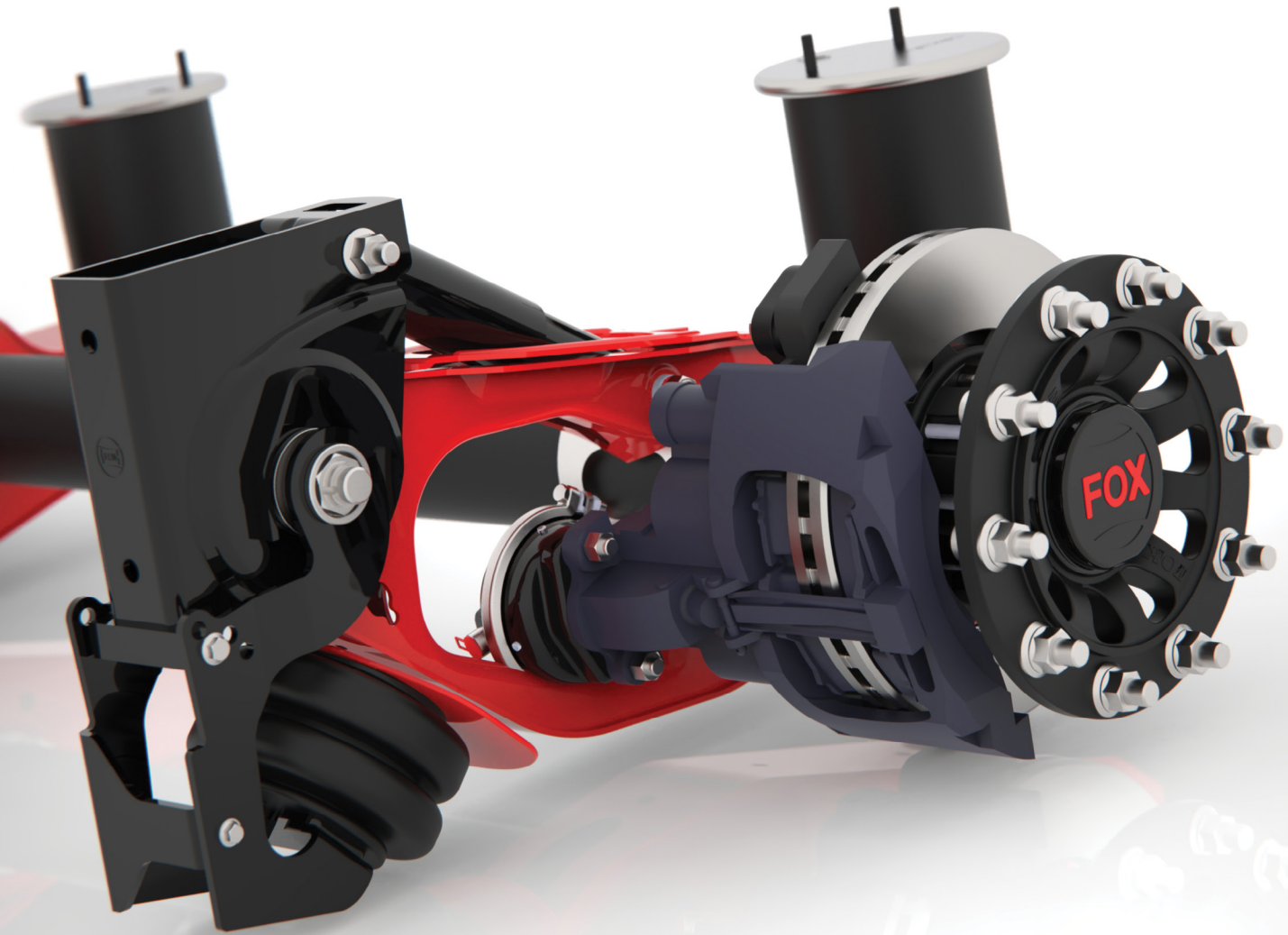




MEHVAR SAZAN CHICHEST Co.

PRODUCT CATALOGUE
SEMI TRAILER AXLES



Redefine the roads...

WWW.FOXCH.COM



MEHVAR SAZAN CHICHEST Co.
www.foxch.com

Mehvar Sazan Chichest Co.

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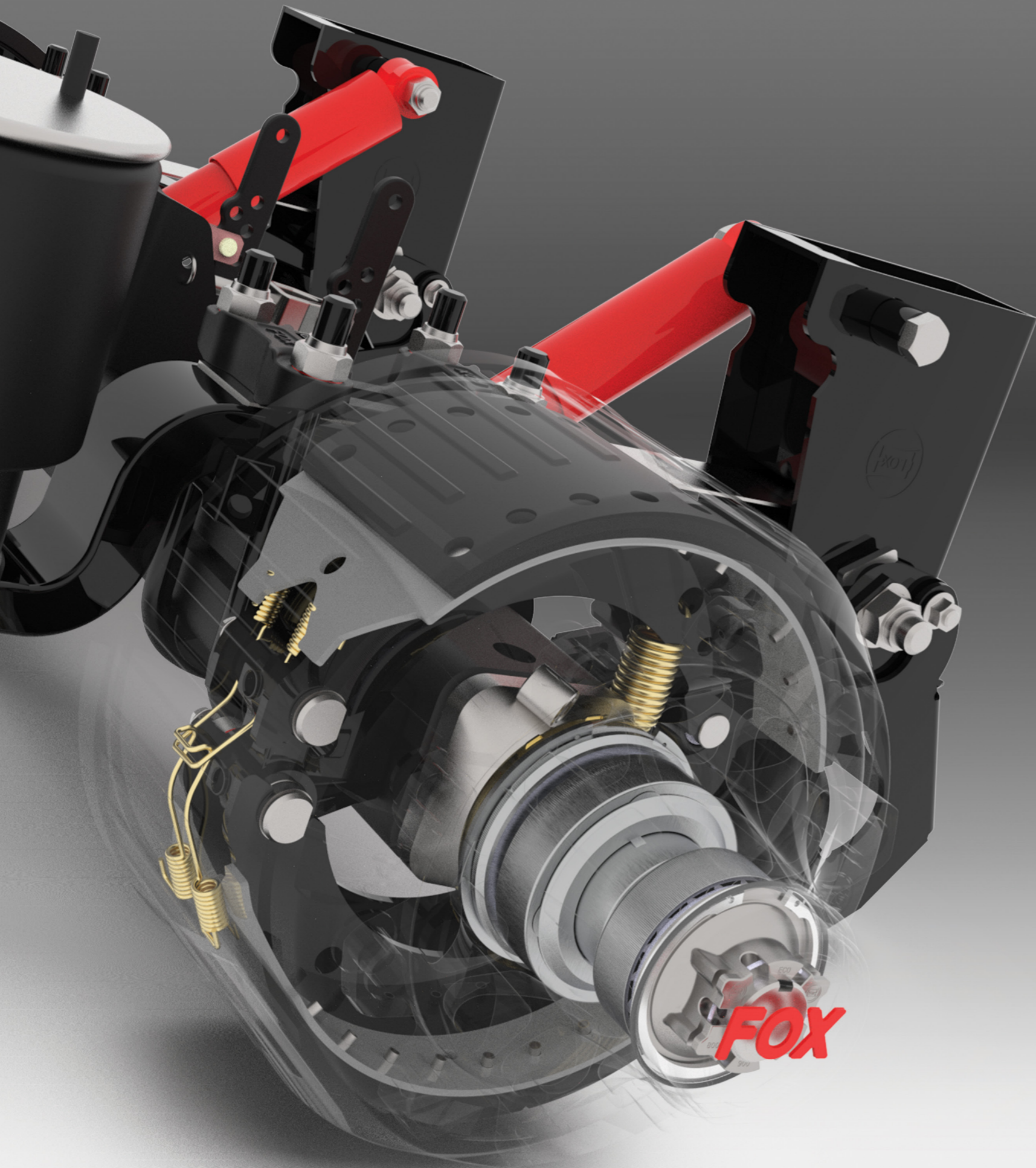
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Content

Introduction	6 - 23
Chapter 1: Axles	24 - 41
Chapter 2: Intra Suspension system	43 - 53
Chapter 3: Leaf Spring Suspension system	55 - 75
Chapter 4: Mechanical Suspension system	77 - 83
Chapter 5: Appendix	85 - 96





MEHVAR SAZAN CHICHEST Co.
www.foxch.com

Mehvar Sazan Chichest Co., located in Urmia, has over a decade of experience in manufacturing and producing various kinds of trailer axles and parts. These products are marketed under the brand **FOX**. It is one of the companies within the Maral Holding Industrial Group, established on a land with an area of about 100,000 square meters. The company employs

over 900 staff members, contributing to job creation.

As the first and largest producer of trailer axles and spare parts in the Middle East, FOX offers a wide range of products that meet international standards and customer expectations. Alongside serving local markets, the company has successfully exported its products to more than 10 countries, playing a huge role in the region.

Each product is manufactured by this company and designed with meticulous attention to detail. The production lines operate under the supervision of experienced engineers utilizing the most modern manufacturing technologies. Additionally, the production process includes stringent quality control and testing procedures carried out with the aid of highly accurate equipment. These measurements ensure that the company is prepared to meet the transportation industry's demands.

We make an important contribution to the transportation of commodities - Safe, Sustainable and environmentally friendly.

With the dedication of its craftsmen, Maral Holding Industrial Group aims to become the leading and largest manufacturer of semi trailers, trailer parts, and municipal service machines in the Middle East as part of its long-term mission. The group is continuously progressing towards achieving this goal.

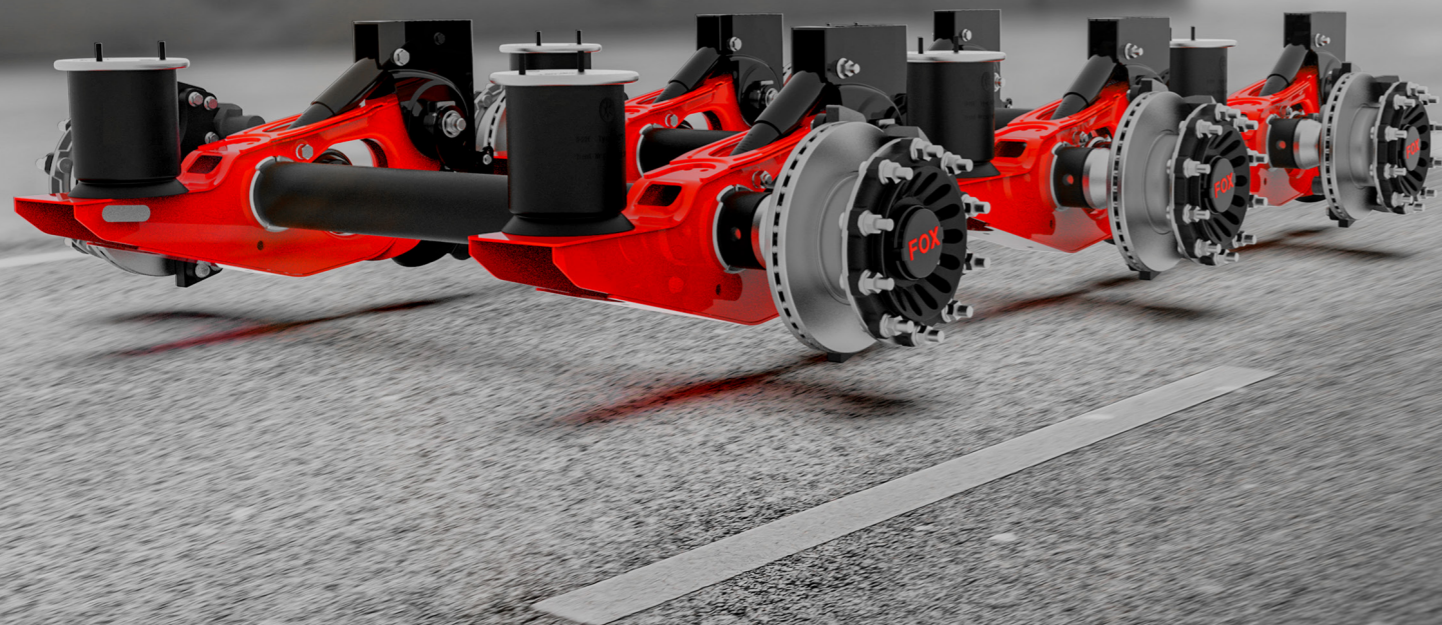


You are looking for quality...

We understand that you value quality. It is your trust in the quality of our products that has

led to our success and progress in the transportation industry. Mehvar Sazan Chichest Co., the first and most distinguished manufacturer of various semi trailers axles, parts, and spare parts, employs experienced and motivated professionals. We continuously develop products, cutting - edge innovation, and utilize the most advanced inspection and control equipment. Our products undergo continuous testing, and we deploy the modern technologies while maintaining effective communication with our customers demands. In addition to providing local markets, we have become one of the largest exporters in the industry in the region.

We always do our best to provide products with high quality to meet your expectations. Our goal is to deliver safe, durable, and cost-effective products. As your business partners, we prioritize our customers needs, aiming to create a positive experience and ensure their satisfaction. We never leave the quality to the chance, so that we offer long term guaranee for our products.



Drive and never worry about the distance...

all our products come with a year guarantee a valuable key to high quality is also after sale services. through it, fox recives direct feedback about the products. the experience of our costumers are collected, evaluated and then flow directly into development work. the satisfaction and confidence in our costumers have been aggrandized over time

Your business must continue.

Fox intends to embody the progress and change in the transport industires with pioneering new technical developments, systems and process solution , production technologies, quality standards and services. Fox has been a reliable partner to its costumers. The company is constantly changing and developing a dynamic company in an industry that is always on the move.

Accurate and durable.

One of the key distinguishing features of products of Mehvar Sazan Chichest Co. compared to similar products from other manufacturers is our considerable attention to detail and commitment to high accuracy in all production processes.

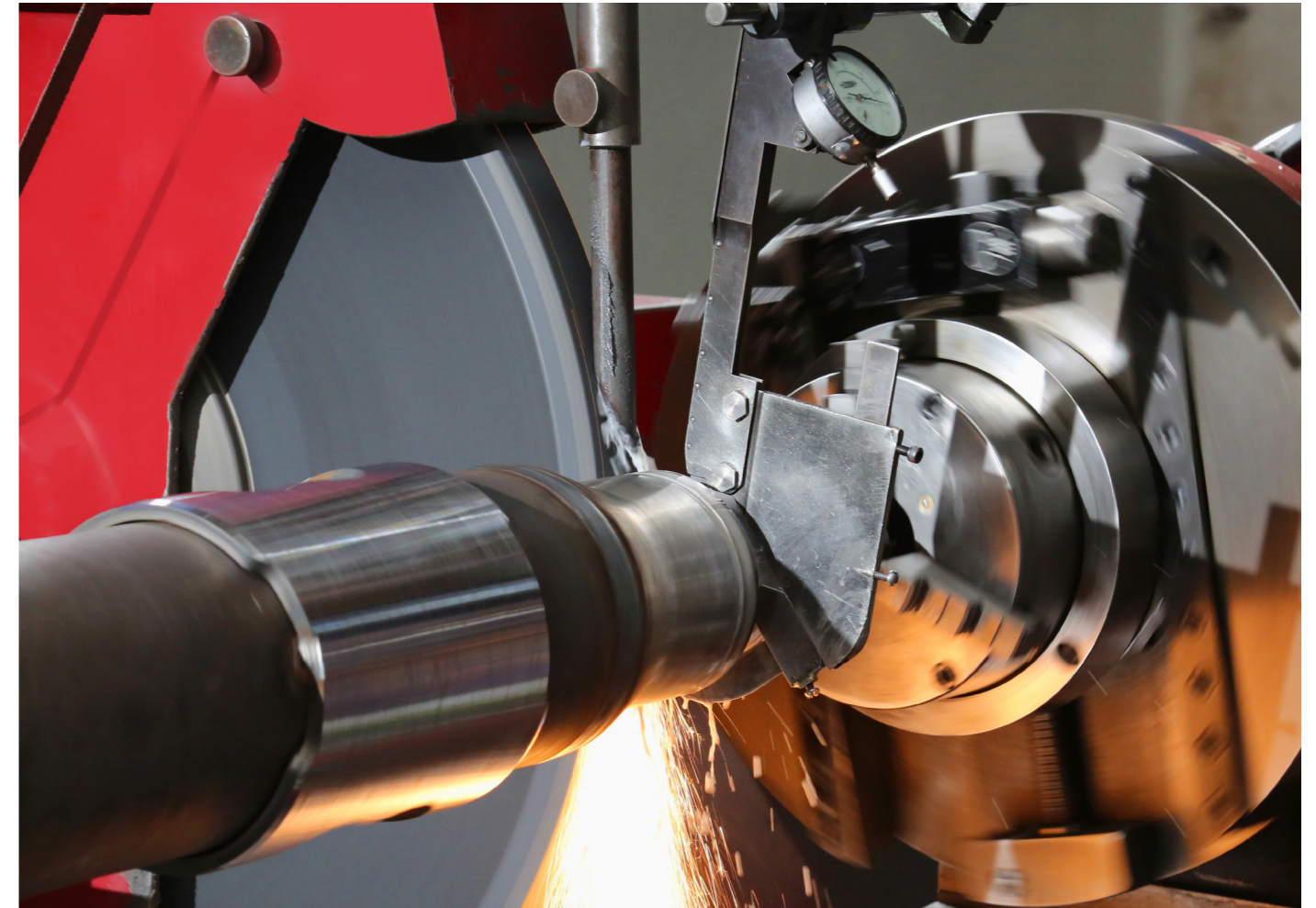
We recognize the challenges that arise in terms of parts wear and tear, as well as the need to reduce depreciation and maintenance costs. To address these challenges, we have implemented various operations during the production process, such as grinding, induction, and cataphoresis. Coating these operations ensure that our parts are durable and resistant to wear and corrosion, reducing the need for frequent replacements and minimizing maintenance costs.

Additionally, we have integrated robotic welding machines and special fixtures into our production processes. This allows for precise and accurate assembly of parts.



• Induction:

Induction heat treatment, through the highly controllable use of an electrically heated coil, allows us to select the best mechanical characteristics of each section on metal parts being hardened. Induction hardening provides superior durability to bearing journals of axle stubs and S-cam shaft sections which are subject to wear without sacrificing the ductility necessary to handle shock loads and vibrations. Surface hardness retains original ductility of core while hardening a high wear area of the part. The hardened area of the parts is accurately controlled in respect to case depth, width, location and hardness.

