



SAF-HOLLAND Group

HOLLAND KINGPINS

TOP-QUALITY
COMPONENTS FOR
ORIGINAL EQUIPMENT
AND RETROFITTING





HOLLAND KINGPINS

SAF-HOLLAND Group

Our kingpins are of outstanding quality and have proven their reliability millions of times for decades in the USA. They are type-approved according to directives 94/20/EC and ECE 55 01.

HOLLAND kingpins are manufactured from specially heat treated steels (42CrMo4) with high-quality alloy components on precision engineering equipment with stringent production and end-of-line monitoring. They stand out thanks to their excellent material strength, hardness and impact resistance as well as their exemplary cost-effectiveness, and meet or exceed the requirements specified in DIN 74080, DIN 74083 and ISO 337, ISO 4086.

These kingpins are now also available in Europe: HOLLAND kingpins – the linchpin between tractor and trailer.

Part number	Type	Kingpin	Trailer Skid-plate	Approval (EC)
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Standard bolt-in version, easy to exchange with kingpin type 67.



KP-E-65206	65	2"	6 mm	e1*94/20*0291
KP-E-65207	65	2"	7 mm	e1*94/20*0291
KP-E-65208	65	2"	8 mm	e1*94/20*0291
KP-E-65210	65	2"	10 mm	e1*94/20*0291
KP-E-65212	65	2"	12 mm	e1*94/20*0291



Kingpin for heavy duty application, exchangeable with the 2" kingpin type 66.

KP-E-63316	63	3.5"	16 mm	e1*94/20*0139
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Mounted in a type KP 66 heavy-duty back plate, exchangeable with the 3.5" kingpin type 63.

KP-E-66216	66	2"	16 mm	e1*94/20*0987
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Standard bolt-in version, easy to exchange with kingpin type 65.



KP-E-67306	67	3.5"	6 mm	e1*94/20*0988
KP-E-67307	67	3.5"	7 mm	e1*94/20*0988
KP-E-67308	67	3.5"	8 mm	e1*94/20*0988
KP-E-67310	67	3.5"	10 mm	e1*94/20*0988
KP-E-67312	67	3.5"	12 mm	e1*94/20*0988



Kingpins with threaded studs in the back plate, secured with self-locking nuts.

KP-E-64208	64	2"	8 mm	e1*94/20*0168
KP-E-64210	64	2"	10 mm	e1*94/20*0168
KP-E-64212	64	2"	12 mm	e1*94/20*0168

CALCULATION OF DRAWBAR THRUST (D-VALUE) for fifth wheels and kingpins

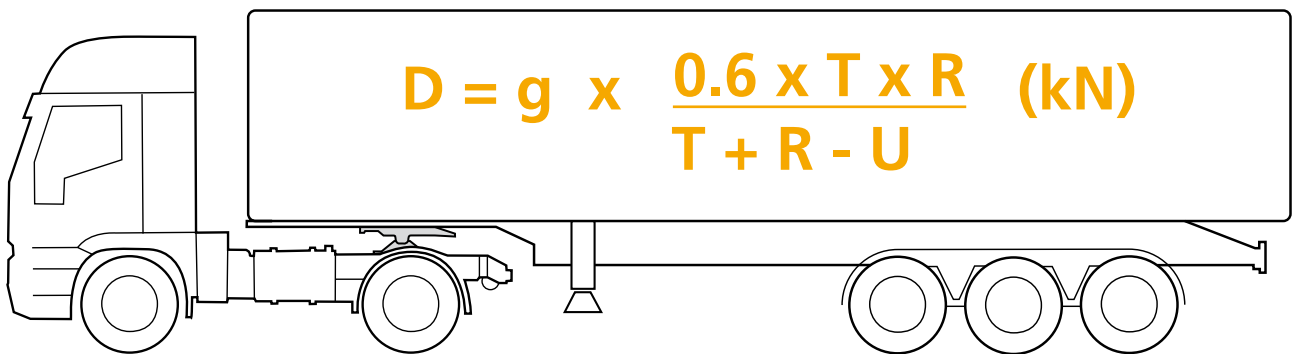
Definition and guidelines for calculating

A certain drawbar thrust (D) is valid for all fifth wheels and kingpins tested in accordance with directive EC 94/20. This serves as a comparable value for the longitudinal horizontal forces between the tractor and semi-trailer.

