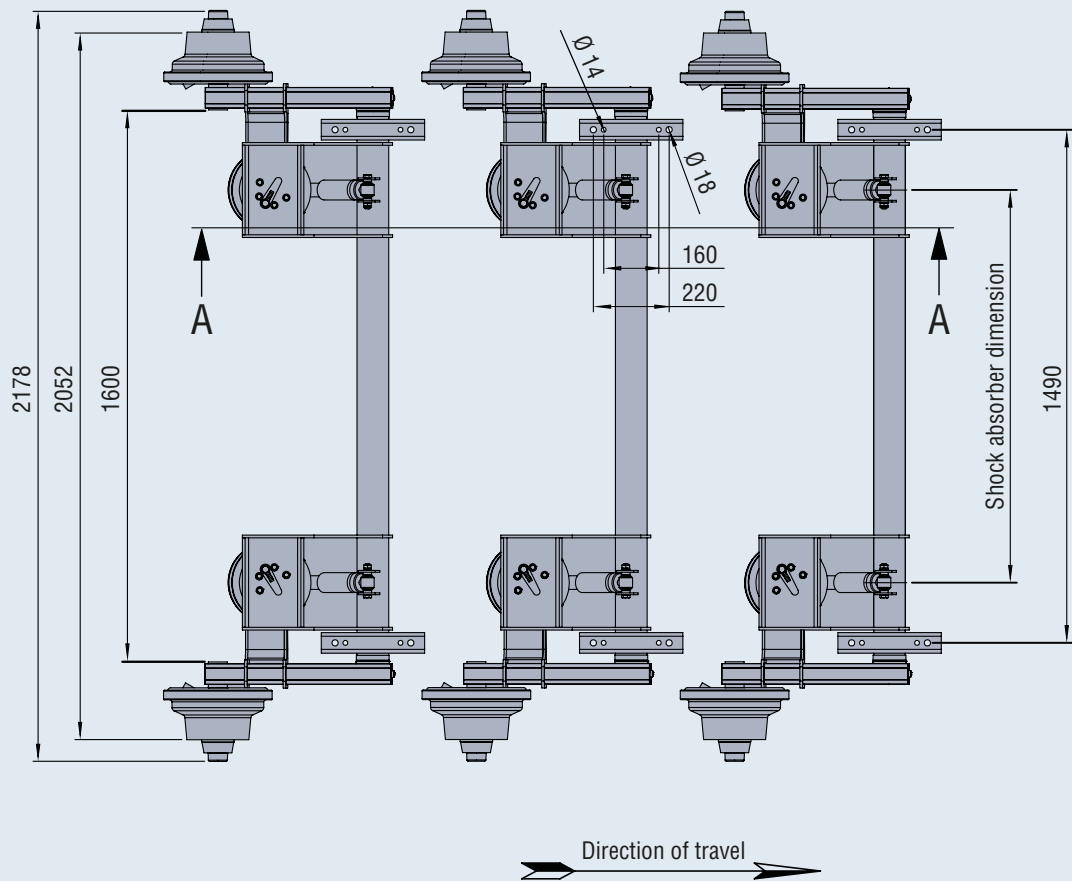
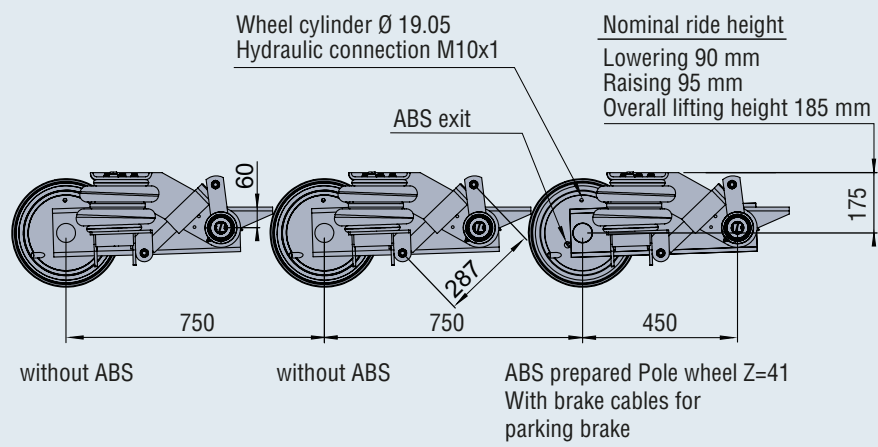
TANDEM UNITS WITH AIR SUSPENSION



Order No.	Type
On request	Single axle, tandem, triple axle

DETAILS

- | 100% air suspension: Protection of the goods during the transport of delicate produce, high driving stability and maximum possible ride comfort
- | Independent wheel suspension: Optimum compensation of uneven road surfaces
- | Additional stabiliser as mechanical link to the air suspension: High driving stability in curves and under extreme driving conditions, reduced tyre wear due to constant ground contact
- | High-performance shock absorbers with higher rebound damping: Protection of the goods thanks to damped suspension travel
- | Fully automatic level control via an electronically controlled air suspension valve ECAS control electronics (Electronically Controlled Air Suspension): Constant ride level of the vehicle, irrespective of the load condition
- | Raising & lowering function (lowering max. 85 mm/raising max. 45 mm): Low loading sills and loading heights, low counter heights on sales vehicles, adaptation to loading ramps, lowering on one side also possible
- | ALB control thanks to the operating pressure in the air bags (pressure-dependent control)



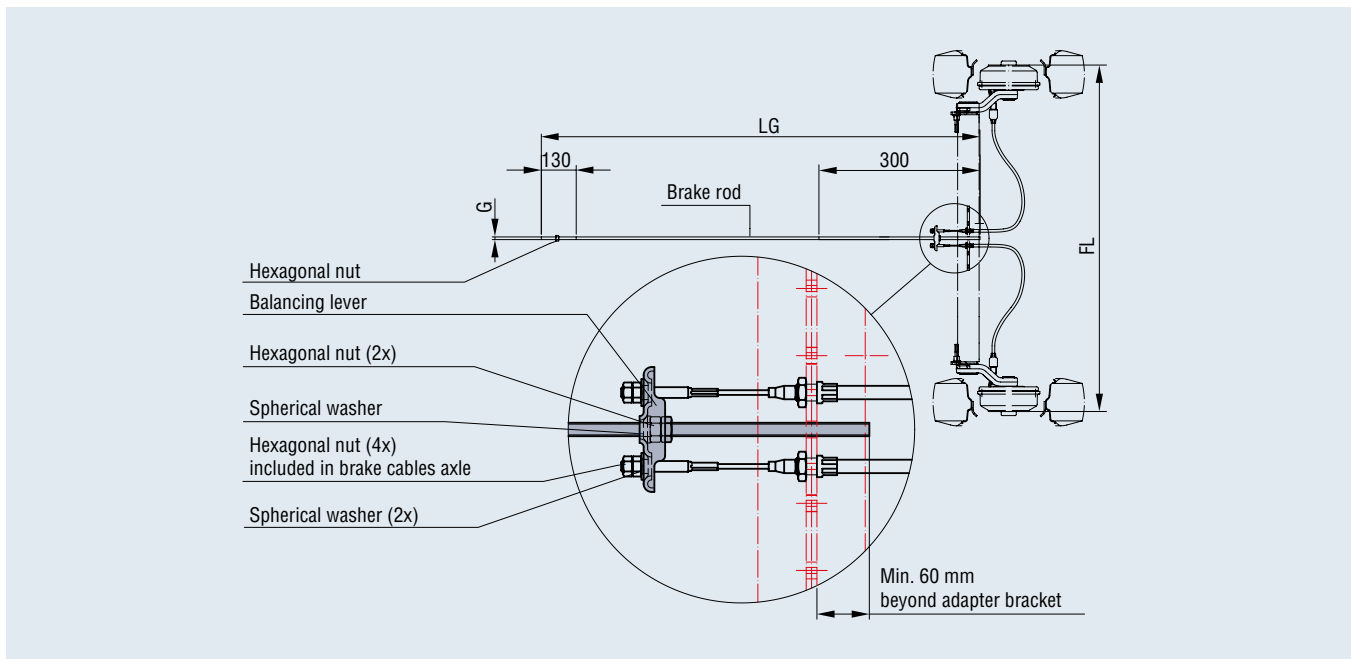
5. ACCESSORIES



5. ACCESSORIES

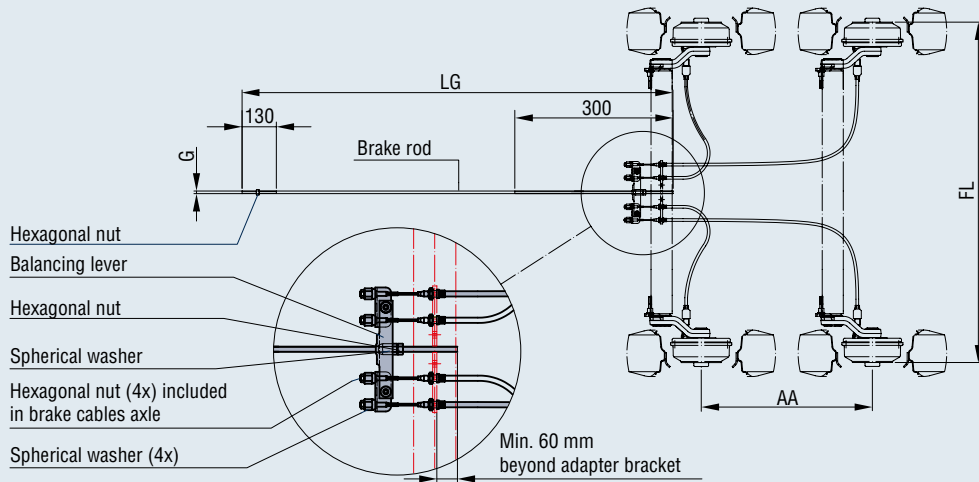
Brake cable, brake rods, tandem balancing	112 – 113
Clamping mounts	114 – 115
Clamping shells	116 – 117
Axle shock absorbers	118 – 120
Drawbar supports	121
Ball hitches and drawbar eyes	122 – 123