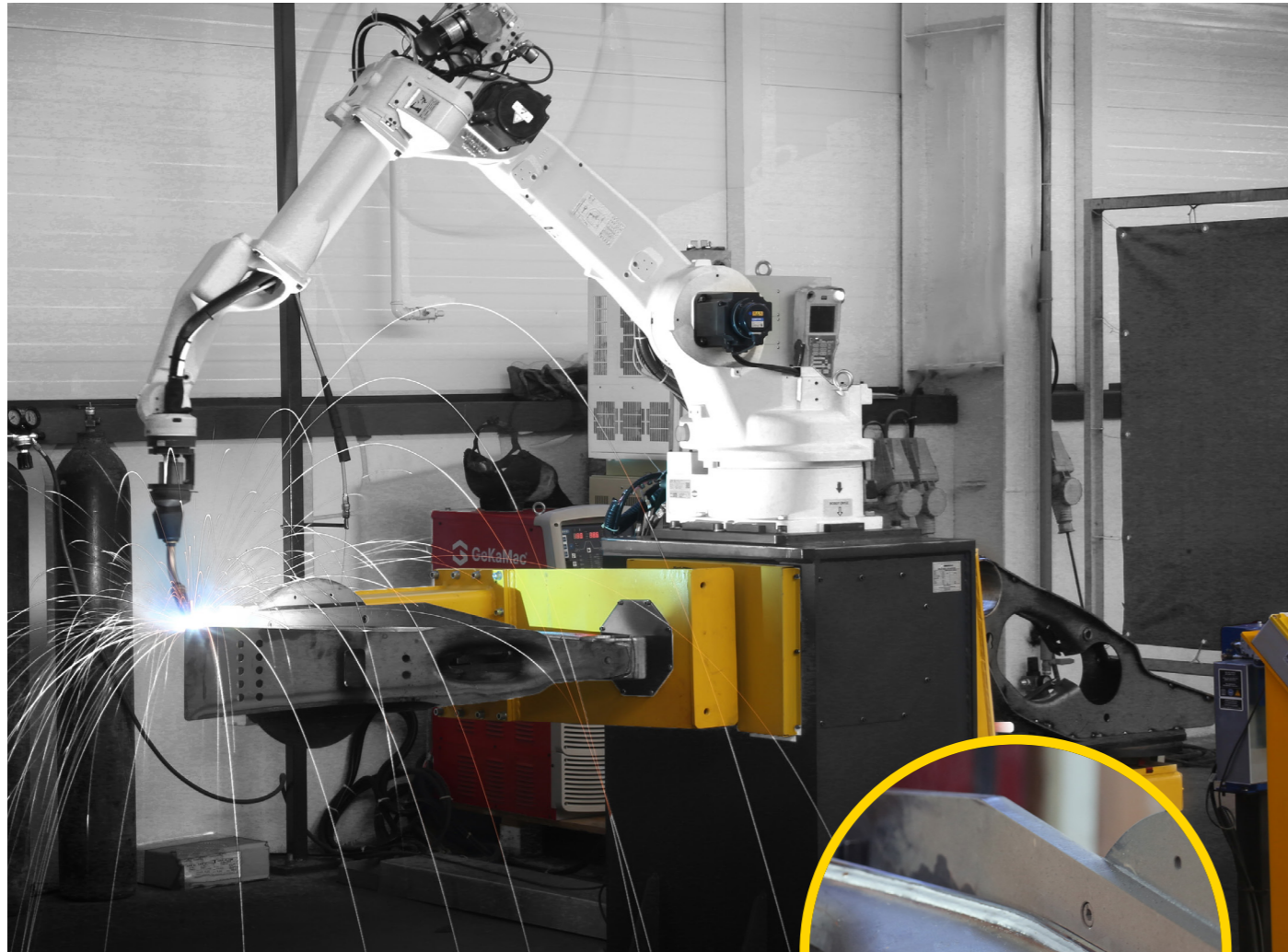


• Grinding:

The grinding process is crucial in machining hard materials, serving as the final step to achieve high precision and smooth surface quality. At Mehvar Sazan Chichest Co., we prioritize this aspect, recognizing the need to produce parts rapidly while minimizing defects.

Our company utilizes special and advanced machines to carry out the grinding process, which offers several advantages. Firstly, it ensures high accuracy in the dimensions of the produced parts. This precision is essential to guarantee the proper fit and performance of each component. Secondly, grinding allows us to achieve the desired smoothness on the surface of each part. This smooth surface enhances performance, reduces friction, and contributes to the overall quality and longevity of the product.

In the production process of FOX axles, grinding is conducted on various parts, including the axle stub bearing journals and brake S-cam shaft, after the completion of the axle manufacturing process and before the assembly of accessories. This careful attention to detail and the use of grinding contribute to the extended service life of FOX axle parts, which is one of the most significant advantages of our products.



• Robotic welding:

Robotic welding machines offer numerous features and benefits to Mehvar Sazan Chichest Co. across all dimensions, ranging from productivity improvement and welding quality to reduced production costs, labor, and material usage. Specifically designed and built for welding operations, these robots demonstrate exceptional precision and consistent quality throughout the continuous operation.

The advantages of robotic welding include

ensuring the correct welding angle, high speed, and precise welds, enabling us to produce parts of the highest quality. By minimizing the need for manual labor and incorporating modern technologies into the production process, we enhance the overall quality of the final product. This, in turn, contributes to reduced depreciation and maintenance costs for the axles manufactured by Mehvar Sazan Chichest Co.



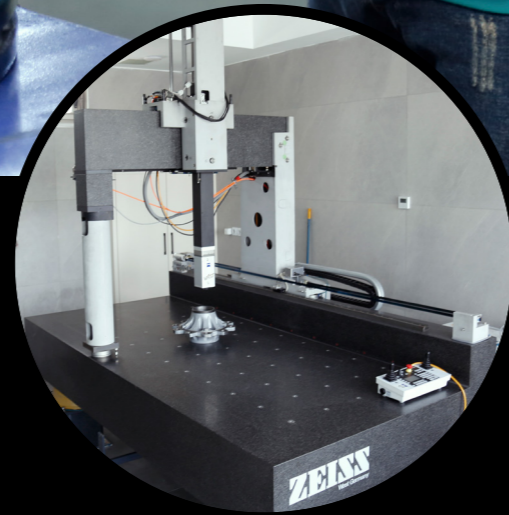
• Corrosion resistance:

To address the challenge of corrosion caused by external factors, Mehvar Sazan Chichest Co. employs various coating processes in its products. One such process is cathodolysis, which involves color-coating products by dipping them in zinc phosphate (KTL). This process ensures high resistance against environmental factors and provides a deep layer of protection for components. KTL coating is highly effective in preventing corrosion of parts, as evidenced by the 500-hour resistance demonstrated in Salt Spray tests. This coating is a reliable and proven measure to safeguard against corrosion. Additionally, the company applies protective coatings such as chromate coating on

different parts of the product. These coatings enhance the ability of the parts to withstand the impact caused by objects like pebbles on the road surface. By implementing these protective coatings, the company ensures that its parts remain durable and resistance to corrosion even in challenging road conditions. The application of advanced coating processes and protective coatings is a an evidence to Mehvar Sazan Chichest Co.'s commitment to delivering high-quality. By preventing corrosion and enhancing impact resistance, these coatings contribute to the longevity and reliability of the company's components.



**Trust is good,
control is better.**



At Mehvar Sazan Chichest Co., we prioritize continuous control of all our products throughout various production lines and assembly processes. This meticulous control ensures that each part in our collection performs with precise coordination and accuracy when combined with other parts. The aim is to guarantee optimal functionality and seamless integration of our products. To uphold our commitment to quality, we maintain comprehensive and transparent documentation of our quality control processes. This documentation provides a complete record of the inspections, tests, and checks conducted at every stage of

production and assembly. It ensures that our products meet the highest standards and adhere to the strictest international transportation regulations. By adhering to these rigorous quality control measures and complying with international standards, we distinguish ourselves in the market. Our customers can have confidence in the reliability, performance, and safety of our products, knowing that they meet and exceed the stringent requirements of the transportation industry.

We care about you...

Our commitment to you extends beyond the quality of our products. We also prioritize providing exceptional care and service to our customers. We have implemented measures to ensure a seamless sales experience for our products.

To assist our customers, we provide comprehensive and valuable technical information. This information equips you with the necessary knowledge for the service and maintenance of FOX axles. Furthermore, we continuously develop our parts to meet evolving needs and challenges in the industry. Our team of experts is dedicated to offering you expert advice and finding the best solutions to meet your specific requirements.

We have established a network of representatives who are equipped with a software system to provide efficient and effective after-sales service. Our warranty process is carefully managed by a team of experts within the FOX after-sales service department. With these measures in place, we aim to ensure that your needs are met and that you receive the necessary support and assistance.

By adhering to the principles of service and maintenance, we are trying to help you to control costs while maintaining the performance and longevity of your FOX axles. Our commitment to exceptional care and service reflects our dedication to your satisfaction and success.





Drive safe...

Before installing any braking system on the axles, the specialists of the Mehvar Sazan Chichest co. check all the cases and algorithms in terms of safety and efficiency and perform the most advanced tests in accordance with the global standards.

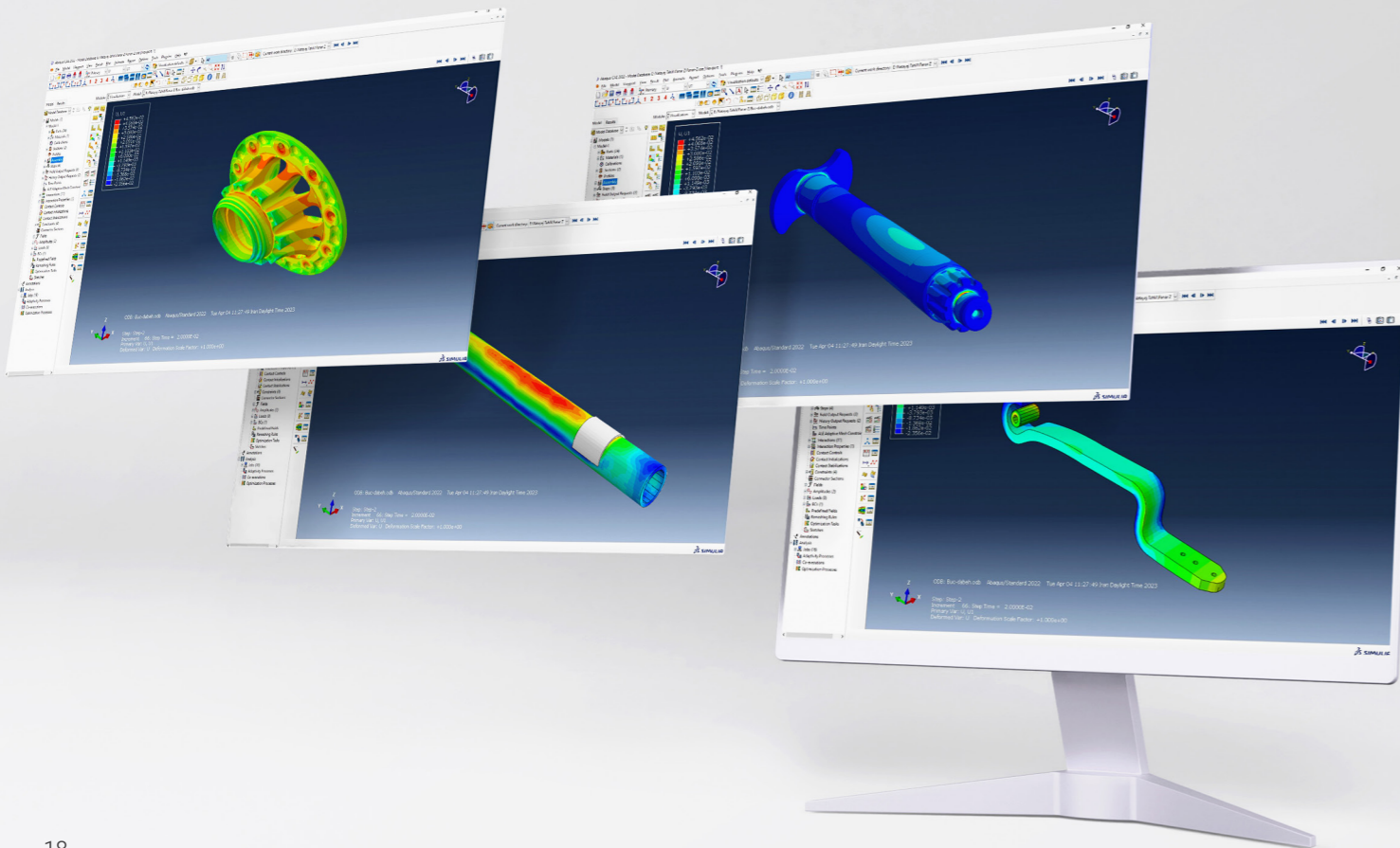


Enjoy driving...

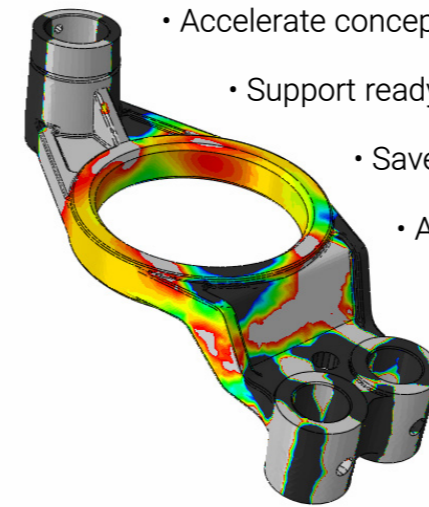
Continuous development of suspension components, FOX axles provide you with high efficiency, stable and comfortable driving.

Finite Element:

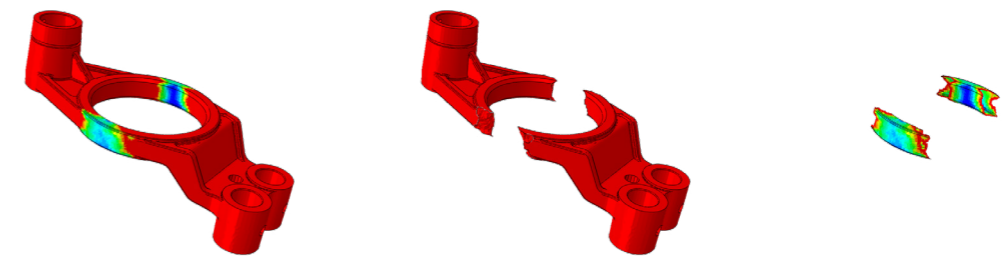
Abaqus is a suitable and powerful engineering simulation softwares, based on the finite element method, that can solve problems ranging from relatively simple linear analyses to the most challenging nonlinear simulations. FOX company always follows developments continuously and tries to improve products and services by means of feedbacks from customers and tries to bring innovations. Also it aims the production of products more qualified and properly improvements in production technologies and processes. With this sense we can accept our designing department which was founded with the support of production and engineering experience dated on many years as the center of our production strategies. Engineers and technicians in our designing department directs our design and manufacturing phases of products with Abaqus, Tosca and Fe-safe software. They utilize from analysis programs in determination and improving of product compliance.



Optimisation:

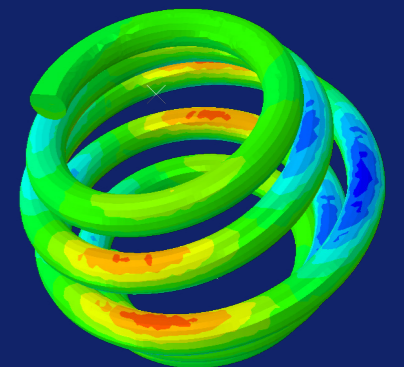


- Accelerate conceptual design, reduce time-to-market
- Support ready-to-manufacture product design
- Save weight and ensure highest result quality for reliable components
- Avoid error-prone and time consuming model simplification
- Benefit of realistic simulation and handle nonlinearities directly within the optimization
- Define structural optimization tasks interactively



With the help of finite elements simulation an integrated part of your design process, you have the ability to:

- Increase the fatigue life of safety critical components
- Optimize designs to use less material
- Reduce customer complaints and warranty costs
- Optimize and validate design and test programs
- Improve correlation between test and analysis within a single user interface
- Reduce prototype test times
- Increase confidence that product designs pass practical (experimental) tests



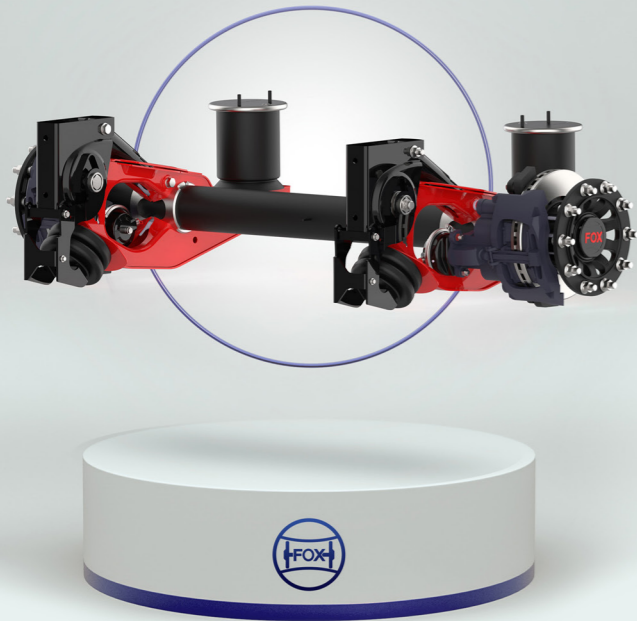


Recommendations for using of axles:

The choice of the right brake:

The choice of a right brake is decisively dependent on its operating conditions and axle load. If the brake system is not used as it should be, it can very soon be overloaded or not used sufficiently.