For this reason, a calculation of the drawbar thrust (D) must always be carried out to determine the correct fifth wheel or kingpin to be used for a semi-trailer combination.

The drawbar thrust (D) value is defined as a theoretical measurement of the horizontal forces between the tractor and semi-trailer. The D-value is used as the basis for the horizontal test forces for the statutory dynamic tests applied to all automatic coupling systems between tractor and semi-trailer.

The equation for calculating the D-value for a combination of tractor and semi-trailer is:



Calculation example

T = 17	Max. permissible gross weight of the tractor: 17 t (net weight 7 t plus fifth-wheel load 10 t)
R = 33	Max. permissible gross weight of the semi-trailer: 33 t (fifth-wheel load 10 t plus axle load 23 t)
U = 10	Fifth-wheel load
g = 9.81	ass. acceleration due to gravity

$$D = 9.81 \times \frac{0.6 \times 17 \times 33}{17 + 33 - 10} \text{ (kN)}$$

D-value = 82.55 kN at 40 t gross combination weight



NOTE

- For safe operation, the calculated D-value must not exceed the specified D-value of the fifth wheel or the kingpin.
- In order to be able to achieve the load limits of the max. D-value installation must be carried out according to the SAF-HOLLAND assembly instructions included in this brochure.



2" kingpin type 65

165 kN D-Value

6, 7, 8, 10, 12 mm semi-trailer skid-plate thickness

EC-tested according to

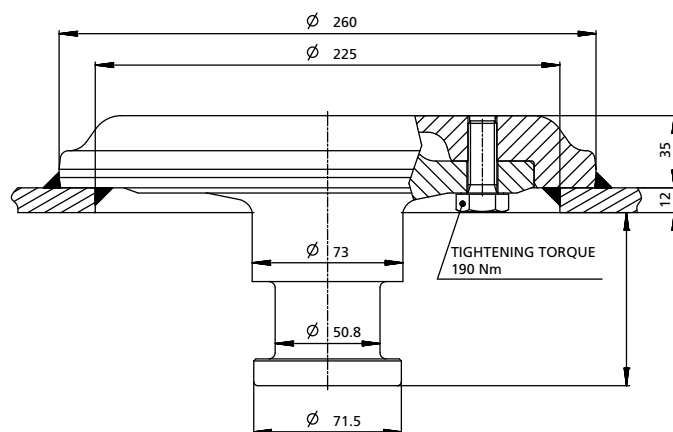
94/20/EC Directive ECE 55 01

Type Approval number e1*94/20*0291

Product description

- Kingpin for attachment to back plates. The kingpin is bolted directly into the back plate and can be replaced easily from below.
- Manufactured in accordance with directive 94/20/EC, DIN 74080, ISO 337.
- Forged material made from high tensile chromium molybdenum steel, heat-treated for optimum strength and durability.
- These kingpins are suitable for use with rear axle steering.
- The base plate allows the alternative mounting of a 3.5" kingpin type 67.

Kingpin mounted		Components				
Part number	Thickness of skid-plate	Back plate	Thickness of skid-plate	Kingpin 2"	Hex-head screws	Order quantity
KP-E-65206	6 mm	XA-E-52206	6 mm	XA-E-51265	4343105910	8
KP-E-65207	7 mm	XA-E-52207	7 mm	XA-E-51265	4343105910	8
KP-E-65208	8 mm	XA-E-52208	8 mm	XA-E-51265	4343105910	8
KP-E-65210	10 mm	XA-E-52210	10 mm	XA-E-51265	4343105910	8
KP-E-65212	12 mm	XA-E-52212	12 mm	XA-E-51265	4343105910	8



for alternative use		
Kingpin 3.5"	Hex-head screws	Order quantity
XA-E-51367	4343105910	8



NOTE

- Installation must be carried out in accordance with SAF-HOLLAND mounting and operating instructions, plus all applicable national regulations (e.g. in Germany StVZO).
- After dismantling, new bolts of similar grade and quality must always be used for re-mounting.
- We recommend using original SAF-HOLLAND spare parts.
- The permissible load limit (D-value) is valid for normal road traffic and under conditions prevailing in Europe. Please consult us in the event of deviations from this.