BRAKE CABLES, BRAKE RODS AND TANDEM BALANCING



	Order No.	Reference No.
Mounting part kit for single-axle balancing lever for M10 brake rod	4008548	05.803.18.38.0
Mounting part kit for single-axle balancing lever for M12 brake rod	4021412	05.803.18.39.0

LG [mm]	Order No.	Brake rod M 10 (connection according to coupling device)		Order No.	Brake rod M 12 (connection according to coupling device)	
		Reference No.	Weight [kg]		Reference No.	Weight [kg]
1,600	4004230	03.399.58.80.0	0.8	4021415	03.399.55.20.0	1.2
1,800	4011738	03.399.58.81.0	0.9	4021416	03.399.55.21.0	1.3
2,000	4011739	03.399.58.82.0	1.0	4021417	03.399.55.22.0	1.4
2,200	4011740	03.399.58.83.0	1.1	4021418	03.399.55.23.0	1.5
2,400	4004231	03.399.58.84.0	1.2	4021419	03.399.55.24.0	1.6
2,600	4011741	03.399.58.85.0	1.3	4011719	03.399.55.25.0	1.7
2,800	4011742	03.399.58.86.0	1.4	4021420	03.399.55.26.0	1.8
3,000	4011743	03.399.58.87.0	1.5	4021421	03.399.55.27.0	1.9
3,200	4011744	03.399.58.88.0	1.6	4021422	03.399.55.28.0	2.0
3,400	4011745	03.399.58.89.0	1.7	4021423	03.399.55.29.0	2.1
3,600	4021413	03.399.58.90.0	1.8	4021424	03.399.55.30.0	2.2
3,800	4021414	03.399.58.91.0	1.9	4021425	03.399.55.31.0	2.3
4,000	4004232	03.399.58.92.0	2.0	4021426	03.399.55.32.0	2.4



Order No. according to axle spacing AA
 Mounting part kit for tandem axle compensation incl. brake cables for rear axle

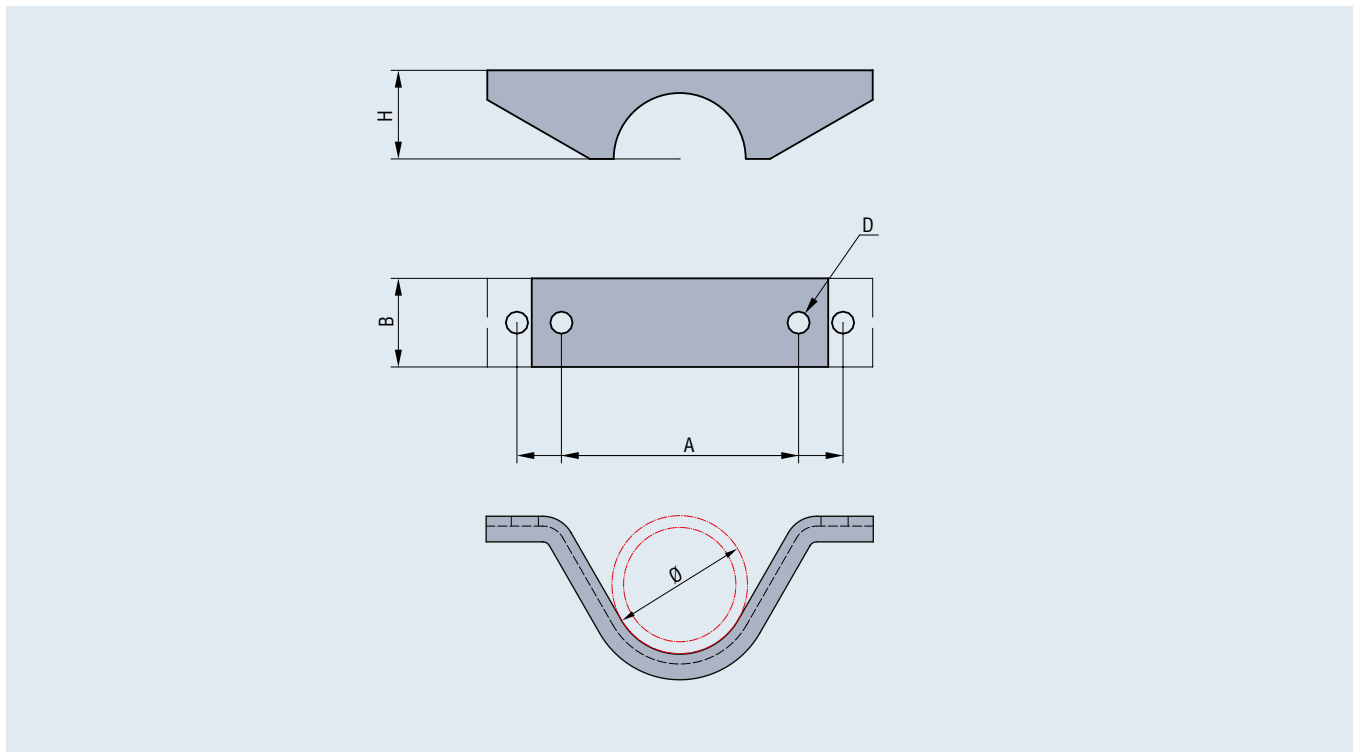
FL [mm]	Brake rod M 10 (connection according to coupling device)			Brake rod M 12 (connection according to coupling device)		
	< 700 mm Order No./ Reference No.	700-850 mm Order No./ Reference No.	> 850-1,000 mm Order No./ Reference No.	< 700 mm Order No./ Reference No.	700-850 mm Order No./ Reference No.	> 850-1,000 mm Order No./ Reference No.
1,400-1,500	4021427 05.803.18.40.0	4008551 05.803.18.50.0	4008561 05.803.18.60.0	4021440 05.803.18.70.0	4011970 05.803.18.80.0	4021456 05.803.18.90.0
1,500-1,600	4021428 05.803.18.41.0	4008552 05.803.18.51.0	4021433 05.803.18.61.0	4021441 05.803.18.71.0	4021450 05.803.18.81.0	4021457 05.803.18.91.0
1,600-1,700	4020074 05.803.18.42.0	4008553 05.803.18.52.0	4021434 05.803.18.62.0	4021442 05.803.18.72.0	4021451 05.803.18.82.0	4021458 05.803.18.92.0
1,700-1,800	4003584 05.803.18.43.0	4008554 05.803.18.53.0	4021435 05.803.18.63.0	4021443 05.803.18.73.0	4011971 05.803.18.83.0	4021459 05.803.18.93.0
1,800-1,900	4008549 05.803.18.44.0	4008555 05.803.18.54.0	4021436 05.803.18.64.0	4021444 05.803.18.74.0	4021452 05.803.18.84.0	4021460 05.803.18.94.0
1,900-2,000	4021429 05.803.18.45.0	4008556 05.803.18.55.0	4008562 05.803.18.65.0	4021445 05.803.18.75.0	4011972 05.803.18.85.0	4021461 05.803.18.95.0
2,000-2,100	4008550 05.803.18.46.0	4008557 05.803.18.56.0	4021437 05.803.18.66.0	4021446 05.803.18.76.0	4021453 05.803.18.86.0	4021462 05.803.18.96.0
2,100-2,200	4021430 05.803.18.47.0	4008558 05.803.18.57.0	4008563 05.803.18.67.0	4021447 05.803.18.77.0	4011973 05.803.18.87.0	4021463 05.803.18.97.0
2,200-2,300	4021431 05.803.18.48.0	4008559 05.803.18.58.0	4021438 05.803.18.68.0	4021448 05.803.18.78.0	4021454 05.803.18.88.0	4021464 05.803.18.98.0
2,300-2,400	4021432 05.803.18.49.0	4008560 05.803.18.59.0	4021439 05.803.18.69.0	4021449 05.803.18.79.0	4021455 05.803.18.89.0	4021465 05.803.18.99.0

CLAMPING MOUNTS

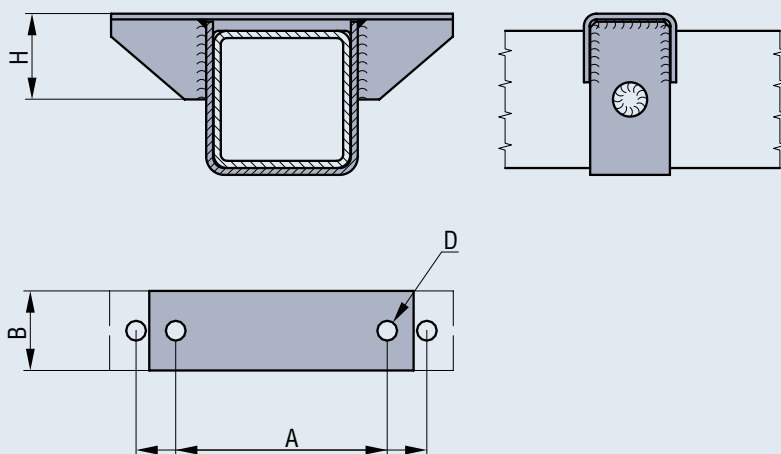
clamped and welded version



I These mounting parts give the coupling devices a secure attachment to the vehicle frame



for tube	Dimensions [mm]				Order No. Mounting part kit Clamping connection	Reference No. Mounting part kit Clamping connection	Order No. Welded connection	Reference No. Welded connection
	H	D	A	B				
Ø 82.5	50	14.5	160	60	4008396	05.803.02.60.0	4021549	05.075.04.16.0
Ø 88.9	60	14/18	160/220	60	4003576	05.803.02.56.0	4006337	05.075.05.13.0
Ø 101.6	75	15	160	60	4008397	05.803.02.61.0	4021550	05.075.06.08.0
Ø 108	60	14/18	160/220	60	-	-	4021551	05.075.06.07.0
Ø 127	60	18	220	70	-	-	4006344	05.075.08.20.0



for tube	Dimensions [mm]				Order No. Mounting part kit Clamping connection	Reference No. Mounting part kit Clamping connection	Order No. Welded connection	Reference No. Welded connection
	H	D	A	B				
square 70	50	13	160	50	4008393	05.803.02.57.0	—	—
square 80	55	13	160	58	4008394	05.803.02.58.0	—	—
square 100	65	13	160/200	60	4008395	05.803.02.59.0	—	—
square 120	75	18	250	81	—	—	4021552	05.803.02.62.0*
square 120	80	18	220	82	4008347	05.801.90.92.0	—	—
150x132	95	18	200	82	4008346	05.801.90.91.0	—	—
square 150	95	18	220	82	4008336	05.801.90.45.0	—	—