Some recommendation for choosing the appropriate brake system are as follows:



Disc Brake systems:

- Appropriate for 9 - 12 t axle load
- Very good brake force modulation
- Low wearing
- High braking comfort
- Rapid respond time
- Low weight
- Appropriate for on road applications



Drum Brake systems:

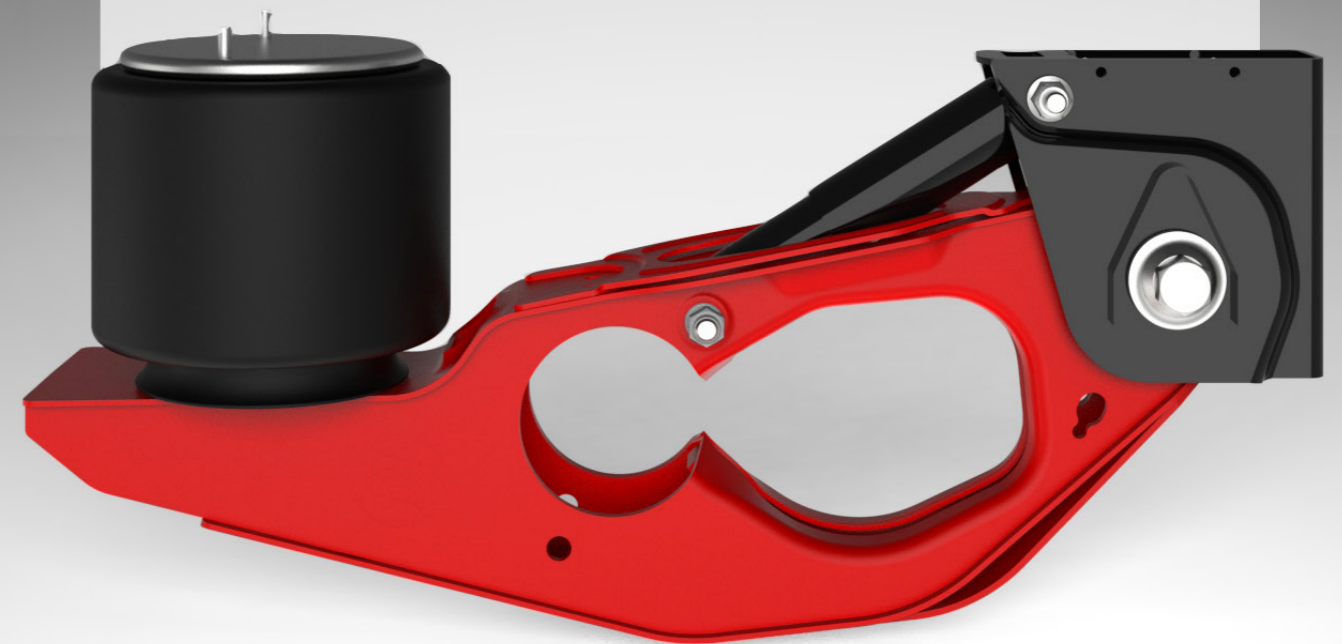
- Mature, robust technology
- Appropriate for 9 - 20 t axle load
- Low susceptibility to dirt because of enclosed design of brake system
- Appropriate for on & off road applications
- Low heat transfer to the adjacent components (e.g. bearings and tyres)
- Rapid brake services and maintenance

INTRA Suspensions:

INTEGRAL suspension system is optimized for on road transports such as curtainsiders, refrigerated trailers and containers. The suspension is particularly efficient and offers the greatest comfort. This design principle protects the material and extends the service life. INTRA suspension design means the disc brake booster is mounted inside the trailing arm. This provides superior protection against brake booster damage from environmental objects of the road.

Features and benefits:

- For axle load 9 t
- More stability
- More efficiency
- Inseparable and maintenance - free unit
- Robust and lightweight
- Appropriate for on road applications
- The secured shock absorbers in the functional suspension arm
- Possible ride heights from 250 to 500 mm





Air-spring suspension:

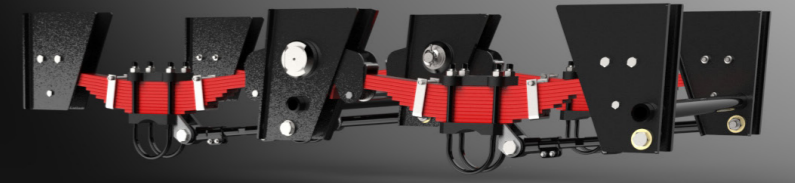
Air suspension hanger brackets transfer all control, braking and acceleration forces from the axle to the vehicle frame. The air bag absorbs all vertical shock loads. The shock absorber reduces vibration in the vehicle body and ensures better driving comfort and road safety.

Features and benefits:

- For axle loads from 9 to 12 t
- Long service life
- Easy to service thanks to the modular structure
- Flexible trailing arms for reduced stress on the vehicle
- Optimum static and dynamic axle load equalization
- Optionally with axle lift devices for reduces Tyre wear
- Appropriate for on - road applications
- Possible ride heights from 230 to 530 mm



Multi-leaf spring:



Whether on- or off-road local or long distance, you can completely rely on multi-leaf spring sustention system. They are extremely robust even in challenging roads. Their design is simple and easy to repair. Leaf spring suspension systems are designed to offer "self-damping" and do not need any additional shock observers.

Features and benefits:

- For axle loads from 9 - 20 t
- Can be used with one to three axles
- Low wear
- Equalizing beams mounted in maintenance-free, long-life bronze bushes which is equalize the static loads
- Precise axle control by horizontally arranged torque arms
- Easy track adjustment by one rigid and one adjustable torque arm
- Available for both VB and VBT models
- Appropriate for standard and hilly roads
- Appropriate for off-road applications and construction sites

W-suspension tandem axle:

Whenever you need the robust suspension system to overcome high axle loads under difficult operating conditions, choose high load W-suspension. W-suspension units have been designed for tandem axles and provided goods transport even under the most difficult conditions.

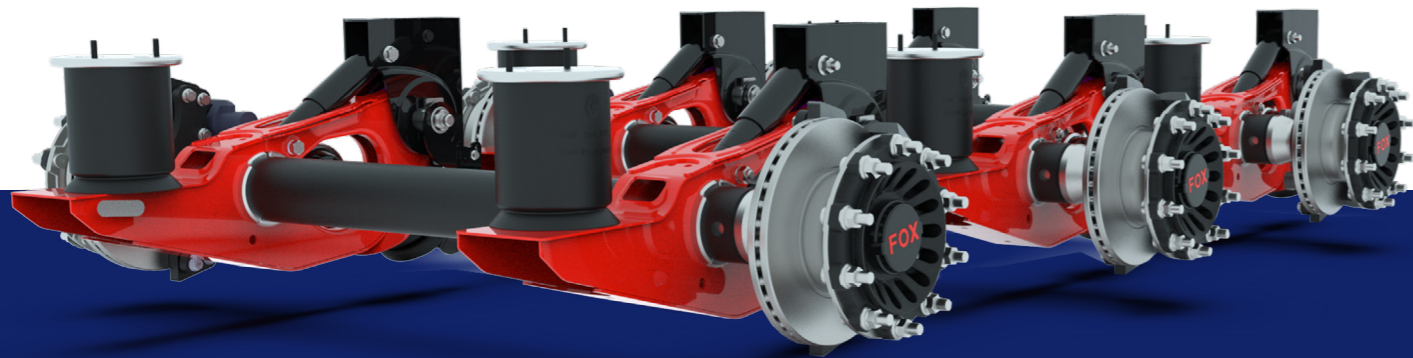
Features and benefits:

- For axle loads from 2x10 to 2x20 t
- Delivery as ready to mount, completely assemble unit
- Simple installation on the vehicle frame using bolted connection
- Insensitive to heat, cold and dirt
- Equipped with robust and long-life multi-leaf springs

- High quality mounting of the turning axle in bronze bushes
- Construction with a high level of lateral stability
- Proven for many years in harsh off-road and tipper applications
- Appropriate for on- or off-roads



FOX Type identification for Axle



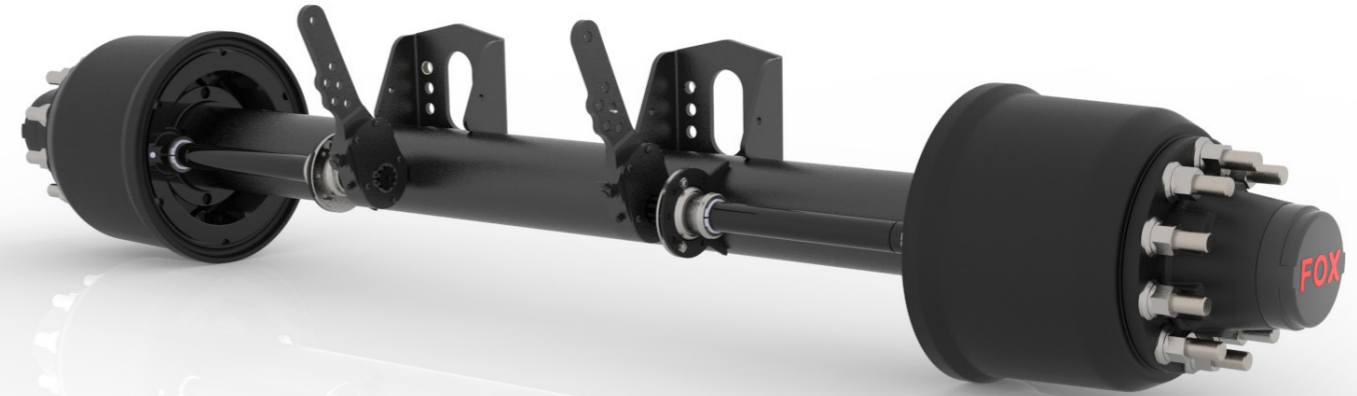
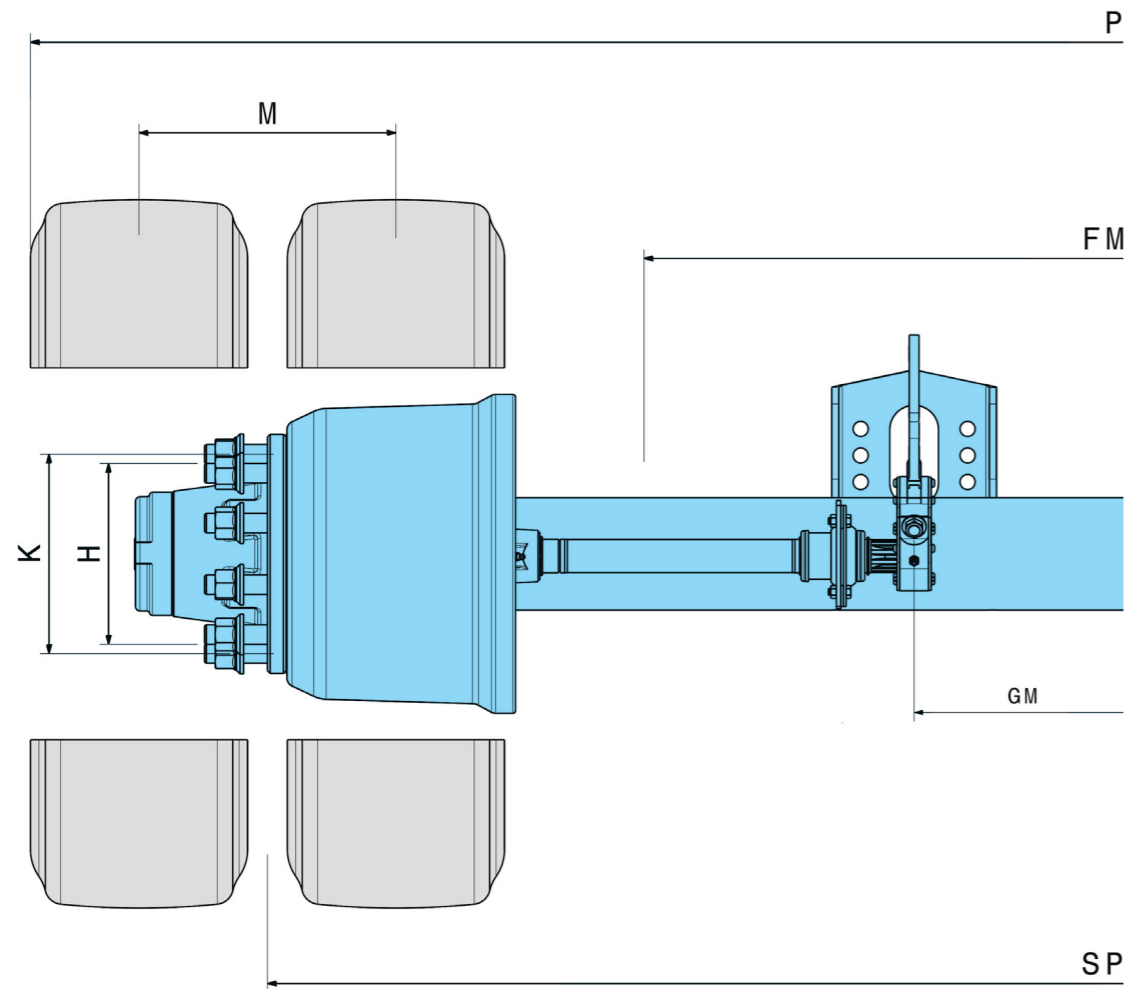
S	D		43	45	09
C	DR	C	42	20	09
X	X(X)	(X)	XX	XX	XX
			<p>Axle load 09 - 12 t</p>		
			<p>Brake width (mm) 20: with drum brake 45: with disk brake</p>		
			<p>Brake dimension (cm) 30: with drum brake 42: with drum brake 43: with disk brake</p>		
			<p>Bearing System C: Compact Bearing</p>		
			<p>Brake System DR: Drum Brake D: Disk Brake</p>		
			<p>Axle Beam C: Circular S: Square</p>		

Axle Type	Rigid Axles	Axle Load	Axle cross section (mm)	Sheet No.
CDR3020		9 to 12t	Ø127	28
CDRC4220		9t	Ø148	30
CDR4220		9t	Ø148	32
SDR4220		9 to 12t	□140x140	34

Axle Type	Rigid Axles	Axle Load	Axle cross section (mm)	Sheet No.
CD4345		9t	Ø148	36
CDC4345		9t	Ø148	38
SD4345		9t	□140x140	40

Rigid axles with drum brake Ø300 mm

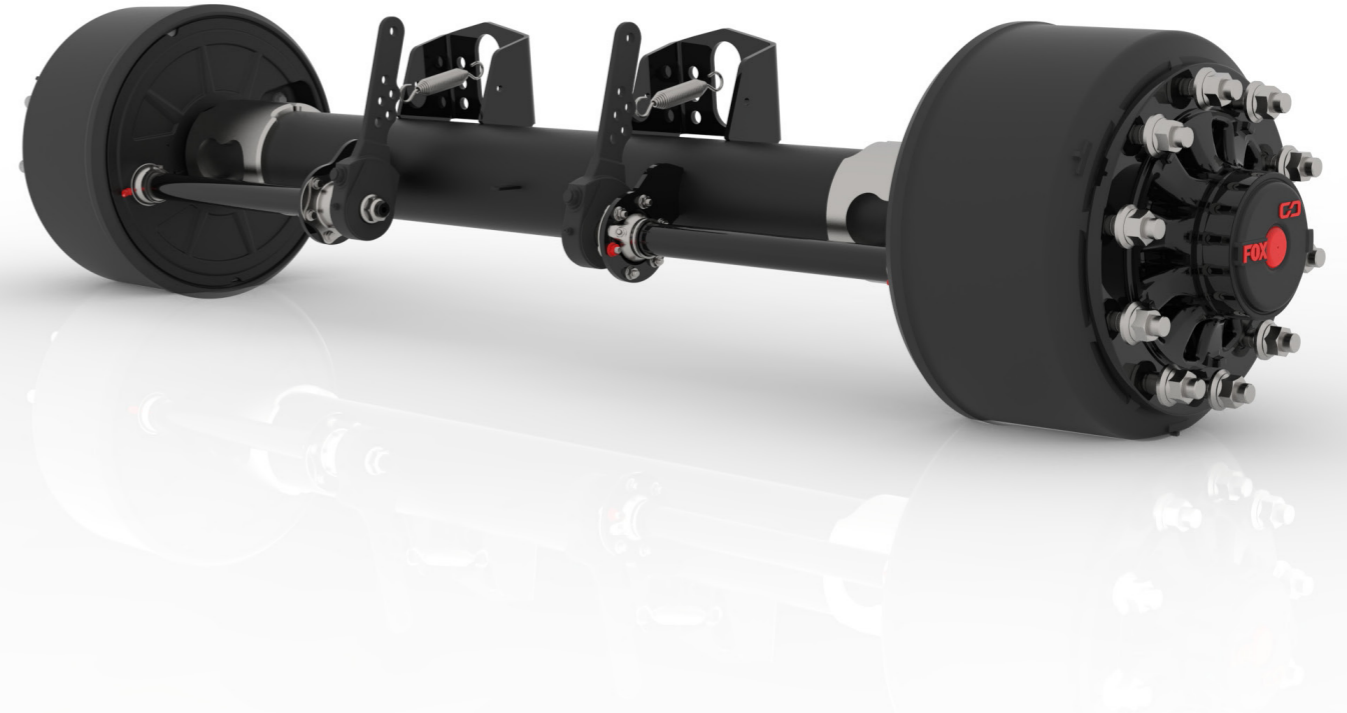
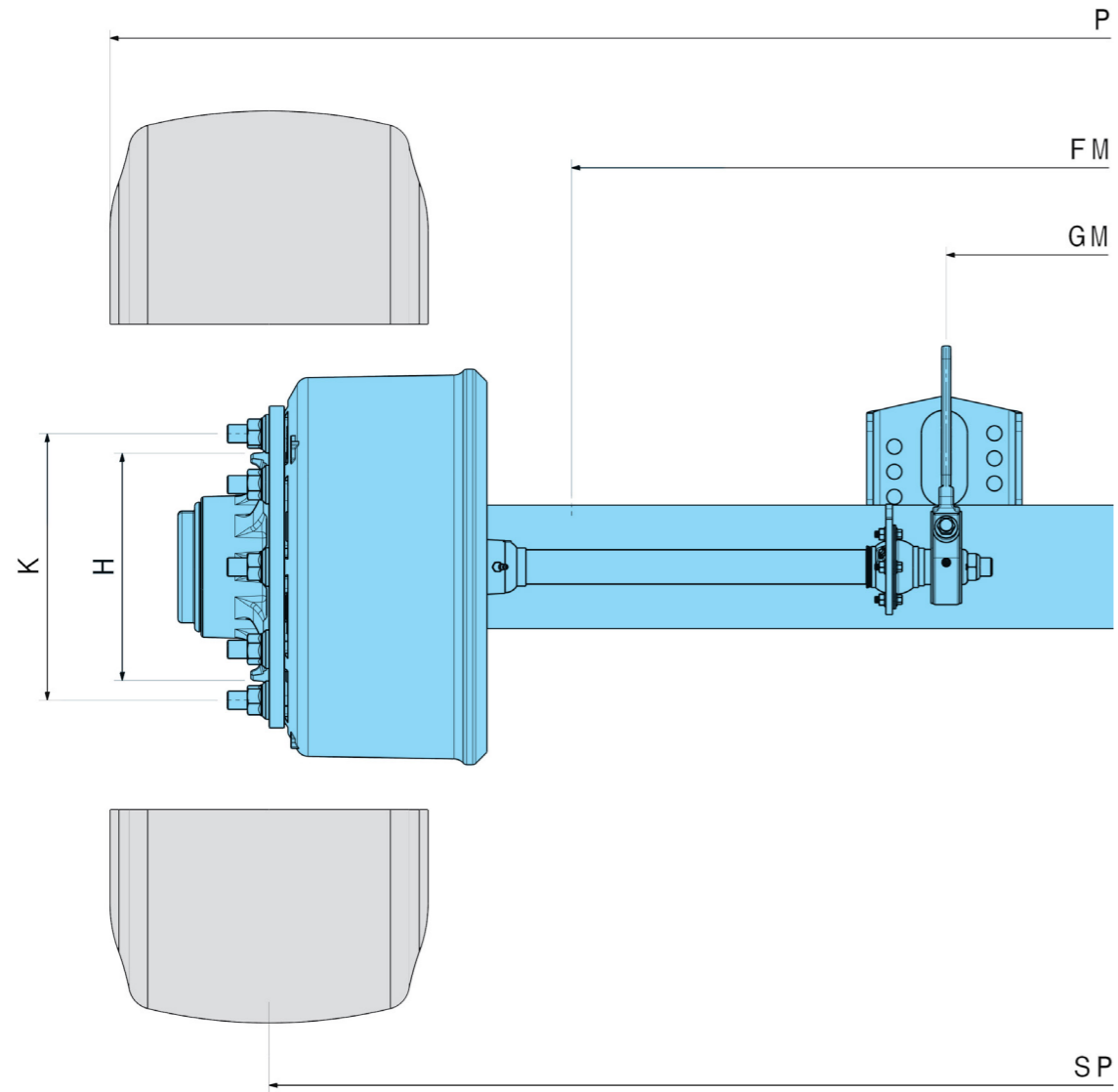
CDR 3020