3.5" kingpin type 63

200 kN D-Value

16 mm semi-trailer skid-plate thickness

EC-tested according to

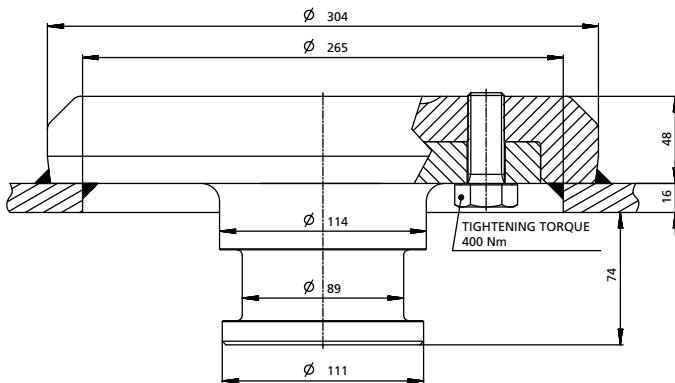
94/20/EC Directive ECE 55 01

Type Approval number e1*94/20*0139

Product description

- Kingpin for heavy duty application.
- Kingpin for attachment to back plates. The kingpin is bolted directly into the back plate and can be replaced easily from below.
- Manufactured in accordance with directive 94/20/EC, DIN 74083, ISO 4086.
- Forged material made from high tensile chromium molybdenum steel, heat-treated for optimum strength and durability.
- These kingpins are suitable for use with rear axle steering.
- The base plate allows the alternative mounting of a 2" kingpin type 66.

Kingpin mounted		Components				
Part number	Thickness of skid-plate	Back plate	Thickness of skid-plate	Kingpin 3.5"	Hex-head screws	Order quantity
KP-E-63316	16 mm	XA-E-52016	16 mm	XA-E-51363	4343207388	8
for alternative use						
				Kingpin 2"	Hex-head screws	Order quantity
				XA-E-51266	4343207388	8



NOTE

- Installation must be carried out in accordance with SAF-HOLLAND mounting and operating instructions, plus all applicable national regulations (e.g. in Germany StVZO).
- After dismantling, new bolts of similar grade and quality must always be used for re-mounting.
- We recommend using original SAF-HOLLAND spare parts.
- The permissible load limit (D-value) is valid for normal road traffic and under conditions prevailing in Europe. Please consult us in the event of deviations from this.



2" kingpin type 66

150 kN D-Value

16 mm semi-trailer skid-plate thickness

EC-tested according to

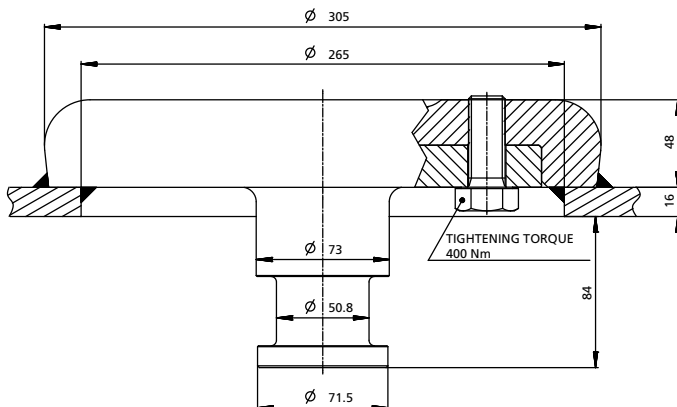
94/20/EC Directive ECE 55 01

Type Approval number e1*94/20*0987

Product description

- Kingpin for attachment to back plates. The kingpin is bolted directly into the back plate and can be replaced easily from below.
- Manufactured in accordance with directive 94/20/EC.
- Forged material made from high tensile chromium molybdenum steel, heat-treated for optimum strength and durability.
- These kingpins are suitable for use with rear axle steering.
- The base plate allows the alternative mounting of a 3.5" kingpin type 63.