*not for ZAV

CLAMPING SHELLS

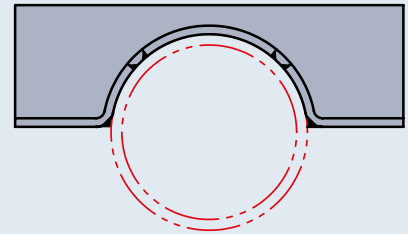
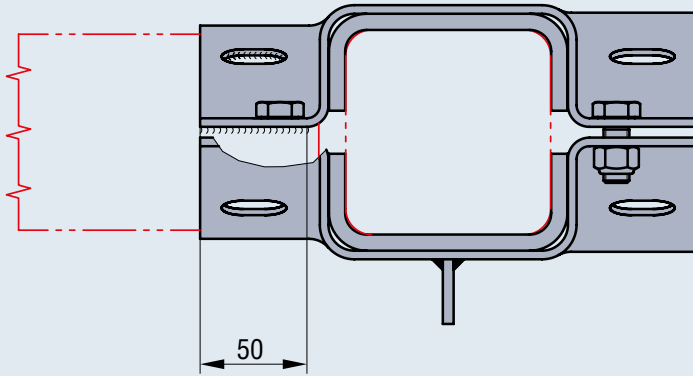
- I For a secure connection between drawbar and axle
- I Clamping shells completely hot-dip galvanised for permanent surface protection



Drawbar tube	Dimensions [mm]		Order No. Single axle	Reference No. Single axle	Order No. Tandem axle	Reference No. Tandem axle
	Axle tube	Version				
Ø 90	square 110	1	4008582	05.820.18.05.0	–	–
Ø 90	Ø 70	1	–	–	–	05.803.11.46.0
Ø 90	Ø 82	1	4021555	05.803.11.32.0	4008507	05.803.11.47.0
Ø 90	Ø 92	1	4011965	05.803.11.33.0	4008508	05.803.11.48.0
Ø 90	Ø 114	1	4021556	05.803.11.34.0	–	–
square 70	square 64	1	4008501	05.803.11.35.0	4008509	05.803.11.49.0
square 70	square 82	1	4021557	05.803.11.77.0	4021557	05.803.11.77.0
square 70	square 80	2	4008495	05.803.11.16.0	–	–
square 70	Ø 70	1	4021558	05.803.11.36.0	–	–
square 70	Ø 82	1	4008502	05.803.11.37.0	–	–
square 80	square 64	1	–	–	4021559	05.803.11.50.0
square 80	square 80	1	4008503	05.803.11.38.0	4008510	05.803.11.51.0
square 80	square 82	1	4008519	05.803.11.83.0	4008519	05.803.11.83.0
square 80	square 95	1	4008504	05.803.11.39.0	–	–
square 80	square 110	1	4008505	05.803.11.40.0	–	–
square 80	Ø 70	1	–	–	4008511	05.803.11.52.0
square 80	Ø 82	1	4021560	05.803.11.41.0	–	–
square 80	Ø 92	1	4021561	05.803.11.42.0	–	–
square 100	square 80	1	–	–	4008512	05.803.11.53.0
square 100	square 82	1	4008519	05.803.11.83.0	4008519	05.803.11.83.0
square 100	square 95	1	–	–	4008513	05.803.11.57.0
square 100	square 110	1	4008506	05.803.11.43.0	–	–
square 100	Ø 70	1	–	–	4021562	05.803.11.54.0
square 100	Ø 82	1	–	–	4021563	05.803.11.55.0
square 100	Ø 92	1	4021564	05.803.11.44.0	4021565	05.803.11.56.0
square 100	Ø 114	1	4021569	05.803.11.45.0	–	–
Clamping shells for variable height coupling devices						
Ø 82.5	square 80	1	4008350	05.801.90.96.0	–	–
Ø 82.5	square 64	1	4021566	05.803.12.80.0	4021566	05.803.12.80.0
Ø 90	square 64	1	4021566	05.803.12.80.0	4021566	05.803.12.80.0
Ø 90	square 80	1	4008580	05.820.16.08.0	4008579	05.820.16.07.0
Ø 90	square 82	1	4021567	05.803.11.77.0	4021567	05.803.11.77.0
Ø 90	square 95	1	4008581	05.820.17.06.0	4021568	05.820.17.05.0
Ø 90	square 110	1	4008582	05.820.18.05.0	–	–

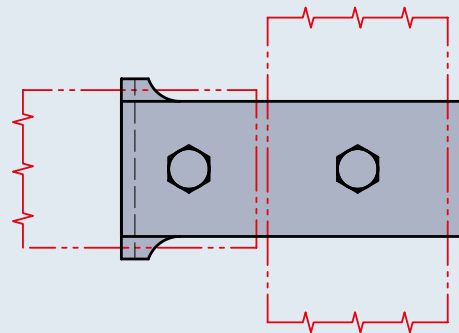
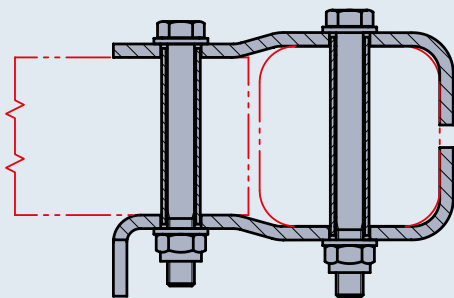


Version 1



5

Version 2



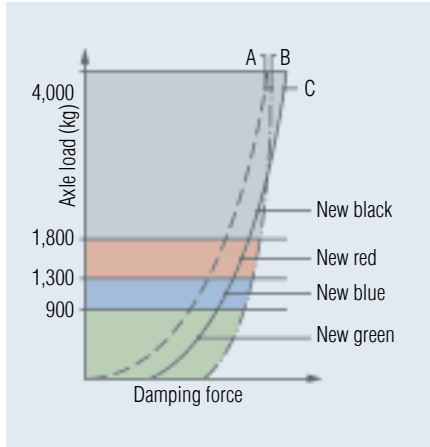
AXLE SHOCK ABSORBERS – OCTAGON PLUS

YOUR ADVANTAGE

- I AL-KO Octagon shock absorbers are specifically set for a particular weight range (see curve C).
- I They thus improve the towing properties of the trailer optimally.

Colour	Single axle	Tandem axle
Green	900 kg	1,600 kg
Blue	1,350 kg	2,700 kg
Red	2,000 kg	3,500 kg
Black	4,000 kg	7,500 kg

To rule out any mix-ups, the different weight ranges are identified with different colours.



- A** Damping characteristic of AL-KO hexagonal rubber suspension axle
- B** Damping characteristic of previous shock absorbers
- C** Damping characteristic optimised by AL-KO Octagon shock absorbers

OPTIMAL DAMPING

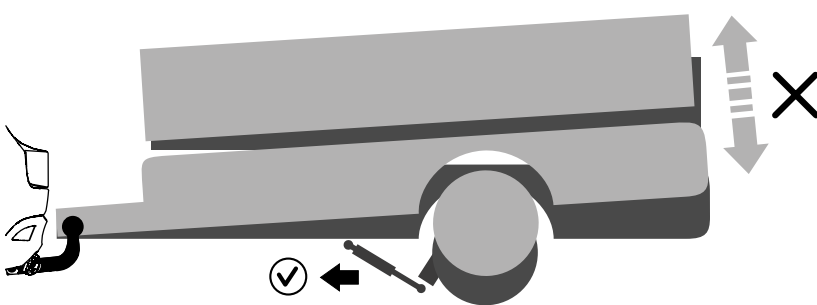
What every driver of a vehicle combination dreads:
Oscillation of the trailer body on uneven roads.
The AL-KO Octagon shock absorber immediately reduces these dangerous bumping movements.

THIS MEANS:

- I Greater driving stability
- I Greater braking stability
- I Optimum ground contact

SIMPLE INSTALLATION

- I The rubber-mounted articulation connection eyes permit a low-wear, stress-free installation position at an angle of up to 5°.
- I In contrast to commercially available shock absorbers, AL-KO Octagon shock absorbers have their bolts firmly integrated into the shock absorber eye, which means they are part of a shock absorber's scope of delivery along with the nuts.



AXLE SHOCK ABSORBERS – OCTAGON COMPACT



Colour	Single axle	Tandem axle
Black	up to 4,000 kg	up to 7,500 kg

5

AXLE SHOCK ABSORBERS – UNIVERSAL COMPACT

SIMPLE INSTALLATION

The rubber-mounted articulation connection eyes permit a low-wear, stress-free installation position at an angle of up to 5°.