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Air cylinder centres (GM) (mm)	Axle cross section	Wheel connection			Tyre size	Tyre example	Overall width (P) (mm)
							Wheel stud	eH/K (mm)	Offset/M			
CDR 3020 09	9	SN 3020	1830	980	230	ø127	10xM22x1.5	175.8/ 225	290	15" 17.5" 19.5"	235 / 75 R17.5	2337
		SN 3020	1880	980	230	ø127	10xM22x1.5	175.8/ 225				2387
		SN 3020	1880	1100	230	ø127	10xM22x1.5	175.8/ 225				2387
		SN 3020	1900	1100	250	ø127	10xM22x1.5	175.8/ 225				2407
		SN 3020	1950	1100	300	ø127	10xM22x1.5	175.8/ 225				2457
		SN 3020	1995	1100	334	ø127	10xM22x1.5	175.8/ 225				2502
CDR 3020 11	10 / 11	SN 3020	1830	980	230	ø127	10xM22x1.5	175.8/ 225	290	15" 17.5" 19.5"	235 / 75 R17.5	2337
		SN 3020	1880	980	230	ø127	10xM22x1.5	175.8/ 225				2387
		SN 3020	1880	1100	230	ø127	10xM22x1.5	175.8/ 225				2387
		SN 3020	1900	1100	250	ø127	10xM22x1.5	175.8/ 225				2408
		SN 3020	1950	1100	300	ø127	10xM22x1.5	175.8/ 225				2457
		SN 3020	1995	1100	334	ø127	10xM22x1.5	175.8/ 225				2502
CDR 3020 12	12	SN 3020	1830	980	230	ø127	10xM22x1.5	175.8/ 225	290	15" 17.5" 19.5"	235 / 75 R17.5	2337
		SN 3020	1880	980	230	ø127	10xM22x1.5	175.8/ 225				2387
		SN 3020	1950	1000	300	ø127	10xM22x1.5	175.8/ 225				2457
		SN 3020	1950	1100	300	ø127	10xM22x1.5	175.8/ 225				2457
		SN 3020	1995	1100	334	ø127	10xM22x1.5	175.8/ 225				2502

Rigid axles with drum brake Ø420 mm

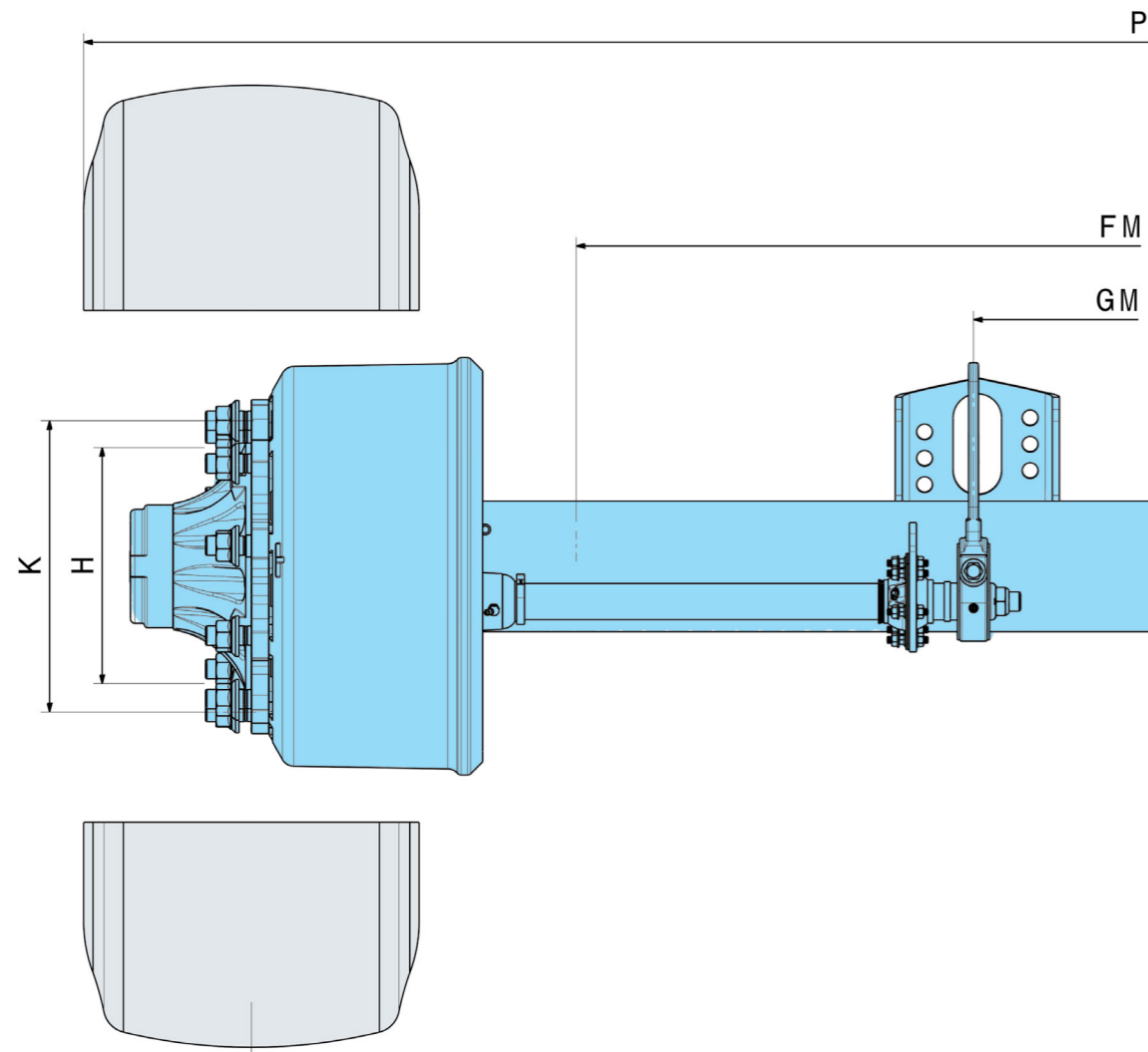
CDRC 4220



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Air cylinder centres (GM) (mm)	Axle cross section	Wheel connection			Tyre size	Tyre example	Overall width (P) (mm)
							Wheel stud	øH/K (mm)	Offset/M			
CDRC 4220 09	9	SN 4220	2040	1300	455	ø148	10xM22x1.5	280.8/ 355	0 offset	20" 22.5" 24"	385/ 65 R22.5	2425
		SN 4220	2090	1300	482.5	ø148	10xM22x1.5	280.8/ 355				2480
		SN 4220	2140	1300	505	ø148	10xM22x1.5	280.8/ 355				2525

Rigid axles with drum brake Ø420 mm

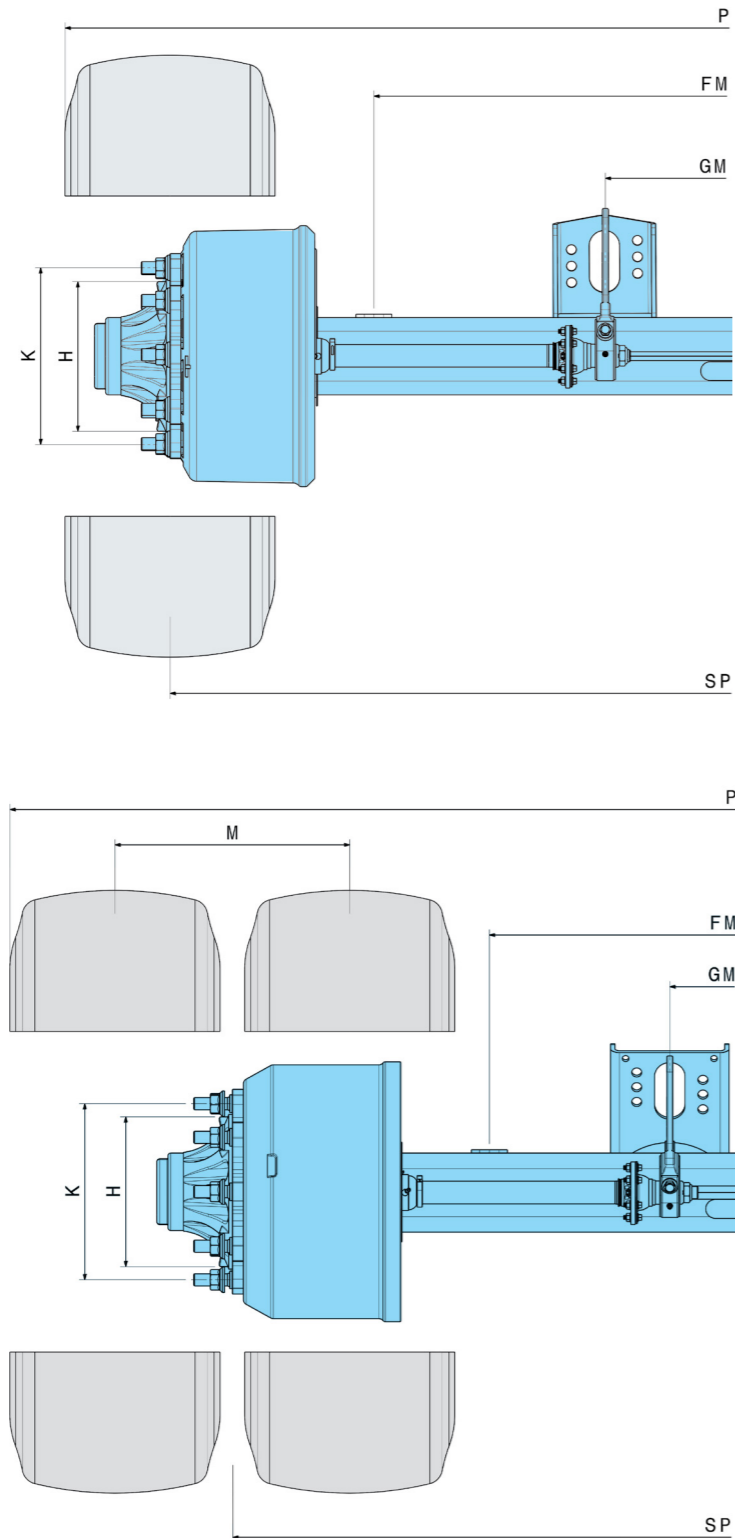
CDR 4220



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Air cylinder centres (GM) (mm)	Axle cross section	Wheel connection			Tyre size	Tyre example	Overall width (P) (mm)
							Wheel stud	øH/K (mm)	Offset/M			
CDRC 4220 09	9	SN 4220	2040	1300	392	ø148	10xM22x1.5	280.8/ 355	0 offset	20" 22.5" 24"	385/ 65 R22.5	2425
		SN 4220	2090	1300	450	ø148	10xM22x1.5	280.8/ 355				2480
		SN 4220	2140	1300	492	ø148	10xM22x1.5	280.8/ 355				2525

Rigid axles with drum brake Ø420 mm

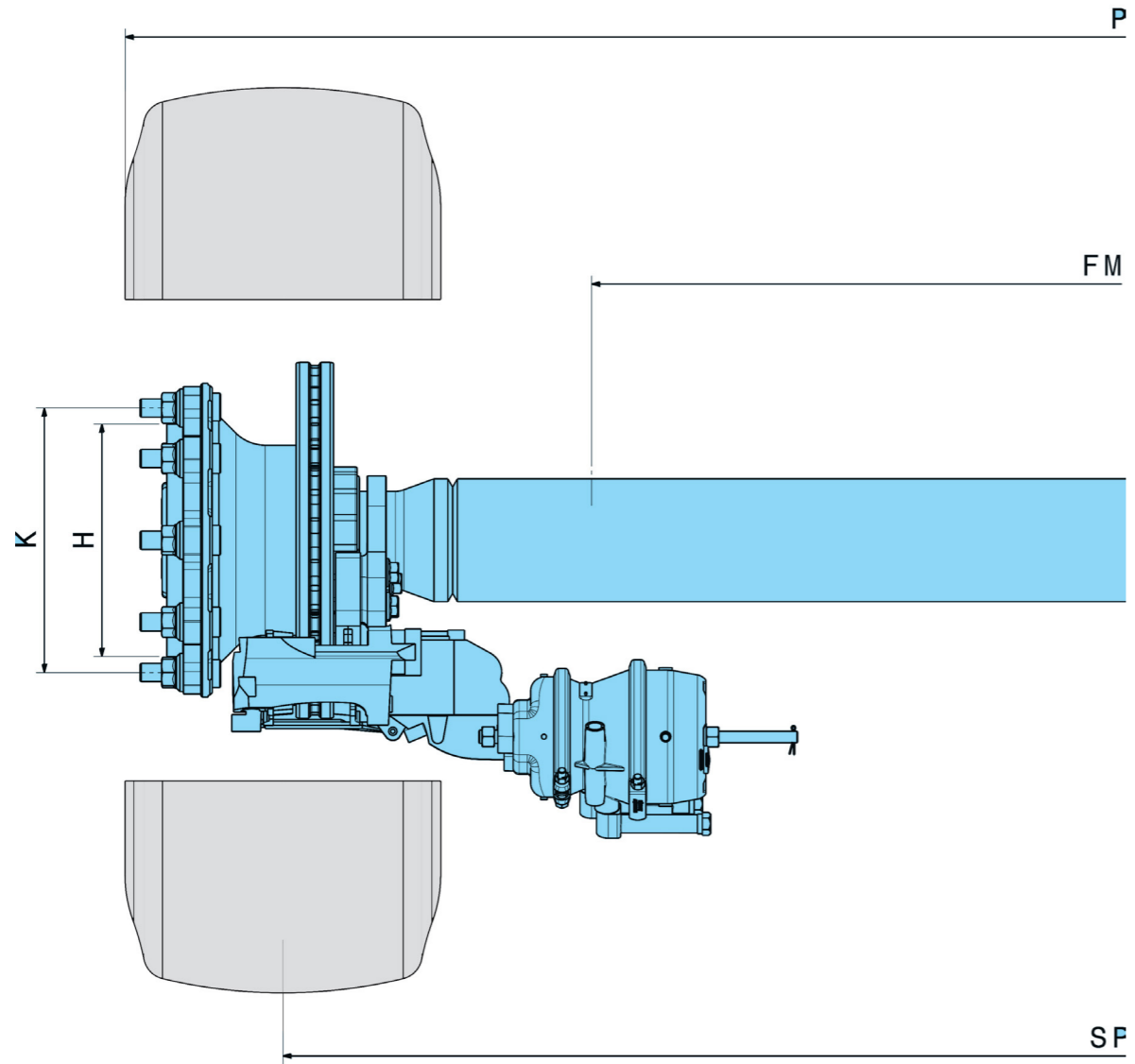
SDR 4220



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Air cylinder centres (GM) (mm)	Axle cross section	Wheel connection			Tyre size	Tyre example	Overall width (P) (mm)
							Wheel stud	eH/K (mm)	Offset/M			
SDR 4220 09	9	SN 4220	2040	1200	465	140x140	10xM22x1.5	280.8/ 335	0 offset	20" 22.2" 24"	385/ 65 R22.5	2435
SDR 4220 09	9	SN 4220	2040	1300	465	140x140	10xM22x1.5	280.8/ 335	0 offset		385/ 65 R22.5	2435
SDR 4220 09	9	SN 4220	2045	1300	470	140x140	10xM22x1.5	280.8/ 335	0 offset		385/ 65 R22.5	2440
SDR 4220 09	9	SN 4220	2095	1300	520	140x140	10xM22x1.5	280.8/ 335	0 offset		385/ 65 R22.5	2490
SDR 4220 09	9	SN 4220	2140	1400	565	140x140	10xM22x1.5	280.8/ 335	0 offset		385/ 65 R22.5	2535
SDR 4220 12	12	SN 4220	1830	900	243	140x140	10xM22x1.5	280.8/ 335	350 offset		12 R22.5	2510
SDR 4220 12	12	SN 4220	2040	1200	443	140x140	10xM22x1.5	280.8/ 335	0 offset		445/ 65 R22.5	2310
SDR 4220 12	12	SN 4220	2040	1300	443	140x140	10xM22x1.5	280.8/ 335	0 offset		445/ 65 R22.5	2310

Rigid axles with Disc brake Ø430 mm

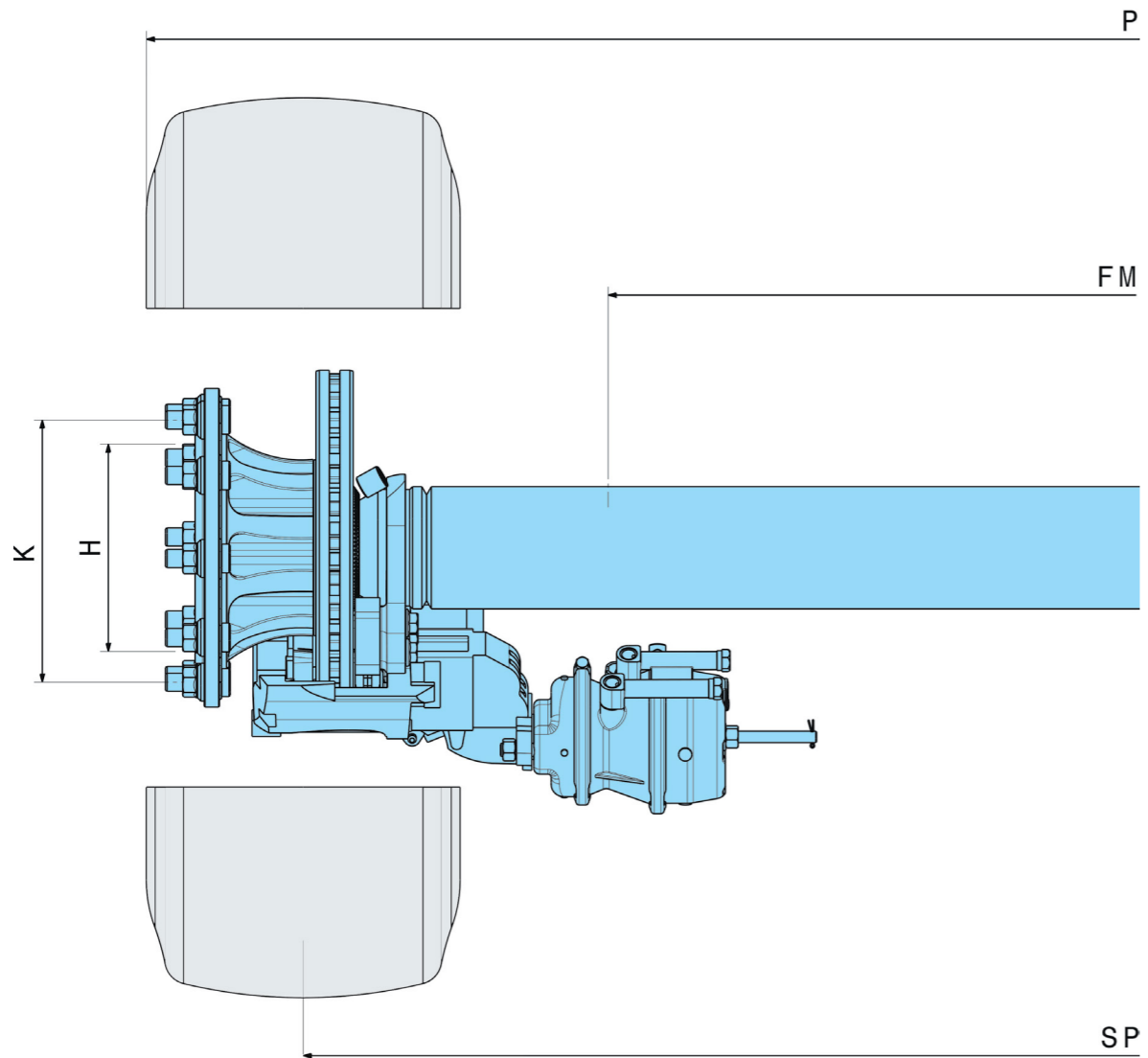
CD 4345



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Axle cross section	Wheel connection			Tyre example	Overall width (P) (mm)
						Wheel stud	øH/K (mm)	Offset/M		
CD4345 09	9	Disc 430x45	2040	1300	ø148	10xM22x1.5	280.8 / 355	120 offset	385/ 65 R22.5	2435
CD4345 09	9	Disc 430x45	2095	1300	ø148	10xM22x1.5	280.8 / 355	120 offset	385/ 65 R22.5	2490
CD4345 09	9	Disc 430x45	2140	1300	ø148	10xM22x1.5	280.8 / 355	120 offset	385/ 65 R22.5	2535