Kingpin mounted		Components				
Sachnummer	Thickness of skid-plate	Back plate	Thickness of skid-plate	Kingpin 2"	Hex-head screws	Order quantity
KP-E-66216	16 mm	XA-E-52016	16 mm	XA-E-51266	4343207388	8
for alternative use						
				Kingpin 3.5"	Hex-head screws	Order quantity
				XA-E-51363	4343207388	8



NOTE

- Installation must be carried out in accordance with SAF-HOLLAND mounting and operating instructions, plus all applicable national regulations (e.g. in Germany StVZO).
- After dismantling, new bolts of similar grade and quality must always be used for re-mounting.
- We recommend using original SAF-HOLLAND spare parts.
- The permissible load limit (D-value) is valid for normal road traffic and under conditions prevailing in Europe. Please consult us in the event of deviations from this.



3,5" kingpin type 67

165 kN D-Value

6, 7, 8, 10, 12 mm semi-trailer skid-plate thickness

EC-tested according to

94/20/EC Directive ECE 55 01

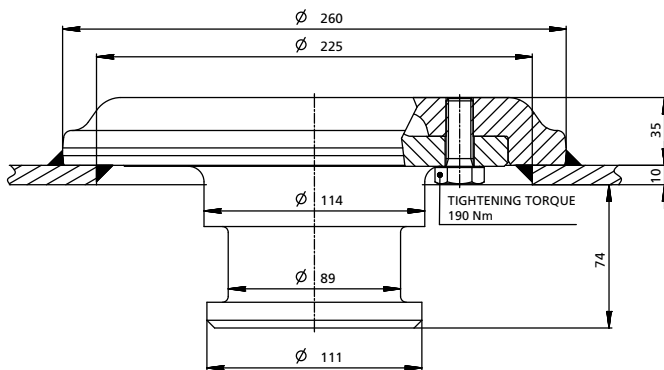
Type Approval number e1*94/20*0988

Product description

- Kingpin for attachment to back plates. The kingpin is bolted directly into the back plate and can be replaced easily from below.
- Manufactured in accordance with directive 94/20/EC.
- Forged material made from high tensile chromium molybdenum steel, heat-treated for optimum strength and durability.
- These kingpins are suitable for use with rear axle steering.
- The base plate allows the alternative mounting of a 2" kingpin type 65.

Kingpin mounted		Components				
Part number	Thickness of skid-plate	Back plate	Thickness of skid-plate	Kingpin 3.5"	Hex-head screws	Order quantity
KP-E-67306	6 mm	XA-E-52206	6 mm	XA-E-51367	4343105910	8
KP-E-67307	7 mm	XA-E-52207	7 mm	XA-E-51367	4343105910	8
KP-E-67308	8 mm	XA-E-52208	8 mm	XA-E-51367	4343105910	8
KP-E-67310	10 mm	XA-E-52210	10 mm	XA-E-51367	4343105910	8
KP-E-67312	12 mm	XA-E-52212	12 mm	XA-E-51367	4343105910	8

for alternative use		
Kingpin 2"	Hex-head screws	Order quantity
XA-E-51265	4343105910	8



NOTE

- Installation must be carried out in accordance with SAF-HOLLAND mounting and operating instructions, plus all applicable national regulations (e.g. in Germany StVZO).
- After dismantling, new bolts of similar grade and quality must always be used for re-mounting.
- We recommend using original SAF-HOLLAND spare parts.
- The permissible load limit (D-value) is valid for normal road traffic and under conditions prevailing in Europe. Please consult us in the event of deviations from this.