By contrast with commercially available shock absorbers, AL-KO Universal shock absorbers also have their bolts firmly integrated into the shock absorber eye, which means they are part of a shock absorber's scope of delivery along with the nuts.



The low-cost AL-KO Universal shock absorber

Colour	Single axle	Tandem axle
Black	up to 1,500 kg	up to 3,000 kg

SHOCK ABSORBER BRACKET









1 312 110
for welding



AXLE SHOCK ABSORBER

Ordering overview

SAP: RADSTOSSDAEMPFER OCTAGON

Shock absorber	Version	Order No.	For AL-KO axles Trailing arm Semi-trailing arm	Single axle up to	Tandem axle up to	Colour	with pivoting connection eyes	with bolt material	Weight [kg]
	Octagon PLUS	244 084	Trailing arm and semi-trailing arm	up to 900 kg	up to 1,600 kg	green	Yes	Yes	1.3
	Octagon PLUS reinforced*	1 204 542	Trailing arm and semi-trailing arm	up to 900 kg	up to 1,600 kg	green	Yes	Yes	1.3
	Octagon PLUS	244 085	Trailing arm and semi-trailing arm	up to 1,350 kg	up to 2,700 kg	blue	Yes	Yes	1.3
	Octagon PLUS reinforced*	1 204 589	Trailing arm and semi-trailing arm	up to 1,350 kg	up to 2,700 kg	blue	Yes	Yes	1.3
	Octagon PLUS	244 086	Trailing arm and semi-trailing arm	up to 2,000 kg	up to 3,500 kg	red	Yes	Yes	1.3
	Octagon PLUS reinforced*	1 204 590	Trailing arm and semi-trailing arm	up to 2,000 kg	up to 3,500 kg	red	Yes	Yes	1.3
	Octagon COMPACT	244 087	Trailing arm and semi-trailing arm	up to 4,000 kg	up to 7,500 kg	black	No	No	1.5
	Universal COMPACT	282 259	Trailing arm	up to 1,500 kg	up to 3,000 kg	black	Yes	Yes	1.0

*Certain mechanical components (e.g. cylinders) that could be destroyed if overloaded are reinforced. The stroke and length dimensions as well as damping forces have not been changed.

SURFACE TREATMENT

Shock absorber epoxy paint (powder-coated)

SCOPE OF SUPPLY

I Shock absorber

Per axle, please order:

2x shock absorbers loose incl. fixing bolts

I Shock absorber brackets for swing arms on AL-KO axles

Per axle, please order:

1 set or 2 sets of shock absorber brackets

I Holding bars for the trailer manufacturer's vehicle frame

Per axle, please order as required:

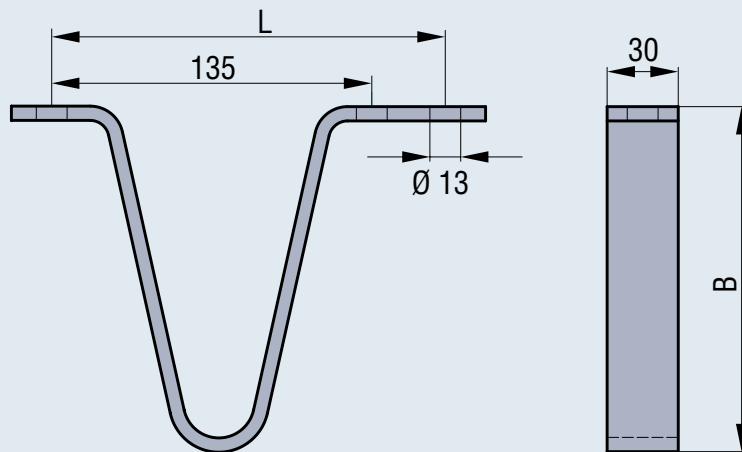
2x holding bars



Colour	Single axle	Tandem axle
Green	900 kg	1,600 kg
Blue	1,350 kg	2,700 kg
Red	2,000 kg	3,500 kg
Black	4,000 kg	7,500 kg

To rule out any mix-ups, the different weight ranges are identified with different colours.

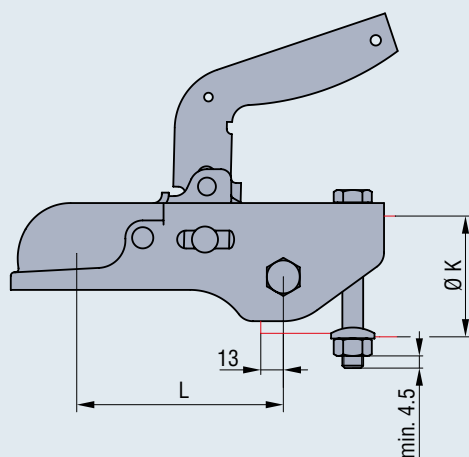
DRAWBAR SUPPORTS



Order No.	Reference No.	B	L	Weight [kg]
4014887	02.3708.23.00	120	166	0.5
217132	-	150	166	0.6
4014890	02.3708.35.00	180	160	0.7

BALL HITCHES AND DRAWBAR EYES

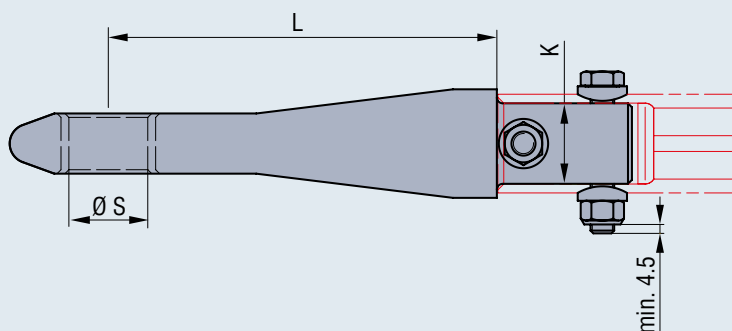
(Conversion kits) for coupling devices



Designation	Order No. Mounting kit	Dimensions [mm]		ECE test code	Tongue load [kg]	Permitted gross weight [kg]	Terminal
		K	L				
WW 13-N	4011532	40	110	E1 55R-01 1086	100	1,500	ZAF 1.0-3; ZAAQ 1.0-3
EM 150R-B	4011553	50/51	110	E1 55R-01 0376	100	1,500	ZAF 1.35-3; ZAF 1.6-3; ZAAQ 1.35-3; ZAA 1.3-1.1; ZKV13.1
EM 220R-B	4011554	50/51	110	E1 55R-01 0399	150	2,200	ZAF 2.0-3; ZAAQ 1.6-3; ZAAQ 2.0-3; ZAA 2.0-1.1; ZKV 20.1
EM 300 R-B-K1212	4011556	50	110	E1 55R-01 0377	150	3,000	ZAF 3.0-3; ZAAQ 2.5-3; ZAAQ 3.0-3
EM 350 R-D-K1212	4008335	65	119	E1 55R-01 0380	200	3,500	ZAA 3.5-1.1; ZKV 25.1; ZKV 35.1; ZAV 3.5-1
EM 350 R-D-K1414	4008528	65	119	E1 55R-01 0380	200	3,500	ZAF 3.5-3; ZAAQ 3.5-3
WW 30-D6-K1212	4008494	60	110	E1 55R-01 0640	150	3,000	ZAV 1.6-5; ZAV 2.0-5; ZAV 2.7-4
iSC ZKAS 3.0-1	4011528	50	135	E1 55R-01 2318	150	3,000	ZAF 1.35-3 to ZAF 3.0-3; ZAAQ 1.35-3 to ZAAQ 3.0-3; ZAA1.3-1.1 ZAA 2.0-1.1 ZKV13.1; ZKV 20.1

DETAILS

Our conversion kit allows greater flexibility in the choice of the towing vehicle. Coupling devices can now be operated with both ball hitches and drawbar eyes.



Designation	Order No. Drawbar eye	Reference No. Drawbar eye	Dimensions [mm]			ECE test code	Tongue load [kg]		
			K	S	L		Permitted gross weight	Terminal	
DIN 40.0-01*	4022718	05.803.13.41.0	40.8	40	123,5	E1 55R-01 2169	300	2,000	ZAA 1.3-1/2.0-1; ZKV 13/20; ZRV 13/20
DIN 40.0-04	4022721	–	45.8	40	123,5	E1 55R-01 2169	300	2,900	ZAV 1.6-5/2.0-5/2.7-4
DIN 40.0-02	4008603	05.870.00.06.0	51.8	40	200	E1 55R-01 0346	150	3,500	ZAA 3.5-1; ZKV 25/35; ZAV 3.5-1
DIN 40.0-02	4011524	05.803.11.30.0	51.8	40	200	E1 55R-01 0346	150	3,500	ZAF 3.5-1
NATO 76.0-01	4008862	09.870.00.32.0	40.8	76	95	E1 55R-01 2170	100	2,000	ZAA 1.3-1/2.0-1; ZKV 13/20; ZRV 13/20
NATO 76.0-04	4008343	05.801.90.86.0	45.8	76	95	E1 55R-01 2170	150	2,900	ZAV 1.6-5/2.0-5/2.7-4
NATO 76.0-02	4008337	05.801.90.46.0	51.8	76	95	E1 55R-01 0642	150	3,500	ZAA 3.5-1; ZKV 25/35; ZAV 3.5-1
Italy 45.0-01	4008340	05.801.90.74.0	40.8	45	109.5	E1 55R-01 2351	100	2,000	ZAA 1.3-1/2.0-1; ZKV 13/20; ZRV 13/201
Italy 45.0-04	4008345	05.801.90.90.0	45.8	45	115	E1 55R-01 2351	150	2,900	ZAV 1.6-5/2.0-5/2.7-4
France 77.0-01	4008341	05.801.90.77.0	40.8	77	94	E1 55R-01 2352	100	2,000	ZAA 1.3-1/2.0-1; ZKV 13/20; ZRV 13/201

*not for ZAV

6. TECHNICAL INFORMATION



6. TECHNICAL INFORMATION

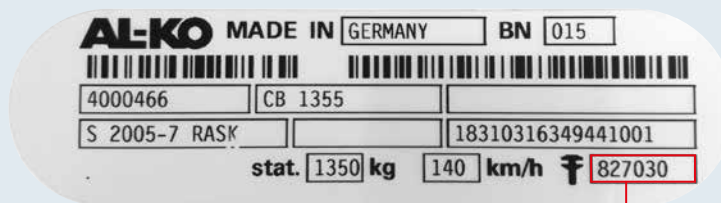
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SPARE PART IDENTIFICATION

Products manufactured after 1 October 2017.