Rigid axles with Disc brake Ø430 mm

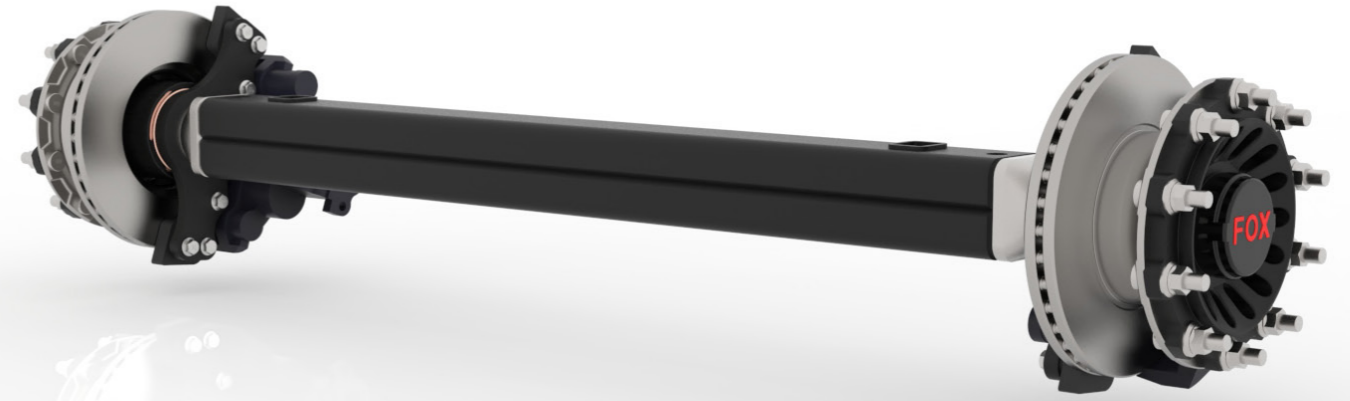
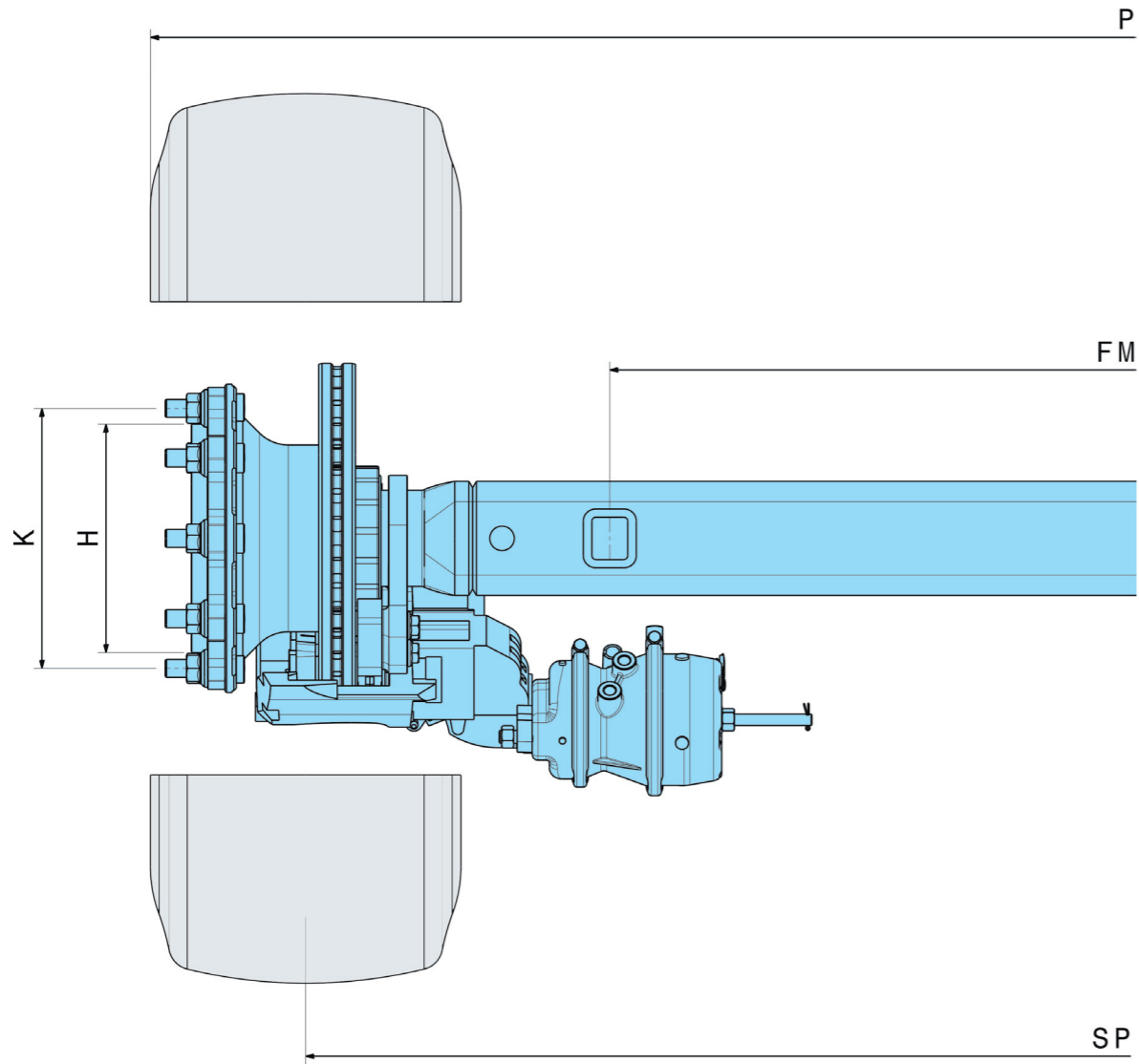
CDC 4345



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Axle cross section	Wheel connection			Tyre example	Overall width (P) (mm)
						Wheel stud	øH/K (mm)	Offset/M		
CDC4345 09	9	Disc 430x45	2040	1300	ø148	10xM22x1.5	280.8/ 355	120 offset	385/ 65 R22.5	2435
CDC4345 09	9	Disc 430x45	2095	1300	ø148	10xM22x1.5	280.8/ 355	120 offset	385/ 65 R22.5	2490
CDC4345 09	9	Disc 430x45	2140	1300	ø148	10xM22x1.5	280.8/ 355	120 offset	385/ 65 R22.5	2535

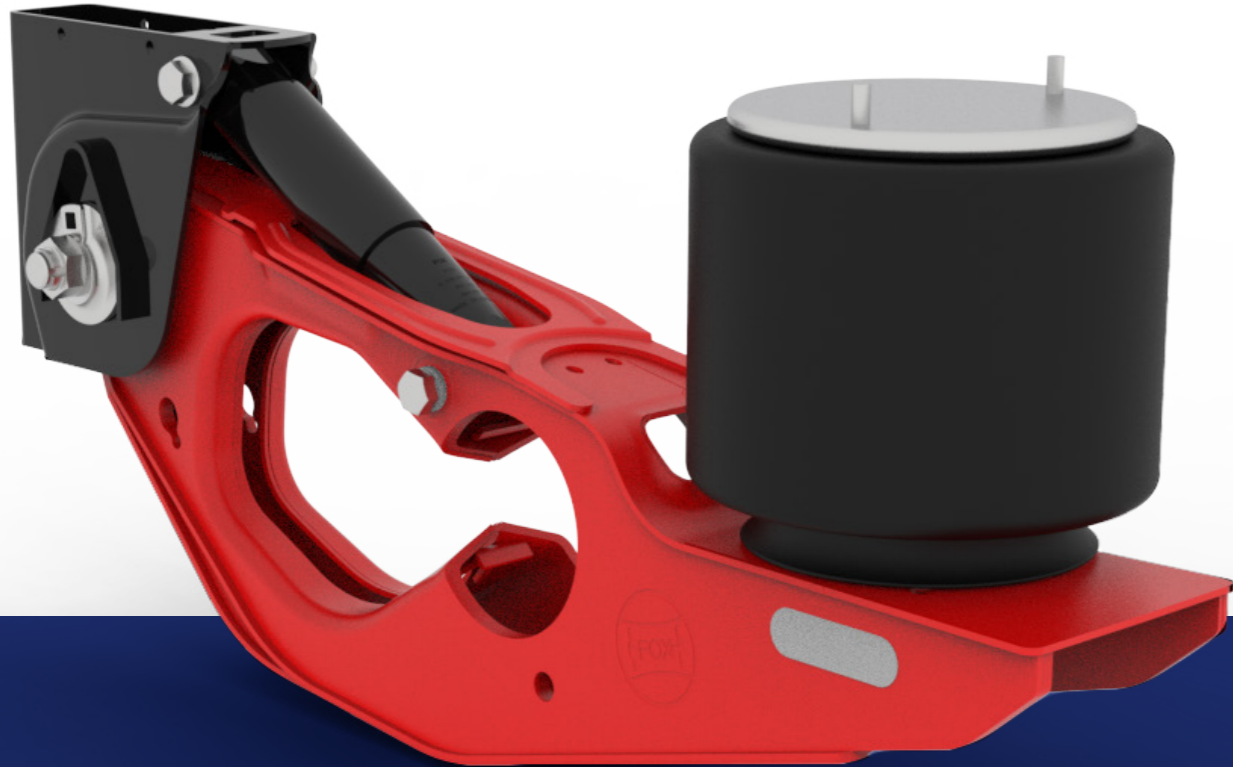
Rigid axles with Disc brake Ø430 mm

SD 4345



Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	Axle cross section	Wheel connection			Tyre example	Overall width (P) (mm)
						Wheel stud	øH/K (mm)	Offset/M		
SD4345 09	9	Disc 430x45	2040	1200	140x140	10xM22x1.5	280.8/ 355	120	385/ 65 R22.5	2440
SD4345 09	9	Disc 430x45	2040	1300	140x140	10xM22x1.5	280.8/ 355	120	385/ 65 R22.5	2440
SD4345 09	9	Disc 430x45	2095	1300	140x140	10xM22x1.5	280.8/ 355	120	385/ 65 R22.5	2495
SD4345 09	9	Disc 430x45	2140	1400	140x140	10xM22x1.5	280.8/ 355	120	385/ 65 R22.5	2540

Type identification for suspension



FIO	47	35	10	919
FIU	28	20	05	619
XXX	XX	XX	XX	XXX
Air Spring type 619 919 924 927				
Air spring bracket height (cm) 05 10 15				
Hanger bracket center (cm) 20 30 25 35				
Nominal ride height (cm)				
Air spring type FIU FIO				

J2

CHAPTER 2

Intra Suspension system

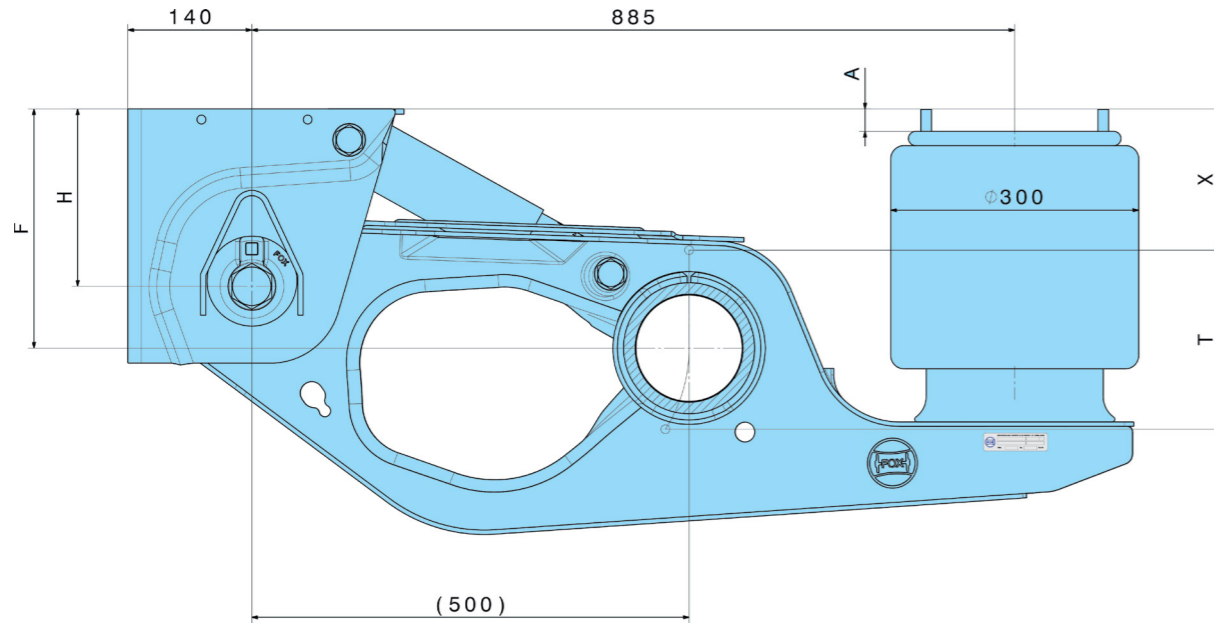
Type	Rigid Axles	Axle Load	Nominal ride heights range (mm)	Axle type	Sheet No
FIU		9t	250 - 350	CDRC4220 CDR4220 CD4345 CDC4345	46
FIU		9t	250 - 350	CDRC4220 CDR4220 CD4345 CDC4345	47
FIU		9t	290 - 420	CDRC4220 CDR4220 CD4345 CDC4345	48
FIU		9t	300 - 420	CDRC4220 CDR4220 CD4345 CDC4345	49

Type	Rigid Axles	Axle Load	Nominal ride heights range (mm)	Axle type	Sheet No.
FIO		9t	355- 505	CDRC4220 CDR4220 CD4345 CDC4345	50
FIO		9t	355- 505	CDRC4220 CDR4220 CD4345 CDC4345	51
FIO		9t	440- 490	CDRC4220 CDR4220 CD4345 CDC4345	52
FIO		9t	450- 500	CDRC4220 CDR4220 CD4345 CDC4345	53

Air suspension type FIU with air spring 619 V⁽¹⁾

Nominal ride heights 250 - 350 mm

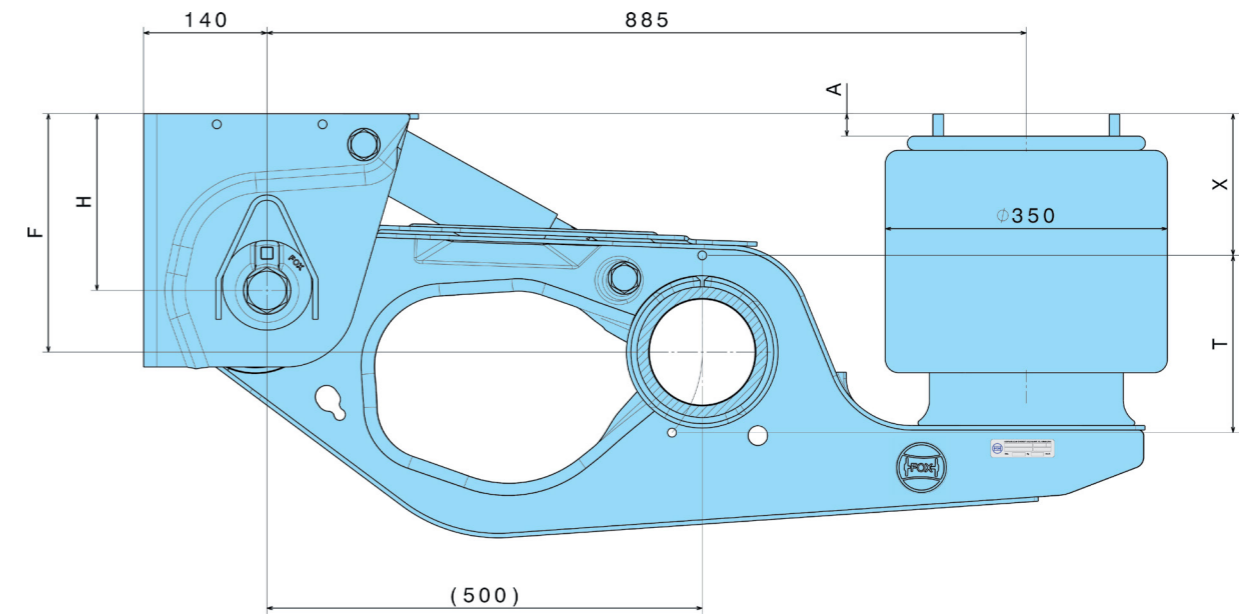
Axle load: 9t



Air suspension type FIU with air spring 919V⁽¹⁾

Nominal ride heights 250 - 350 mm

Axle load: 9t



Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A; Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
FIU25/ 2000 619	200	250	230 - 270	160	145	0	180	B1	CDRC4220 CDR4220 CD4345 CDC4345
FIU28/ 2005 619	200	280	260 - 300	190	175	50		B1	
FIU30/ 2505 619	250	300	280 - 320	210	195	50		B2/B4	
FIU33/ 2510 619	250	330	310 - 350	240	225	100		B2/B4	
FIU35/ 3010 619	300	350	330 - 370	260	245	100		B2/B4	