2" kingpin type 64

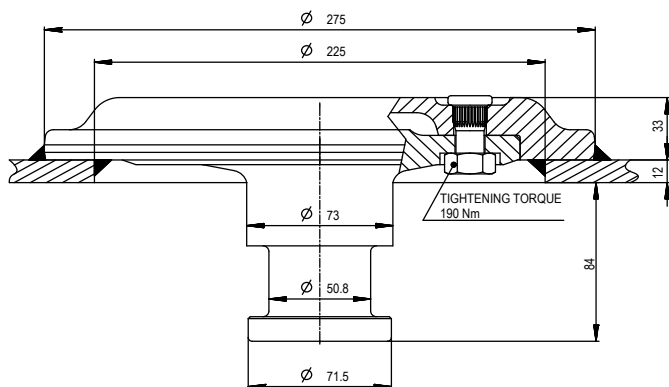
159 kN D-Value
8, 10, 12 mm semi-trailer skid-plate
thickness

EC-tested according to
94/20/EC Directive ECE 55 01
Type Approval number e1*94/20*0168

Product description

- Kingpin for attachment to back plates. The kingpin is secured with nuts directly into the back plate and can be replaced easily from below.
- Manufactured in accordance with directive 94/20/EC.
- Forged material made from high tensile chromium molybdenum steel, heat-treated for optimum strength and durability.
- These kingpins are suitable for use with rear axle steering.

Kingpin mounted		Components						
Part number	Thickness of skid-plate	Back plate	Thickness of skid-plate	Kingpin	Locknuts	Order quantity	Wheel studs for back plate	Order quantity
KP-E-64208	8 mm	XA-E-52108	8 mm	XA-E-51264	4247405410	8	4051006000	8
KP-E-64210	10 mm	XA-E-52110	10 mm	XA-E-51264	4247405410	8	4051006000	8
KP-E-64212	12 mm	XA-E-52112	12 mm	XA-E-51264	4247405410	8	4051006000	8



NOTE

- Installation must be carried out in accordance with SAF-HOLLAND mounting and operating instructions, plus all applicable national regulations (e.g. in Germany StVZO).
- After dismantling, new nuts of similar grade and quality must always be used for re-mounting.
- We recommend using original SAF-HOLLAND spare parts.
- The permissible load limit (D-value) is valid for normal road traffic and under conditions prevailing in Europe. Please consult us in the event of deviations from this.

WE PLACE THE GREATEST DEMANDS ON OURSELVES, SO THAT YOU ...

Kingpins are the linchpin between tractor and trailer. The forces acting on these components are huge, and the safety requirements made on these vehicle components are some of the most stringent – and quite rightly of course.

Which is why SAF-HOLLAND applies particularly strict standards of manufacturing quality and functional safety and will not tolerate any compromises.

From the first development step through the testing phase to series release and production, a complete control system ensures that you can rely on SAF-HOLLAND kingpins without any restrictions – at any time, anywhere and in any transport situation.



... CAN RELY 100% ON KINGPINS FROM SAF-HOLLAND.

The quality assurance department at SAF-HOLLAND makes sure that all of the necessary requirements are met or exceeded. The knowledge gained here is continually integrated into the development and manufacturing process, and is a fixed part of our quality management system. This covers each and every one of the production facilities where our SAF-HOLLAND kingpins are manufactured.

Development



Testing



Production



Manufacturing quality control



MOUNTING AND OPERATING INSTRUCTIONS

for kingpins type 65, 63, 66, 67, 64

General notes

The kingpin is the connection between the fifth wheel installed on the tractor and the semi-trailer. The back plate is welded to the semi-trailer skid-plate.

The dimensions of the kingpins underneath the semi-trailer skid-plate correspond to DIN 74080, DIN 74083 and ISO 337, ISO 4086.

For this reason, the evenness of the semi-trailer skid-plate and its thickness must be checked before mounting.