Products in this catalogue manufactured after 1 October 2017 have “ETI numbers” on the type plates. These numbers serve for identification of spare parts using the AL-KO system.

Example of a type plate on an overrun device



ETI number
827030

Example of a type plate on an axle



ETI number
827004

The ETI numbers of the products can be found on the type plate in the boxes marked here in red. Behind this ETI number there is a spare part card with which the spare parts can be identified.

The BN number 015 indicates that the product in question forms part of the Paderborn portfolio.

The spare parts cards can be accessed via the AL-KO Service Portal.

General login data:

www.alko-tech.com/de/serviceportal

User name: service

Password: Login.AL-KO

SPARE PART IDENTIFICATION

SPARE PART IDENTIFICATION

Products manufactured before 1 October 2017.

ETI numbers according to the AL-KO system have also been assigned to products in this catalogue manufactured before 1 October 2017. However, these ETI numbers cannot be found on the type plates.

The ETI numbers can be identified using a list that can be found on the AL-KO service portal from 2019.

Axle spare part identification

ETI numbers for the product group “axles” can be identified using the article numbers on the existing type plates. The AL-KO ETI number can be determined with this article number using the list on the AL-KO service portal. Behind the ETI number is the spare part card with which the respective spare parts can be identified.

Example of a type plate on an axle



Article number (type plate)

46.24.379.183

Designation

Wheel brake S2005-7 RASK /
S2005-7 SK with hub bearing

ETI number

827030

Example of a type plate on an overrun device



Type (Type plate)

ZAF1.6-3

Designation

Overrun device ZAF 1.6-3

ETI number

827003

Spare part identification for overrun devices

ETI numbers for the product group “overrun devices” can be identified using the type indicated on the existing type plates. The new AL-KO ETI number corresponding to an ETI number can be determined with this type using the list on the AL-KO service portal. Behind the ETI number is the spare part card with which the respective spare parts can be identified.

All spare part cards can be called up in the AL-KO service portal.

General login data:

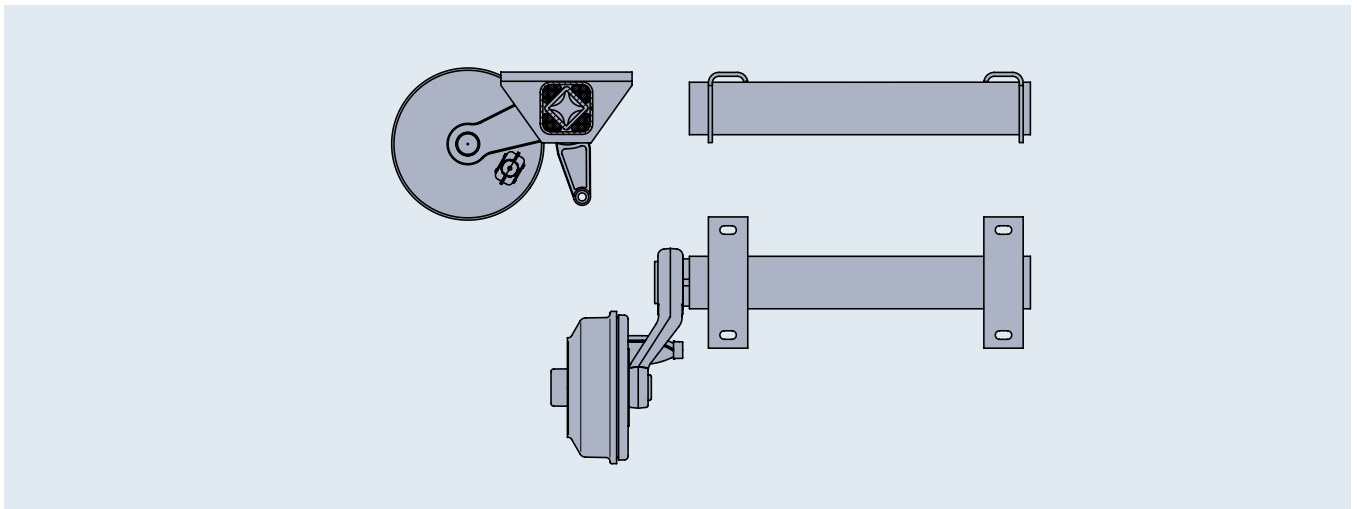
www.alko-tech.com/de/serviceportal

User name: service

Password: Login.AL-KO

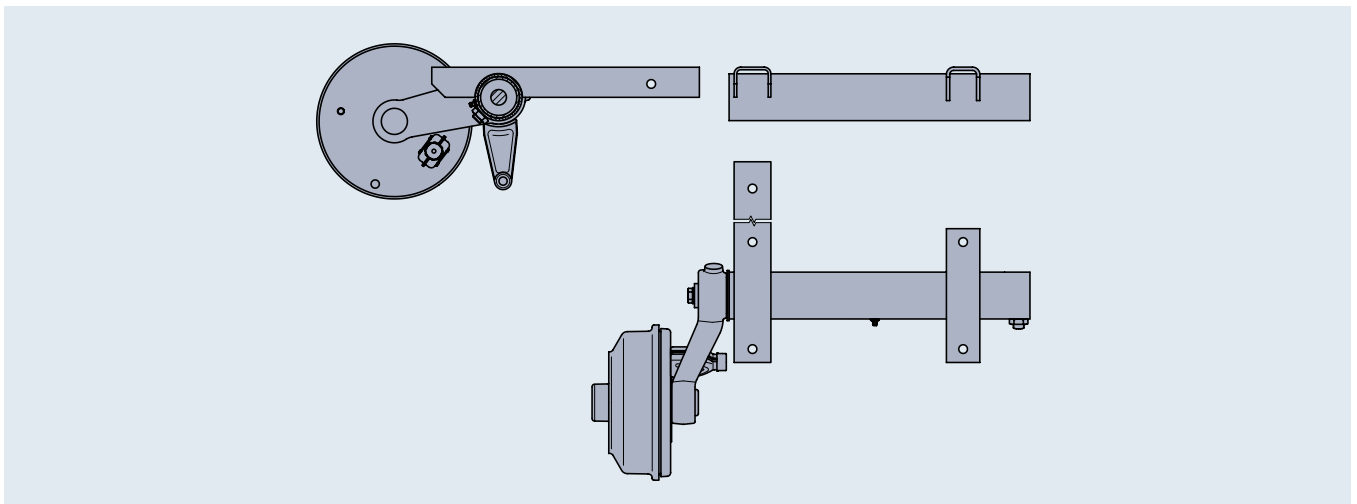
BRAKED HALF AXLES

(SWING HALF AXLE RUBBER SUSPENSION)



BRAKED AXLES WITH STEEL SUSPENSION

(RONDO TORSION BAR AXLES)

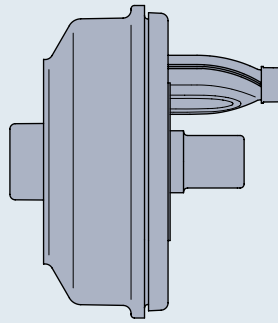


WHEEL BRAKES WITH AXLE STUB



DETAILS

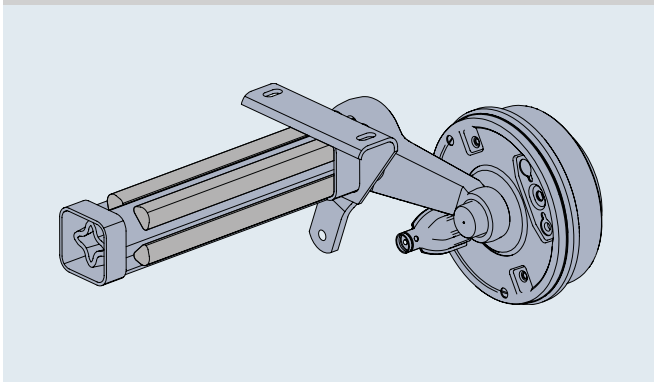
| The axle stubs and half axles give vehicle manufacturers maximum flexibility when it comes to defining the wheelbases individually.



BRAKED HALF AXLES (SWING HALF AXLE RUBBER SUSPENSION) + RONDO TORSION ROD AXLE

Rubber and torsion rod suspension offer maximum suspension comfort. They adapt to widely differing loads. They ensure optimum damping of vibrations caused by unevenness in the road surface. The functional principle differs. The customer's wishes and the individual application determine the use.