(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A; Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
FIU25 / 2000 919	200	250	225 - 265	155	140	0	180	B1	CDRC4220 CDR4220 CD4345 CDC4345
FIU28 / 2000 919	200	280	255 - 295	185	170	0		B1	
FIU30 / 2505 919	250	300	275 - 315	205	190	50		B2/B4	
FIU33 / 2510 919	250	330	305 - 345	235	220	100		B2/B4	
FIU35 / 3010 919	300	350	325 - 365	255	240	100		B2/B4	

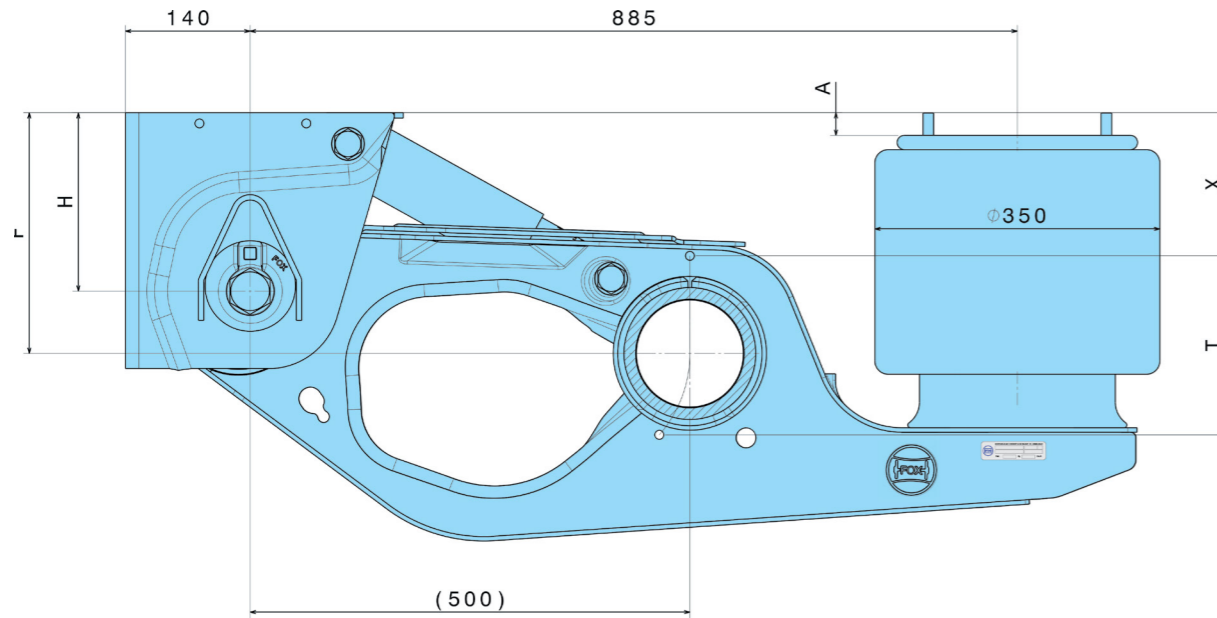
(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type FIU with air spring 924V⁽¹⁾

Nominal ride heights 290 - 420 mm

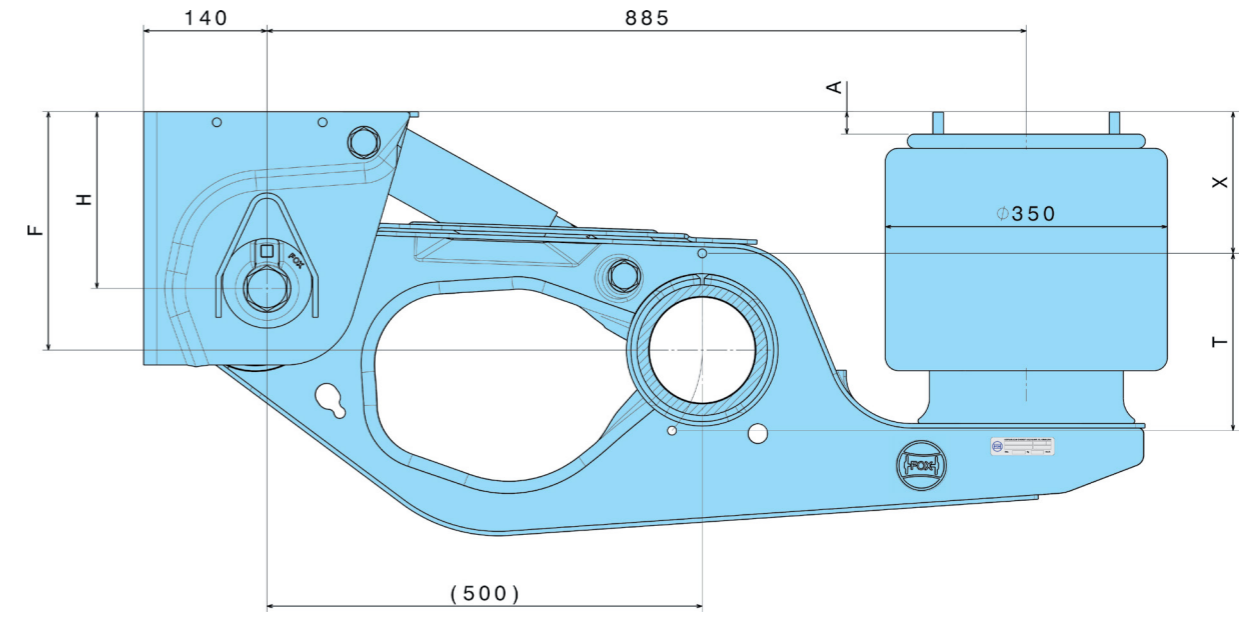
Axle load: 9t



Air suspension type FIU with air spring 927V⁽¹⁾

Nominal ride heights 300 - 420 mm

Axle load: 9t



Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X, overall height		A _i Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
FIU29 / 2000 924	200	290	250 - 310	180	165	0	200	B1	CDRC4220 CDR4220 CD4345 CDC4345
FIU31 / 2500 924	250	310	270 - 330	200	185	0		B2/B4	
FIU34 / 2505 924	250	340	300 - 360	230	215	50		B2/B4	
FIU36 / 3005 924	300	360	320 - 380	250	235	50		B2/B4	
FIU39 / 3010 924	300	390	350 - 410	280	265	100		B2/B4	
FIU42 / 3015 924	300	420	375 - 435	305	290	150		B3	

(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X, overall height		A _i Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
FIU32/ 2500 927	250	320	290 - 370	220	205	0	260	B3	CDRC4220 CDR4220 CD4345 CDC4345
FIU35/ 2505 927	250	350	320 - 400	250	235	50		B3	
FIU37/ 3005 927	300	370	340 - 420	270	255	50		B3	
FIU40/ 3010 927	300	400	370 - 450	300	285	10		B3	
FIU42 /3510 927	350	420	390 - 470	320	305	10		B3	

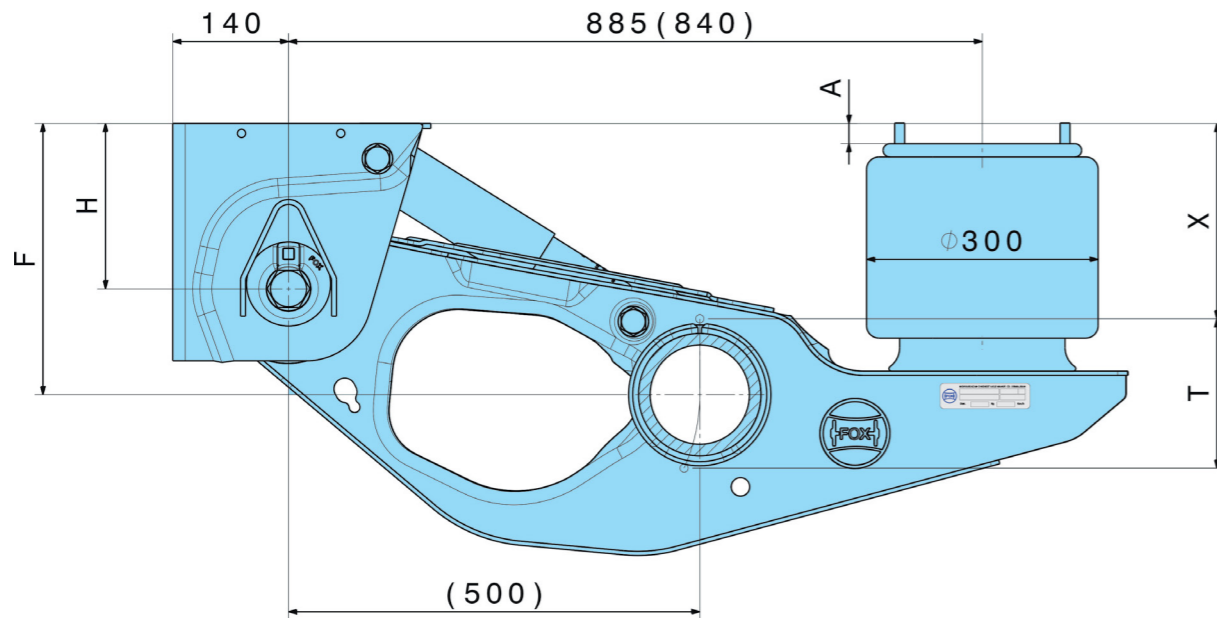
(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type F10 with air spring 619V⁽¹⁾

Nominal ride heights 355 - 505 mm

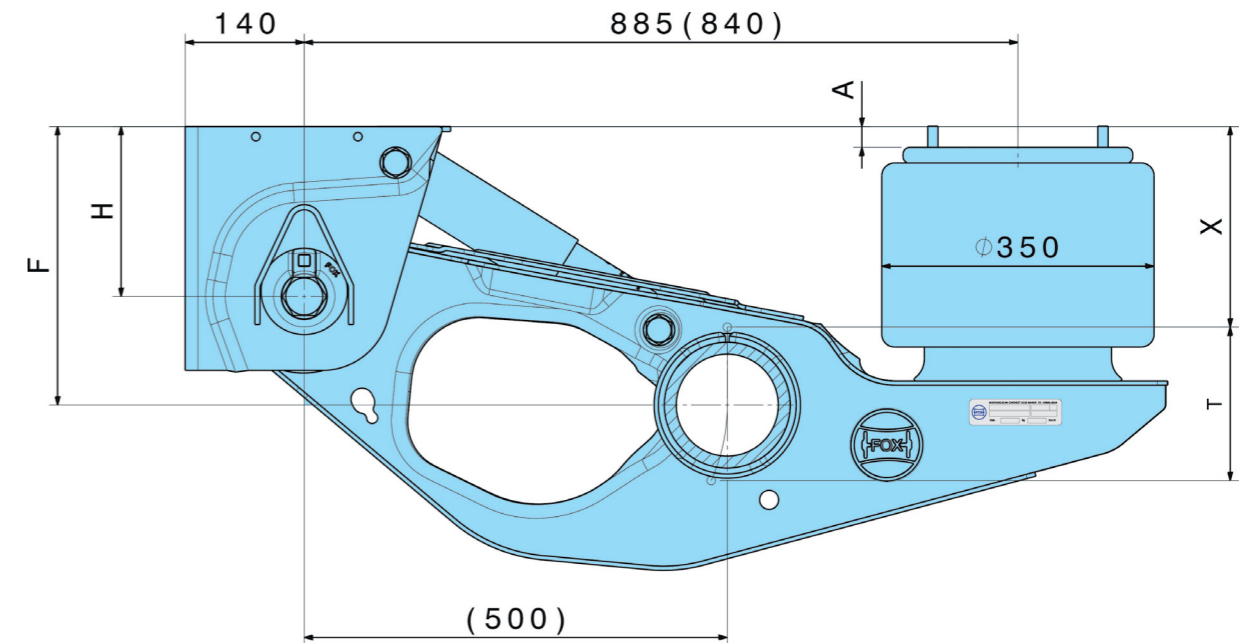
Axle load: 9t



Air suspension type F10 with air spring 919V⁽¹⁾

Nominal ride heights 355 - 505 mm

Axle load: 9t



Air suspension type	H _i : Hanger bracket center (mm)	F _i : Nominal ride height (mm)	Ride height range (mm)	X, overall height		A: Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
F1035/ 2000 619	200	355	335- 375	265	250	0	180	B2/B4	CDRC4220 CDR4220 CD4345 CDC4345
F1037/ 2500 619	250	375	355- 395	285	270	0		B2/B4	
F1040/ 2505 619	250	405	385- 425	315	300	50		B3	
F1042/ 3005 619	300	425	405- 445	335	320	50		B2/B4	
F1045/ 3010 619	300	455	435- 475	365	350	100		B3	
F1047/ 3510 619	350	475	455- 495	385	370	100		B2/B4	
F1050/ 3515 619	350	505	485- 525	415	400	150		B3	

(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type	H _i : Hanger bracket center (mm)	F _i : Nominal ride height (mm)	Ride height range (mm)	X, overall height		A: Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
F1035/ 2000 919	200	355	330 - 370	260	245	0	180	B2/B4	CDRC4220 CDR422 CD4345 CDC4345
F1037/ 2500 919	250	375	350 - 390	280	265	0		B2/B4	
F1040/ 2505 919	250	405	380 - 420	310	295	50		B3	
F1042/ 3005 919	300	425	400 - 440	330	315	50		B2/B4	
F1045/ 3010 919	300	455	430 - 470	360	345	100		B3	
F1047/ 3510 919	350	475	450 - 490	380	365	100		B2/B4	
F1050/ 3515 919	350	505	480 - 520	410	395	150		B3	

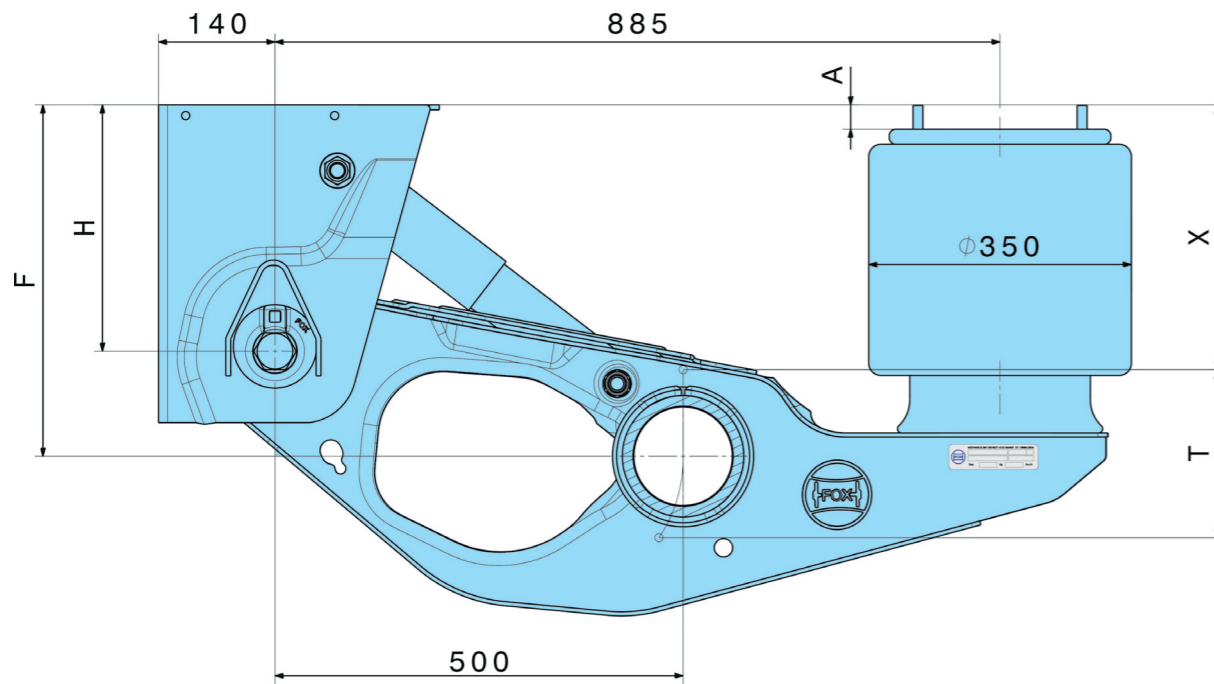
(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Air suspension type F10 with air spring 924V⁽¹⁾

Nominal ride height 440 - 490 mm

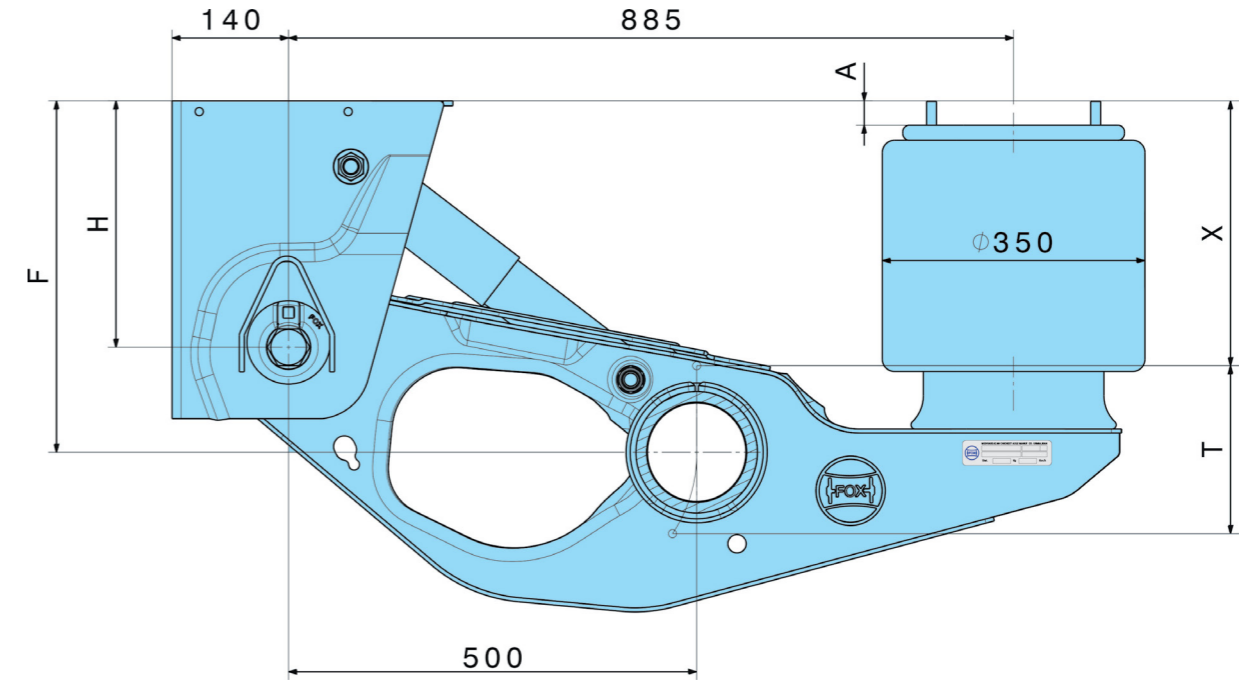
Axle load: 9t



Air suspension type F10 with air spring 927V⁽¹⁾

Nominal ride heights 450 - 500 mm

Axle load: 9t



Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X _i overall height		A _i Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
F1044/ 3000 924	300	440	395 - 455	325	310	0	200	B3	CDRC4220
									CDR4220
F1049/ 3505 924	350	490	445 - 505	375	360	50		B3	CD4345 CDC4345