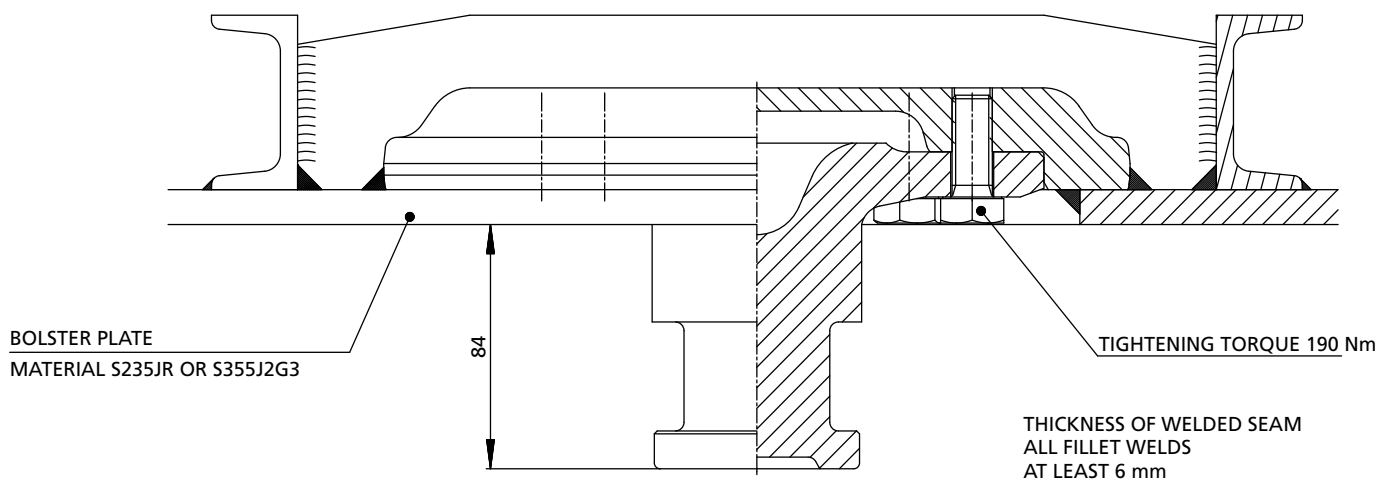
The attachment of the kingpin must be checked during the vehicle type approval procedure.

Depending on the type of kingpin used as well as the respective semi-trailer skid-plate thickness and its bracing, different permissible D-values may result.

Permissible tolerances in semi-trailer skid-plate thickness

Plate thickness mm	Tolerances
6, 7, 8, 10	+0.4/-0.3
12	+0.2/-0.5
16	+0.4/-0.5

Mounting instructions using type 65 as an example



Attachment

The back plate is welded to the semi-trailer skid-plate according to the assembly drawing and the above-mentioned regulations. The kingpin is equipped with a bolt connection* that can be loosened. The following applies:

Type	D-value (kN)	DIN		Tightening torque	
65	165	8 Hex-head screws	M14 x 35	933/10,9	micro-encapsulated 190 Nm
63	200	8 Hex-head screws	M20 x 50	933/8,8	micro-encapsulated 400 Nm
66	150	8 Hex-head screws	M20 x 50	933/8,8	micro-encapsulated 400 Nm
67	165	8 Hex-head screws	M14 x 35	933/10,9	micro-encapsulated 190 Nm
64	159	8 Wheel studs	M14 x 1.5 x 36	267/10,9	and self-locking 190 Nm
		8 Lock nuts	M14 x 1.5	980/10,9	

* After dismantling, new bolts of similar grade and quality must always be used for re-mounting. We recommend using original SAF-HOLLAND spare parts.