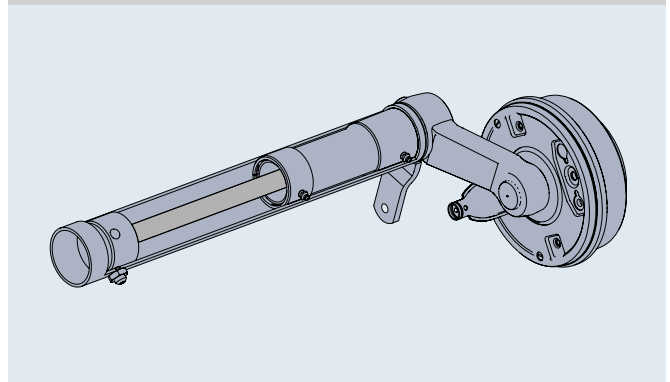
Brakes axles, square



FUNCTION

The suspension is effected by four rubber elements pressed in between the square tubes offset from another by 45°.

Braked axles with steel suspension



FUNCTION

The suspension element here is a torsion rod of spring steel that is completely housed in the axle tube. Practically infinite adjustment of the trailing arms is possible via the involute tothing on the torsion rod. Advantage: Variable ride height adjustment during production of the vehicle

PLEASE NOTE:

The axle must be adjusted accordingly for trailers with special operating conditions, e.g. hazardous goods trailers (wheelbase over 1,000 mm), trailers for moving loads, bus service trailers, light commercial vehicle trailers.

INSTALLATION OF AXLES IN TANDEM VEHICLES

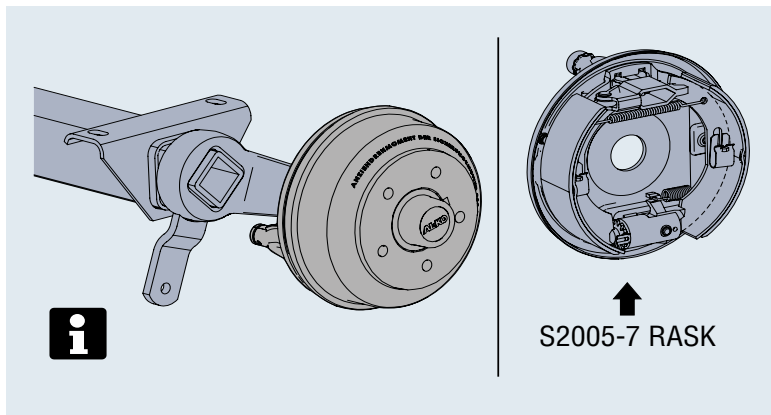


6

Axle load [kg]	Permissible gross weight with wheelbase (AA)		
	≤ 750 mm [kg]	≤ 850 mm [kg]	≤ 1000 mm [kg]
2 x 750	1,500	1,400	1,300
2 x 850	1,700	1,550	1,400
2 x 1,050	2,100	2,000	1,850
2 x 1,350	2,700	2,500	2,300
2 x 1,500	3,000	2,800	2,700
2 x 1,800	< 3,500	3,300	3,100

TECHNICAL DATA

Wheel brakes



Brake type	S 1704-7 RASK	S 2005-7 RASK			S 2504-7 RASK				S 3006-7 RASK	3081	
Report type	S 1704-7	S 2005-7			S 2504-7				S 3006-7	3081	
Version	–	a	b	c	a	b	c	d	–	A	B
ECE R13 test report	361 077 13	361 069 13			361 079 13				361 071 13	361-0189-97	
Technically permissible load per wheel GB0 [kg]	500	750	750	900	900	900	950	1,000	1,500	1,250	2,000
Maximum braking torque Mmax [Nm]	1350	2400			2950	2230	2930	2930	5900	6700	
Tyre radius under load											
Rdyn min. [m]	0.21	0.26	0.215	0.255	0.27	0.25	0.27	0.27	0.31	0.31	0.36
Rdyn max. [m]	0.30	0.36	0.2595	0.288	0.36	0.269	0.34	0.321	0.44	0.40	0.40
Characteristic rho [m]											
Beral 1517	0.63	0.86	0.74	–	0.97	0.92	0.98	0.98	0.94	0.966	0.936
FERODO 1770	0.82	0.91	0.81	0.78	1.04	1.03	1.02	1.08			
Disengage force P0 [N]	20	42	9	35	121	0	0	0	140	135	54
Brake application stroke SB* [mm]	1.54	1.6			1.7				1.8	1.8	
Path transmission ig	13.93	14.11			14.2				13.78	17.44	
Path transmission ia	3.44	3.55			3.57				3.57	4.0	
Permitted application stroke SPR at the brake cable [mm] during reversing	27	27			28				30	30	

COUPLING DEVICES



INSTALLATION OF COUPLING PARTS

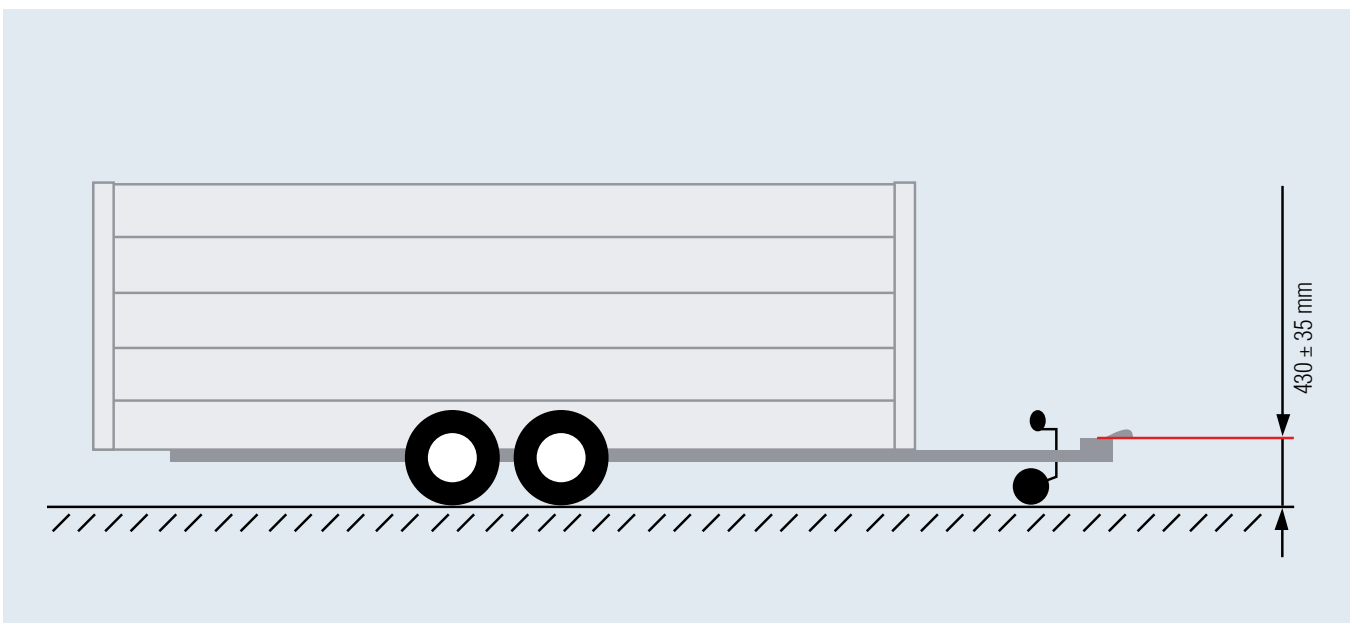
The coupling parts must be correctly installed to ensure a safe connection between trailer and towing vehicle. With the trailer body horizontal and the axle under maximum load, the trailer coupling point must be 430 millimetres above the horizontal plane on which the wheels of the trailer rest.

35 millimetres above or below are tolerable. Trailers are horizontal as soon as the floor or loading area is horizontal.

PLEASE NOTE:

On trailers for special operating conditions, e.g. for use behind buses, lightweight commercial vehicles or vehicles with fluctuating loads at the coupling point, the coupling device must be adapted accordingly.

6



TYRES AND WHEELS TABLE



DIMENSIONS [mm]

Tyre size	Tyre load capacity (kg) per axle			Radius		Wheel connection	Axle type for wheels	
	100 km/h	140 km/h	rstat mm	rdyn mm	Wheel size		With offset	Offset Ø
180/70 R 8 X CX	1500	–	209	221	5.00 F - 8	Ø 94/5/Ø 140/R14	Spec.	CS/DS 1505
145 R10	650	–	220	239	3,50 B x 10H2	Ø 60/4/Ø 100/R12		CS 654
195/50 B 10	1500	–	215	219	6.00 J x 10 H2	Ø 67/5/Ø 112/R12		CS/DS 1505
						Ø 94/5/Ø 140/R14		CS/DS 1505
135 R12	610	580	237	253	4 J x 12 H2	Ø 57/4/Ø 100/R12	CB 554	CS 554
145 R12	750	710	245	263			CB 754	CS 754
155 R12	840	800	248	267		Ø 67/5/Ø 112/R12	CB 755	CS 755
155/70 R12	1800	1600	245	253	4 1/2 J x 12 H2	Ø 67/5/Ø 112/R12	DB/CB 1805	
145 R13	790	750	257	275	4 J x 13 H2	Ø 57/4/Ø 100/R13	CB 654/854	
145/70 R13	725	690	245	259		Ø 67/5/Ø 112/R12	CB 655/855	
155 R13	895	850	262	280				
155/70 R13	814	775	250	266	4 1/2 J x 13 H2	Ø 57/4/Ø 100/60°	DB/CB 1054	
165 R13	1000	950	269	289		Ø 67/5/Ø 112/R12	DB/CB 1055	CS 1055
165/70 R13	920	875	256	272		Ø 67/5/Ø 112/60°		
175 R13	1220	1160	273	295	5 1/2 J x 13 H2			
175/70 R13	1000	950	261	279				
185/70 R13	1115	1060	266	286	6 J x 13 H2			
195/70 R13	1220	1160	276	292				
165 R14	1050	1000	302	282	5 J x 14 H2			
175 R14	1180	1120	286	307		Ø 57/4/Ø 100/60°	DB/CB 1054	
175/65 R14	1000	950	267	283		Ø 66,5/5/Ø 112/R12	DB/CB 1055	CS 1055
175/70 R14	1050	1000	274	292		Ø 66,5/5/Ø 112/60°		
185 R14	1260	1200	315	293				
185 R14 C	1785	1700	296	313				
185/65 R14	1115	1060	272	289	5 1/2 J x 14 H2			