Air suspension type	H _i Hanger bracket center (mm)	F _i Nominal ride height (mm)	Ride height range (mm)	X _i overall height		A _i Air spring bracket height (mm)	Total axle travel	Shock absorber ⁽²⁾	Axle type
				Unladen without air (mm)	Laden without air (mm)				
F1045/ 3000 927	300	450	415 - 495	345	330	0	260	B3	CDRC4220
									CDR4220
F1050/ 3505 927	350	500	465 - 545	395	380	50		B3	CD4345 CDC4345

(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

(1) Sheet No. of Air spring

(2) Sheet No. of Shock absorber

Type identification for suspension



DF	B	28	268	00	F2	36K
SF	T	43	184	00	F1	30K
XX	X	XX	XXX	XX	XX	XXX
<p>Air Spring type 30K 36K</p> <p>Hanger bracket type F1 F2</p> <p>Air Spring bracket height (cm) 05 10</p> <p>Hanger bracket center (mm) 268 184</p> <p>Nominal Ride height (cm)</p> <p>Leaf Spring Installation T: Leaf spring in top of the axle B: Leaf spring un bottom of the axle</p> <p>Spring type SF: Single Flat DF: Double Flat SZ: Single Z DZ: Double Z</p>						

03

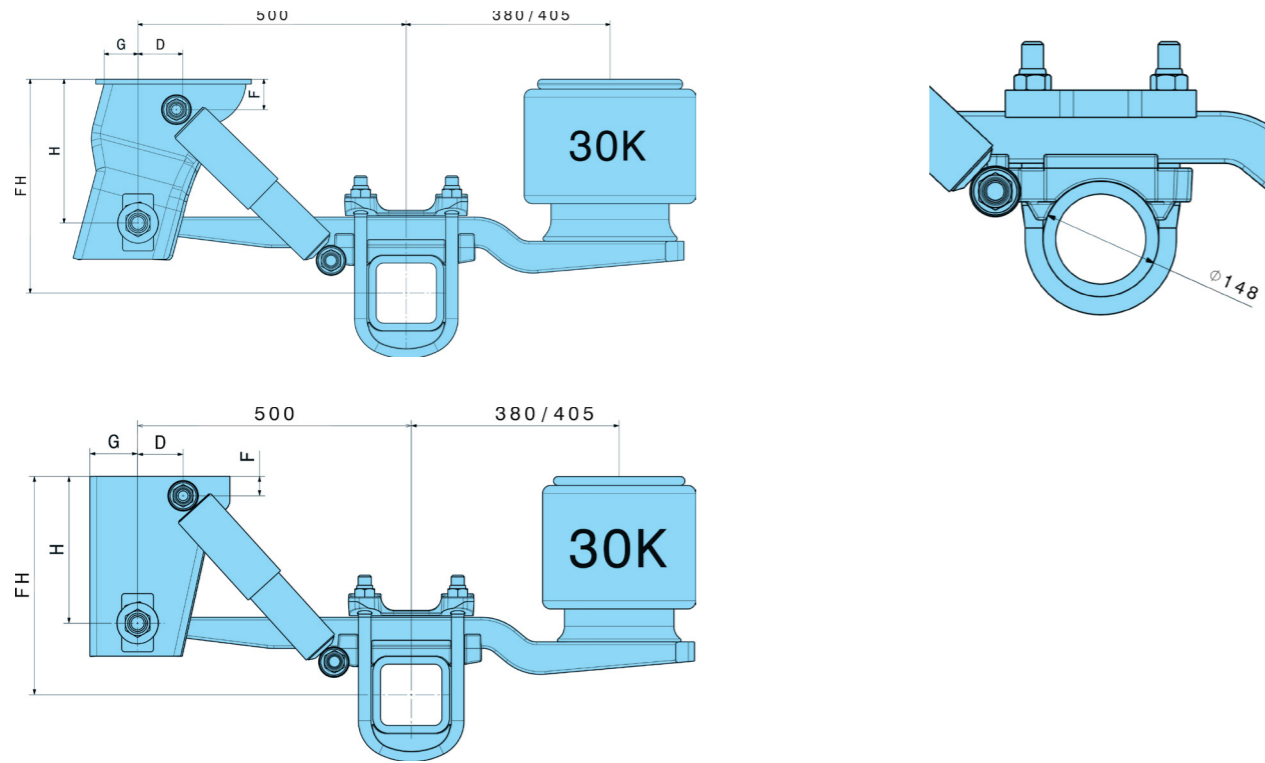
CHAPTER 3

Leaf spring suspension system

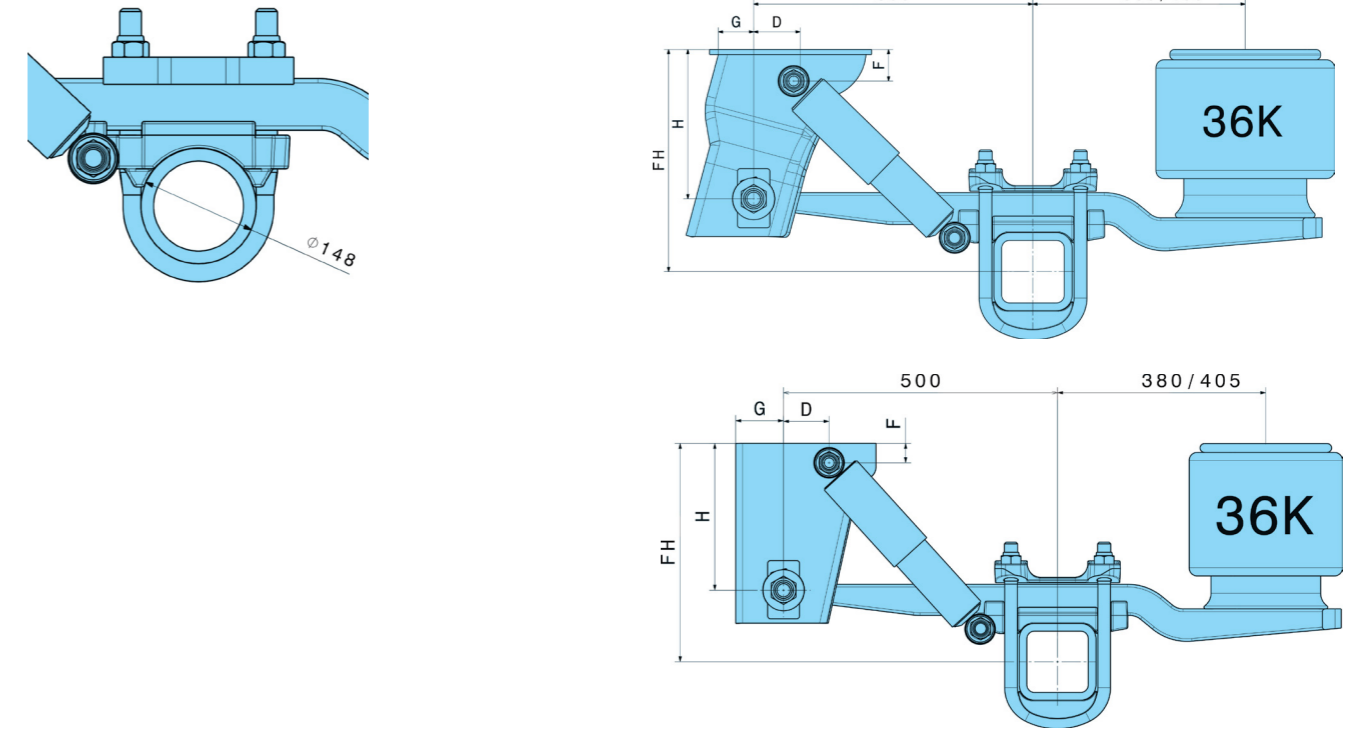
Suspension system series	Air-spring suspension	Trailing arm type	Trailing arm properties (mm)	Axle load (t)	Link Length L1/L2 (mm)	Ride height range (mm)	Sheet No.
SFT		Single leaf (flat)	100x57	9 to 12	500 / 380 - 405	430 - 490	58 - 61
DFT		Double leaf (flat)	100 x 43 / 43	9 to 12	500 / 380 - 405	525 - 530	62 - 63
SZT		Single leaf (Z)	100x52	9 to 12	500 / 380 - 405	360 - 470	64 - 67
DZT		Double leaf (Z)	100 x 43 / 43	9 to 12	500 / 380 - 405	380 - 475	68 - 69

Suspension system series	Air-spring suspension	Trailing arm type	Trailing arm properties (mm)	Axle load (t)	Link Length L1/L2 (mm)	Ride height range (mm)	Sheet No.
SFB		Single leaf (flat)	100x57	9 to 12	500 / 380 - 405	230 - 285	70 - 73
DFB		Double leaf (flat)	100 x 43 / 43	9 to 12	500 / 380 - 405	250 - 280	74 - 75

Up to 9 t
Air bag 30k / Axle beam: 140x140 - Ø148



Up to 9 - 12 t
Air bag 36k / Axle beam: 140x140 - Ø148



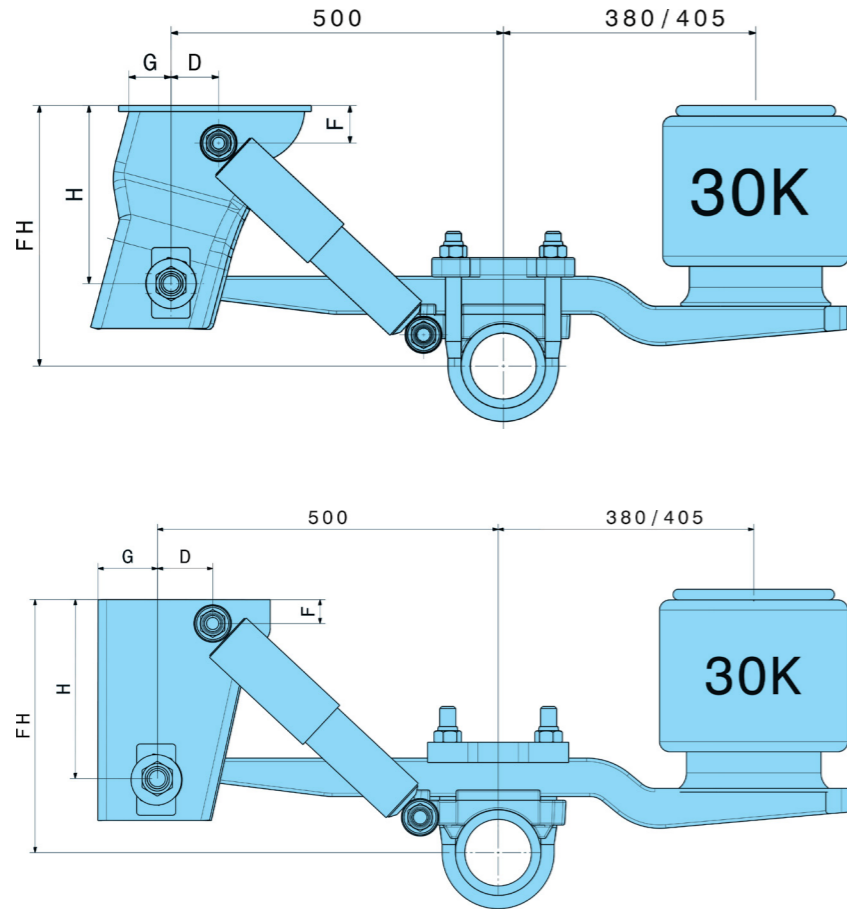
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _s Air spring bracket height (mm)	Shock absorber ⁽²⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFT 43 / 184 00 / F1 30k	430	410 - 450	315	300	0	A1	F1	184	64	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09
SFT 47 / 268 00 / F1 30k	470	450 - 490	355	340	0	A3	F1	268	83	88	35	CD 4345 09 CDC 4345 09
SFT 47 / 268 00 / F2 30k	470	450 - 490	355	340	0	A1	F2	268	72	63	56.5	SD 4345 09

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

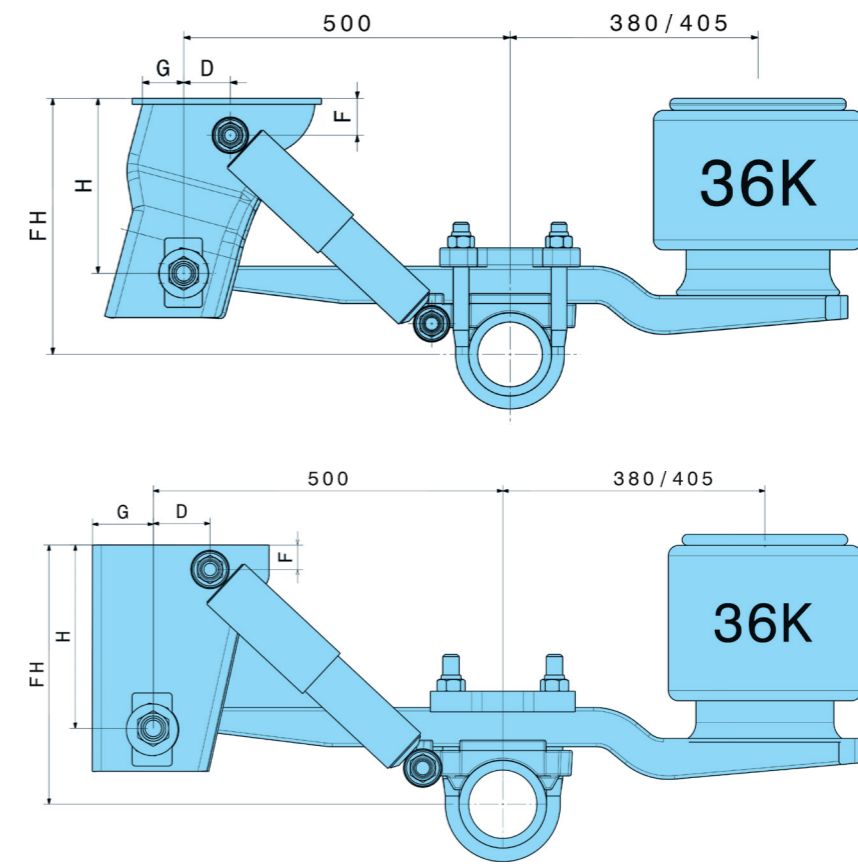
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _s Air spring bracket height (mm)	Shock absorber ⁽²⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFT 44 / 184 00 / F1 36k	440	420 - 460	340	325	0	A1	F1	184	64	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09
SFT 48 / 268 00 / F1 36k	485	465 - 505	380	365	0	A3	F1	268	83	88	35	SDR 4220 12 CD 4345 09 CDC 4345 09
SFT 48 / 268 00 / F2 36k	485	470 - 505	380	365	0	A1	F2	268	72	63	56.5	SD 4345 09

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

Up to 9 t
Air bag 30k / Axle beam: $\varnothing 127$



Up to 9 - 12 t
Air bag 36k / Axle beam: $\varnothing 127$



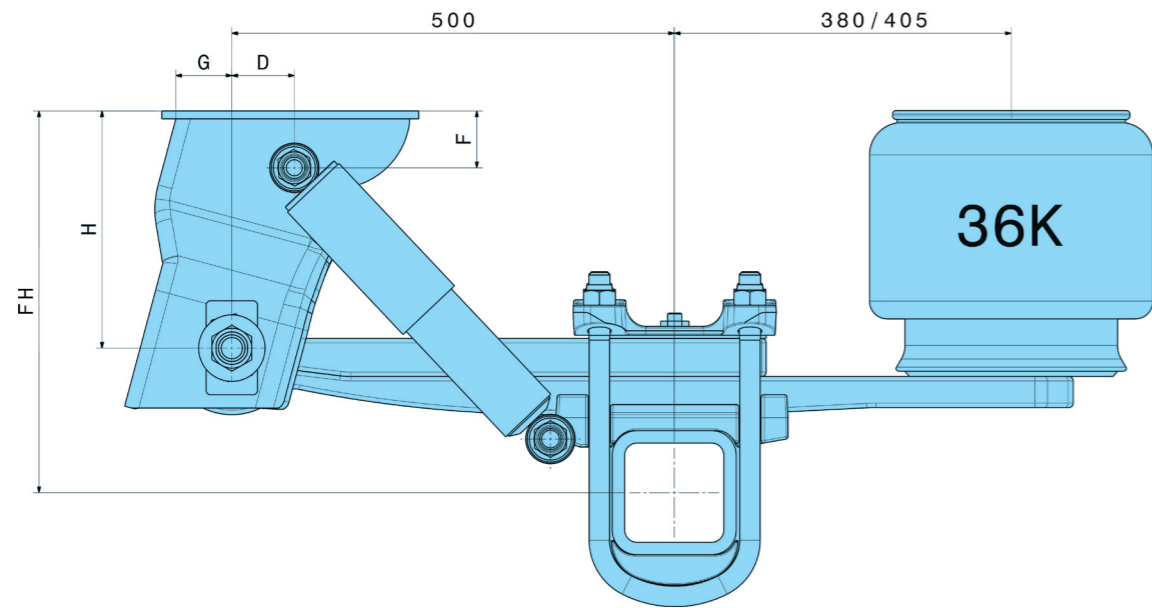
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _v Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H ₁ Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFT 44 /184 00/F1 30k	440	420- 460	310	295	0	A1	F1	184	64	88	35	CDR 3020 09
SFT 47 /268 00/F1 30k	475	455- 495	345	330	0	A3	F1	268	83	88	35	
SFT 47 /268 00/F2 30k	475	455- 495	345	330	0	A3	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

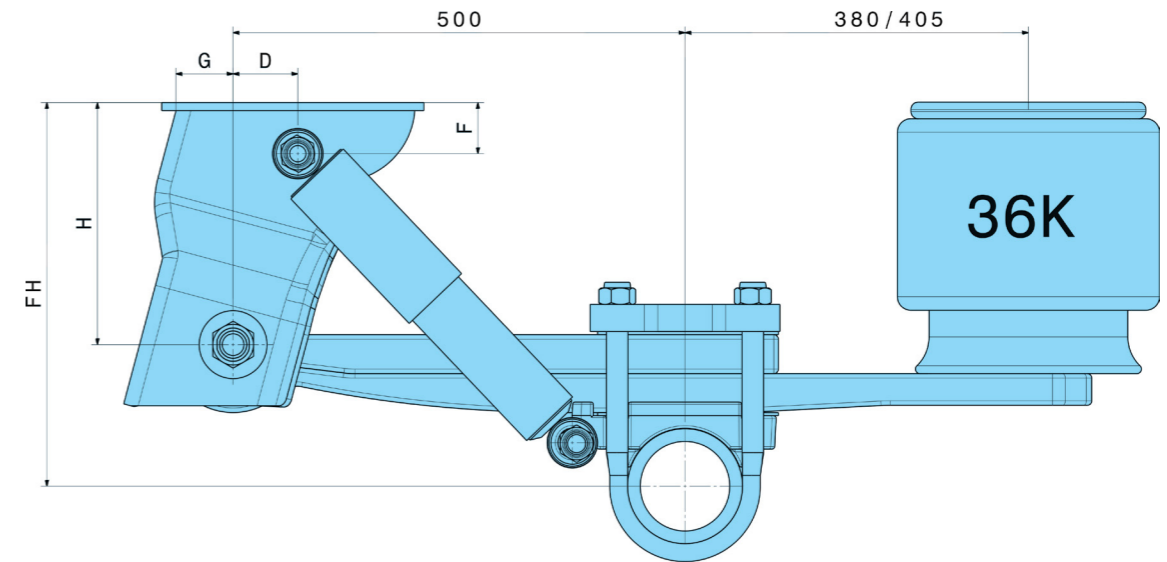
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _v Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H ₁ Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFT 45 /184 00/F1 36k	450	430- 470	340	325	0	A1	F1	184	64	88	35	CDR 3020 09 CDR 3020 11 CDR 3020 12
SFT 49/ 268 00/F1 36k	490	470- 510	370	355	0	A3	F1	268	83	88	35	
SFT 49/ 268 00/F2 36k	490	470- 510	370	355	0	A3	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