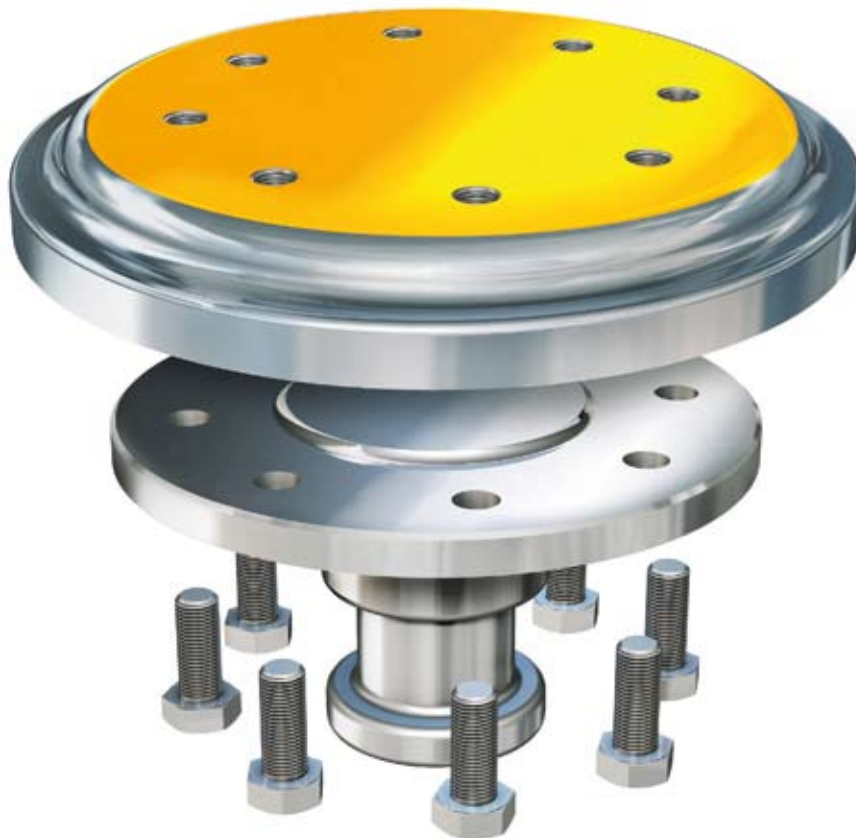


NOTE

- The semi-trailer skid-plate must be reinforced sufficiently according to the load.
- For reasons of material strength we recommend a semi-trailer skid-plate thickness of 12 mm for 2" kingpins and a semi-trailer skid-plate thickness of 16 mm for 3.5" kingpins.
- The kingpins must be inserted centrally and planar, and the angled seat must be checked.
- The bolted in kingpins must be protected from weld splatter.
- After welding, the attachment bolts or nuts (depending on the type) must be checked for correct torque.
- This checking procedure must also be included in all future vehicle inspections.

Permissible welding procedure:

- Electrode: EN 499 - E 42 0 RR 12
- Shielding gas: EN 440 - G 42 0 G3 Si 1



IMPORTANT NOTES

- Kingpins are parts that require type approval and which are subject to maximum safety requirements. Modifications of any kind render any guarantee claims invalid and lead to the type approval becoming void.
- Before the semi-trailer is put into operation, the kingpin must be thoroughly lubricated using a high-pressure grease (EP) with MoS₂ or graphite additive. Adequate lubrication is decisive for the service life of the kingpin and the fifth wheel.



SAF's history begins in 1881 in a village forge in Germany with the invention of a new plough. The family business soon starts building steel axles for agricultural vehicles, and under the name Otto Sauer Achsenfabrik (SAF) develops into one of the leading manufacturers of trailer axles and suspension systems in Europe.

A safety coupling between plough and horse team can be found at the beginning of Holland's history. The Safety Release Clevis Company was founded in South Dakota, USA, in 1910. After its move to Holland, Michigan, the company emerges as one of the largest supplier companies to the commercial vehicles industry under the name The Holland Hitch Company.

The merger of the two companies to form SAF-HOLLAND in 2006 creates one of the leading global suppliers of high-quality components and services for the commercial vehicle industry. Alongside axle and suspension systems for trailers and semi-trailers, the product range also includes kingpins and landing gear as well as fifth wheels for tractors, air suspensions, coupling products and numerous other components for buses and trucks.

Today SAF-HOLLAND is represented on all continents and distributes its products and services worldwide under the brand names SAF and HOLLAND. It can boast of an extensive distribution network with global service and dealer locations.

HIGH QUALITY COMPONENTS FOR THE COMMERCIAL VEHICLE INDUSTRY



EUROPE · NORTH AMERICA · SOUTH AMERICA · AFRICA · ASIA · AUSTRALIA

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