Tyre size	Tyre load capacity (kg) per axle			Radius		Wheel connection	Axle type for wheels	
	100 km/h	140 km/h	rstat mm	röyn mm	Wheel size		with offset	Offset 0
185/70 R14	1180	1120	279	299		Ø 57/4/Ø 100/60°	DB/CB 1354	CS 1355
195 R14 C	1995	1900	302	321		Ø 66,5/5/Ø 112/R12	DB/CB 1355	
195/65 R14	1220	1160	277	296		Ø 66,5/5/Ø 112/60°		
195/70 R14	1295	1230	285	306				
205 R14 C	2170	2060	310	330	6 J x 14 H2	Ø 66,5/5/Ø 112/R12	DB/CB 1505	CS 1505
205/70 R14	1450	1380	312	290		Ø 66,5/5/Ø 112/60°		
215 R14 C	2360	2240	316	337				
215/70 R14	1450	1380	302	323				
185 R15 C	1840	1750	308	325	5 1/2 J x 15 H2	Ø 66,5/5/Ø 112/R12	DB/CB 1805	
195/70 R15 C	1840	1750	302	316	6 J x 15 H2	Ø 66,5/5/Ø 112/R12	DB/CB 1805	
205/65 R15 C	1790	1700	294	312	6 J x 15 H2		DB/CB 1805	
215/70 R15 C	2170	2060	311	329	6 1/2 J x 15 H2	Ø 161/6/Ø 205		CS/DS 2106
225/70 R15 C	2360	2240	336	317				CS/DS 2506
205/75 R16 C	2420	2300	344	326	6 J x 16 H2	Ø 161/6/Ø 205		
215/75 R16 C	2420	2300	332	351				
225/75 R16 C	3150	3000	338	358		Ø 161/6/Ø 205		CS 3006

FREE DRAWBAR LENGTHS (FD)

FREE DRAWBAR LENGTHS (FD) [mm]

GA [kg]	Sales designation																				
	ZOV 1.2-1 B	ZOV 2.5-1	ZOV 5.0-1	ZEA 2.0-1	ZEA 2.8-1 Version B	ZEA 3.5-1	ZAAP 1.35	ZAAP 1.6	ZAAP 2.0	ZAAP 3.0	ZKV 13 A	ZKV 13 B	ZKV 20 A	ZKV 20 B	ZKV 25 B	ZKV 25 D	ZKV 35 B	ZAV 1.6-5	ZAV 2.0-5	ZAV 2.7-4	ZAV 3.5-1
600	4273		1923	1540	1985					9036	9036							3000	3000	3500	3500
650	3627		1923	1540	1985					8279	8341							3000	3000	3500	3500
700	3185		1923	1540	1985					7489	7745							3000	3000	3500	3500
750	2851		1923	1540	1985	2190	2570			6805	7229							3000	3000	3500	3500
800	2585		1923	1540	1985	2050	2410			4899	6777							3000	3000	3500	3500
850	2366		1923	1540	1985	1930	2270			4017	5358							3000	3000	3500	3500
900	2217		1923	1540	1985	1820	2140			3458	4541							3000	3000	3500	3500
950	2091		1923	1540	1985	1730	2030			3040	4054							3000	3000	3500	3500
1,000	1978		1923	1540	1985	1640	1930			2705	3618							3000	3000	3500	3500
1,050	1876		1923	1540	1985	1560	1840			2446	3254							3000	3000	3500	3500
1,100	1783		1923	1540	1985	1490	1750			2261	2958							3000	3000	3500	3500
1,150	1685		1923	1540	1985	1430	1680			2092	2710							3000	3000	3500	3500
1,200	1583		1923	1540	1985	1310	1610			1937	2497							3000	3000	3500	3500
1,250			1923	1540	1985	1260	1540	2180		1795	2354							3000	3000	3500	3500
1,300			1923	1540	1985	1260	1480	2100		1664	2223	3853	3641					3000	3000	3500	3500
1,350			1923	1540	1985	1210	1430	2020				3589	3314					3000	3000	3500	3500
1,400			1923	1540	1985		1380	1950				3367	3041					3000	3000	3500	3500
1,450			1923	1540	1985		1330	1880				3161	2806					3000	3000	3500	3500
1,500			1923	1540	1985		1280	1820				2952	2601					3000	3000	3500	3500
1,550			1923	1540	1985		1240	1760				2768	2439					3000	3000	3500	3500
1,600	3670		1923	1540	1985		1200	1700				2603	2311	4840	4770			3000	3000	3500	3500
1,650	3490		1923	1540	1985			1650				2467	2195	4680	4620			3000	3500	3500	
1,700	3490		1923	1540	1985			1600				2363	2079	4540	4480			3000	3500	3500	
1,750	3300		1923	1540	1985			1560				2266	1974	4410	4350			3000	3500	3500	
1,800	3300		1923	1540	1985			1510	2970			2174	1874	4280	4220			3000	3500	3500	
1,850	3120		1923	1540	1985			1470	2890			2087	1780	4160	4100			3000	3500	3500	
1,900	3120		1923	1540	1985			1430	2810			2005	1690	4050	3980			3000	3500	3500	
1,950	2970		1923	1540	1985			1400	2740			1927	1606	3940	3880			3000	3500	3500	
2,000	2970		1923	1540	1985			1360	2670			1853	1526	3830	3770			3000	3500	3500	
2,050	1804			1540	1985					2610				3740	3680					3500	3500
2,100	2804			1540	1985					2550				3640	3580					3500	3500
2,150	2530			1540	1985					2490				3550	3490					3500	3500
2,200	2530			1540	1985					2430				3470	3390					3500	3500
2,250	2410			1540	1985					2380				3390	3280					3500	3500
2,300	2410			1540	1985					2320				3310	3180					3500	3500
2,350	2300			1540	1985					2270				3240	3080					3500	3500

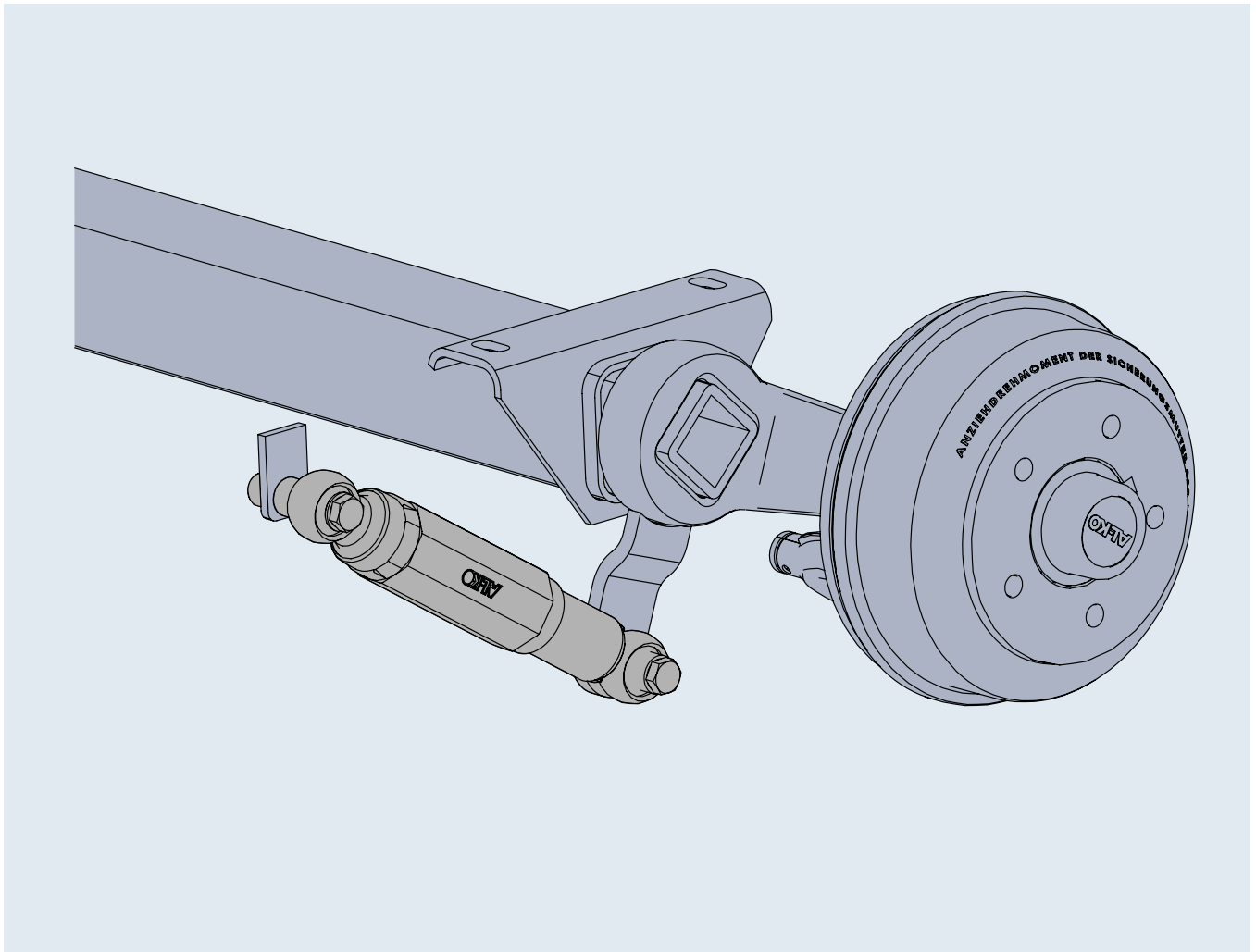
FREE DRAWBAR LENGTHS (FD)

FREE DRAWBAR LENGTHS (FD) [mm]

GA [kg]	Sales designation																				
	ZOV 1.2-1 B	ZOV 2.5-1	ZOV 5.0-1	ZEK 2.0-1	ZEK 2.8-1 Version B	ZEK 3.5-1	ZARR 1.35	ZARR 1.6	ZARR 2.0	ZARR 3.0	ZKV 13 A	ZKV 13 B	ZKV 20 A	ZKV 20 B	ZKV 25 B	ZKV 25 D	ZKV 35 B	ZAV 1.6-5	ZAV 2.0-5	ZAV 2.7-4	ZAV 3.5-1
2,400	2300			1540	1985				2230					3170	2990					3500	3500
2,450	2200			1540	1985				2180					3100	2900					3500	3500
2,500	2200			1540	1985				2140					3030	2810	4340				3500	3500
2,550				1540	1985				2100					2970	2730	4260				3500	3500
2,600				1540	1985				2060					2910	2638	4170				3500	3500
2,650				1540	1985				2020					2850	2535	4090				3500	3500
2,700				1540	1985				1980					2820	2453	4010				3500	3500
2,750				1540	1985				1940							3930					3500
2,800				1540	1985				1910							3860					3500
2,850					1985				1870							3790					3500
2,900					1985				1840							3720					3500
2,950					1985				1810							3650					3500
3,000					1985				1780							3590					3500
3,050					1985											3530					3500
3,100		2500			1985											3470					3500
3,150		2440			1985											3410					3500
3,200		2440			1985											3350					3500
3,250		2370			1985											3300					3500
3,300		2370			1985											3240					3500
3,350		2300			1985											3190					3500
3,400		2300			1985											3140					3500
3,450		2220			1985											3100					3500
3,500		2220			1985											3050					3500
3,600		2150																			
3,700		2080																			
3,800		2020																			
3,900		1950																			
4,000		1900																			
4,100		1850																			
4,200		1800																			
4,300		1750																			
4,400		1700																			
4,500		1660																			
4,600		1600																			
4,800		1600																			

AXLE SHOCK ABSORBER

Mounting



AL-KO axle shock absorbers can be used for almost all trailer axles.

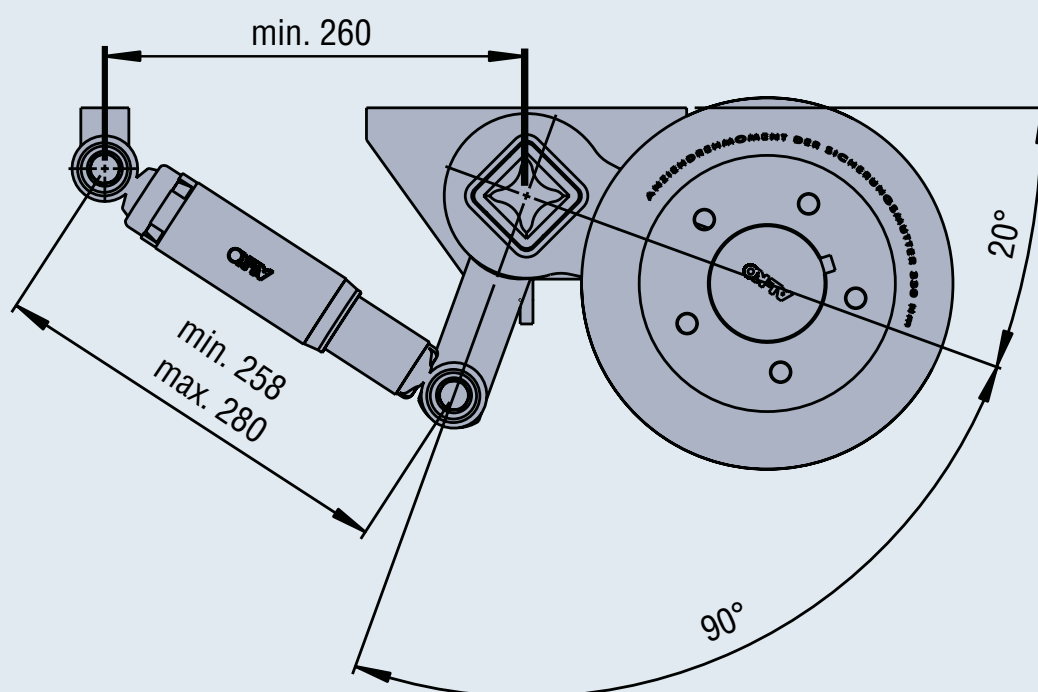
Counter-mounting on the vehicle frame of the trailer manufacturer

Attachment of the shock absorber on the vehicle frame must be coordinated with the vehicle manufacturer. According to the installation situation, AL-KO uses holding bars that are welded onto the frame by the vehicle manufacturer.

(Order No. 1 312 110) for this purpose.

Conceivable applications

- | Long high-volume bodies with a high centre of gravity (high-loader)
- | Trailer for transporting mini diggers (risk of exceeding payload capacity)
- | Turntable drawbar trailers (risk that the payload will not be evenly distributed when loading)



Installation dimensions in side view with unladen axle link and *20° swing arm position!

Important:

Always mount bolt head on the tyre side!

Distance between bolt head and tyre at least 16 mm!

Failure to comply represents a danger of accident!

GENERAL NOTES

on European registration regulations in the car trailer area

ECE Directive

The overrun devices and wheel brakes in this catalogue comply with the ECE-R13 / ECE-R55 guidelines with all supplements.

COUNTRY-SPECIFIC REGULATIONS FOR TRAILER REGISTRATION CAN BE FOUND IN:



Belgium / Netherlands

- | In all cases: ECE-tested drawbar, drawbar shaft and hitches
- | In the case of ECE type approval: UN/ECE-tested brake system
- | In the case of an individual acceptance or NKS test (national small series) an RDW test report may be sufficient for the Netherlands

To be requested from:

- Corresponding manufacturer
- Corresponding manufacturer
- Corresponding manufacturer



Bulgaria

- | Brake calculation according to Directive ECE-R13

To be requested from:

- Corresponding manufacturer



Denmark

- | Brake calculation according to Directive ECE-R13

To be requested from:

- Overrun device manufacturer



Germany

- | Brake calculation according to Directive ECE-R13
- | Type approval according to ECE-R55-01 for all vehicle connecting parts, e.g. coupling head, drawbar, drawbar installation and drawbar

To be requested from:

- Manufacturer



France

- Original warranty for
- | Confirmation of permitted axle load
- | Strength calculation for drawbar according to directive dated 28.2.1986
- | Brake calculation according to Directive ECE-R13

To be requested from:

- Axle manufacturer
- Drawbar manufacturer
- Overrun device manufacturer



United Kingdom

- | Brake calculation according to Directive ECE-R13

To be requested from:

- Overrun device manufacturer



Italy

- | Brake calculation according to Directive ECE-R13
- | Coupling head with I-test no. or according to Directive ECE-R5

To be requested from:

- Overrun device manufacturer
- Corresponding manufacturer

All documents must be issued in Italian. These documents can be requested from the corresponding trailer importer at our branch in Vintl.








Austria

- | Brake calculation according to Directive ECE-R13 with EC supplement
- | Special regulation on trailer loads (mass of motor vehicle in relation to mass of trailer)

To be requested from:

- Overrun device manufacturer
- Please find out from the corresponding authorities.

	Poland I Technical report for overrun device and wheel brake according to Directive ECE-R13	To be requested from: Ministry of Transport
	Romania I Brake calculation according to Directive ECE-R13	To be requested from: Corresponding manufacturer
	Russia I Brake calculation according to Directive ECE-R13 I GOST 37.001.220 - 97 of 1997 (Russian industry standard for car trailers)	To be requested from: Corresponding manufacturer Corresponding manufacturer
	Sweden I Brake calculation according to Directive ECE-R13	To be requested from: Overrun device manufacturer
	Switzerland Original warranty for I Confirmation of permitted axle load I Confirmation of nose load and pulling force on the drawbar as well as overrun devices I Confirmation of nose load and pulling force of the coupling head (also DIN drawbar eye) I Schematic drawing of the service and parking brake system with specification of the ratio and effective brake surface area	To be requested from: Axle manufacturer Overrun device manufacturer Corresponding manufacturer Overrun device manufacturer
	Slovakia I Certificate number for axle, overrun device, coupling head, wheels and lighting (according to Directive 315/1996)	To be requested from: Ministry of Transport
 	Spain/Portugal I Brake calculation, according to ECE-R13 Directive from the overrun device manufacturer, diagram for central tube drawbars with braked and unbraked trailers, corresponding manufacturer's general operating permit for all vehicle-connecting parts, e.g. coupling head, drawbar, drawbar installation	To be requested from: Corresponding manufacturer
	Czech Republic I Brake calculation according to Directive ECE-R13 I Czech report for coupling head, overrun device, axle	To be requested from: Overrun device manufacturer Corresponding manufacturer (or importer)

NOTES

AL-KO

QUALITY FOR LIFE

ALOIS KOBER GMBH

Ichenhauser Str. 14
89359 Kötz
Germany
Phone: +49 8221 97-0
info@alko-tech.com
www.alko-tech.com

AL-KO TECHNOLOGY PADERBORN GMBH

Pater-Ewald-Straße 29
33104 Paderborn
Germany
Phone: +49 5254 803-0
info15@alko-tech.com
www.alko-tech.com