Up to 9 - 12 t
Air bag 36k / Axle beam: 140*140



Up to 9 - 12 t
Air bag 36k / Axle beam: Ø127



Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A; Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _r Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DFT 53/ 26800/F2 36K	530	510 - 550	412	397	0	A3	F2	268	72	63	56.5	SDR 4220 09 SDR 4220 12 SD 4345 09

Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A; Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _r Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DFT 52/ 268 00/F2 36K	525	505 - 545	405	390	0	A3	F2	268	72	63	56.5	CDR 3020 09 CDR 3020 12

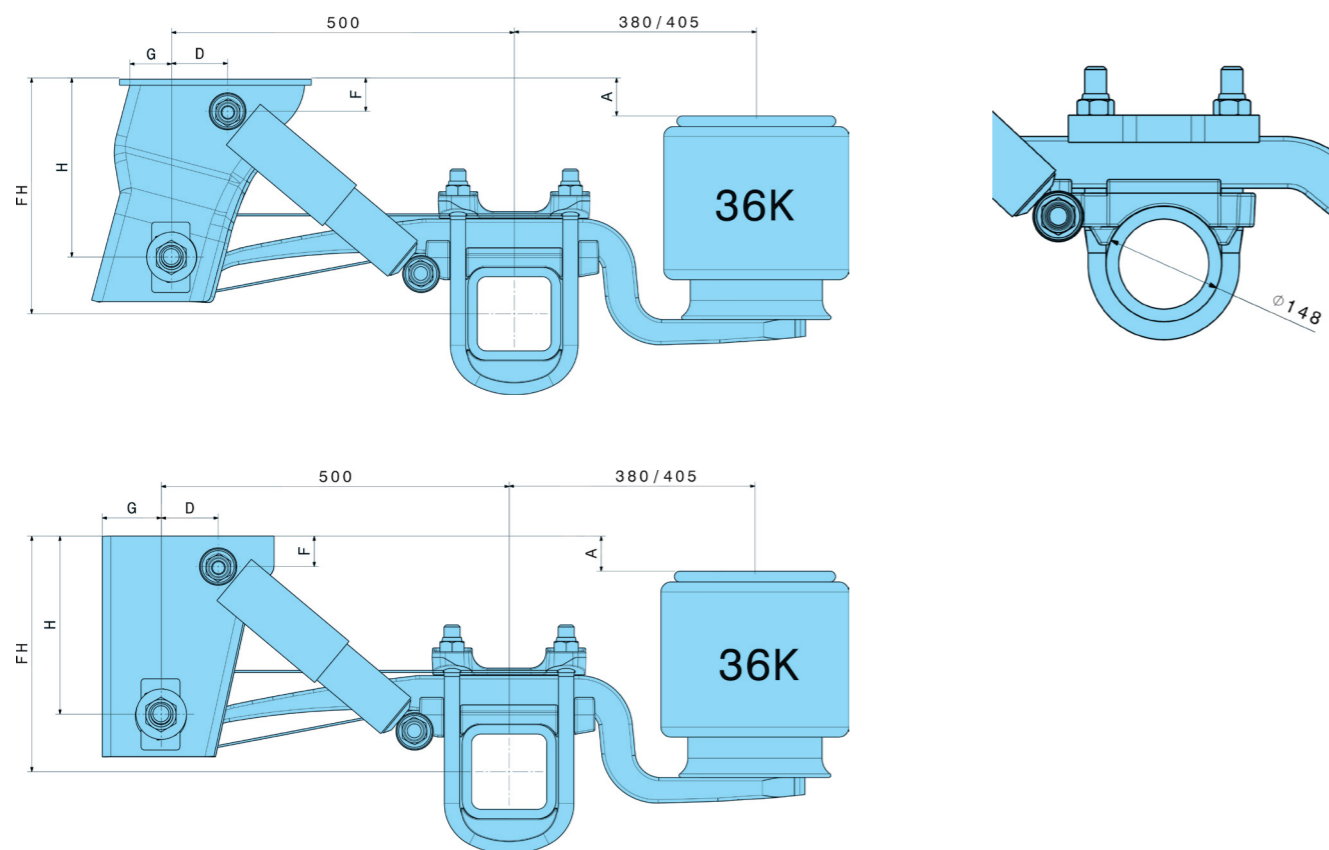
(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

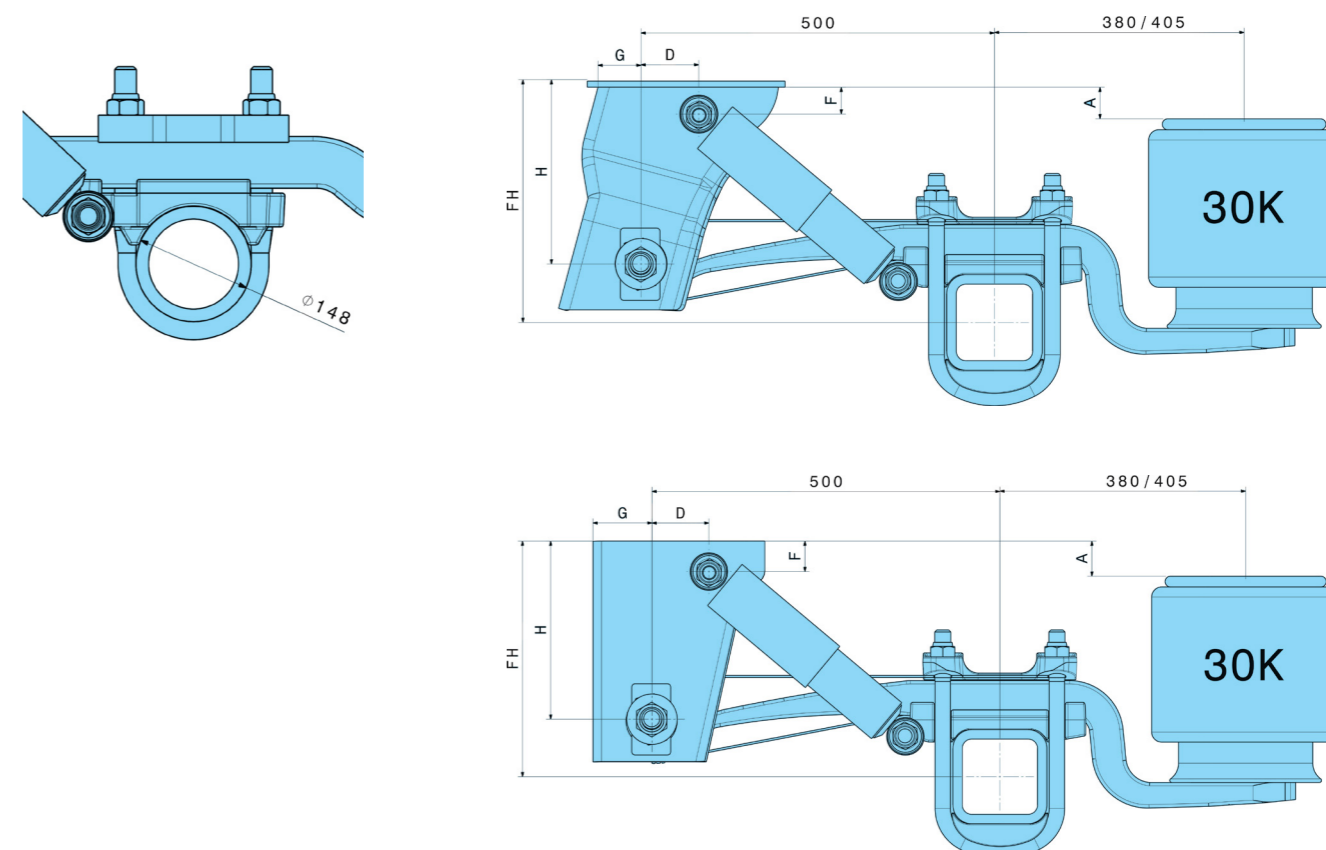
(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

Up to 9 - 12 t
Air bag 36k / Axle beam: 140x140 - Ø148



Up to 9 t
Air bag 30k / Axle beam: 140x140- Ø148



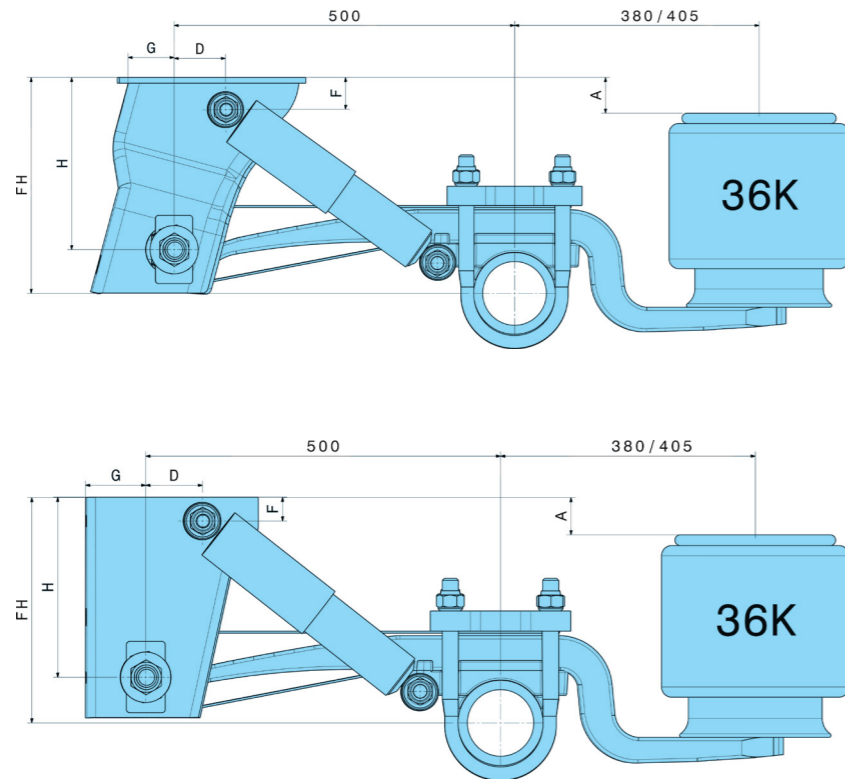
Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SZT 38/ 184 00/F1 36K	380	360 - 400	260	245	0	A3	F1	184	64	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09 SDR 4220 12 CD 4345 09 CDC 4345 09 SD 4345 09
SZT 41/ 268 00/F1 36K	415	395 - 435	295	280	0		F1	268	83	88	35	
SZT 41/ 268 00/F2 36k	415	395 - 435	295	280	0		F2	268	72	63	56.5	
SZT 40/ 184 05/F1 36K	405	385 - 425	287	272	50		F1	184	64	88	35	
SZT 43/ 184 10/F1 36K	435	415 - 455	315	300	100		F1	184	64	88	35	
SZT 44/ 268 05/F1 36K	442	422 - 462	322	307	50		F1	268	83	88	35	
SZT 47 /268 10/F1 36K	470	450 - 490	350	335	100		F1	268	83	88	35	
SZT 44/ 268 05/F2 36k	442	422 - 462	322	307	50		F2	268	72	63	56.5	
SZT 47/ 268 10/F2 36k	470	450 - 490	350	335	100		F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

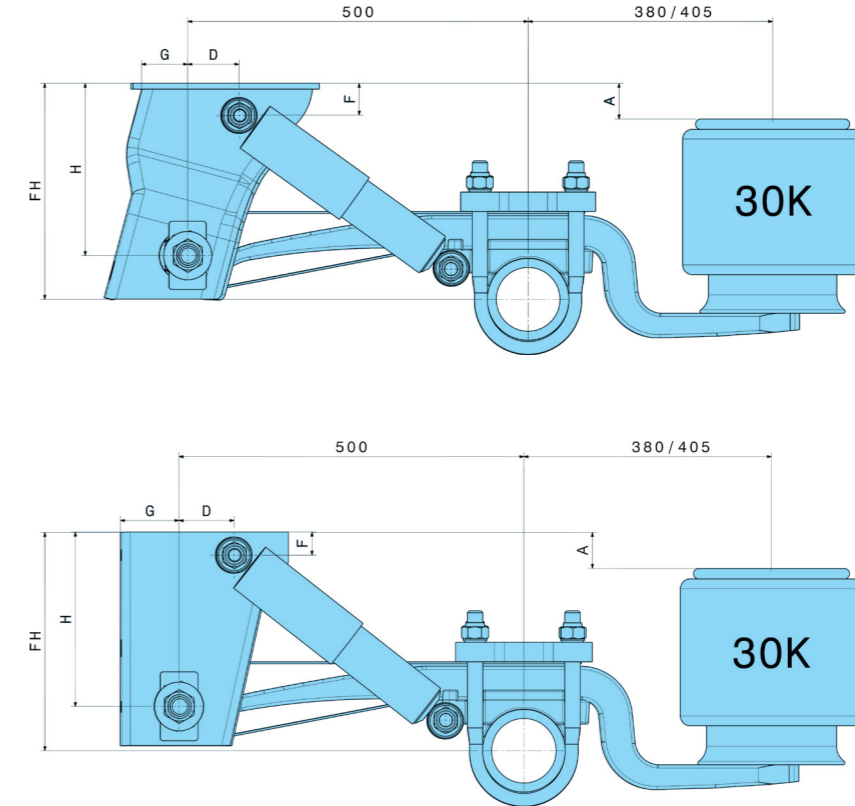
Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SZT 36/ 184 00/F1 30K	360	340 - 380	230	215	0	A3	F1	184	64	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09 CD 4345 09 CDC 4345 09 SD 4345 09
SZT 40 /268 00/F1 30K	400	380 - 420	266	251	0		F1	268	83	88	35	
SZT 40/ 268 00/F2 30k	400	380 - 420	266	251	0		F2	268	72	63	56.5	
SZT 39/ 184 05/F1 30K	390	370 - 410	260	245	50		F1	184	64	88	35	
SZT 42 /184 10/F1 30K	420	400 - 440	288	273	100		F1	184	64	88	35	
SZT 42/ 268 05/F1 30K	425	405 - 445	295	280	50		F1	268	83	88	35	
SZT 45/ 268 10/F1 30K	455	435 - 475	325	310	100		F1	268	83	88	35	
SZT 42/ 268 05/F2 30k	425	405 - 445	295	280	50		F2	268	72	63	56.5	
SZT 45/ 268 10/F2 30k	455	435 - 475	325	310	100		F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

Up to 9 - 12 t
Air bag 36k / Axle beam: Ø127



Up to 9 t
Air bag 30k / Axle beam: Ø127



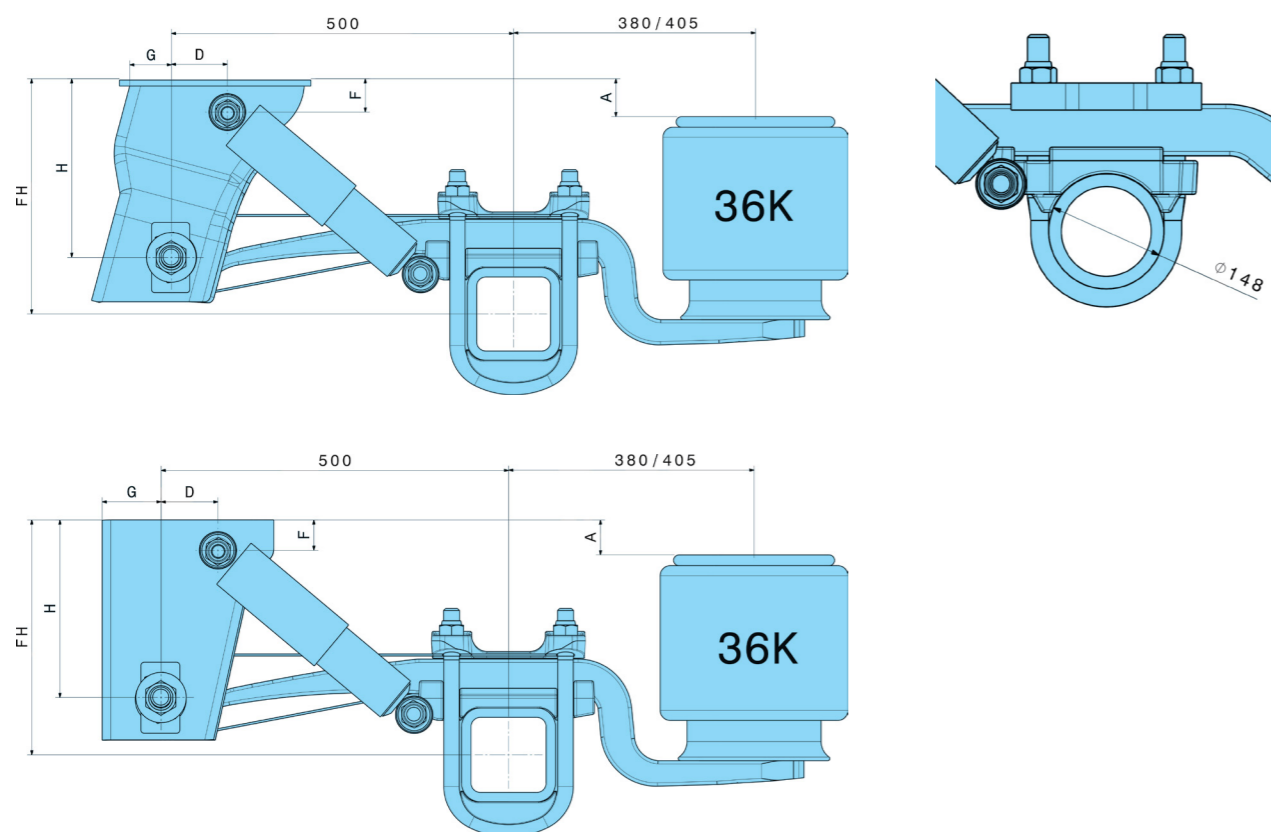
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A ₁ Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H ₁ Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SZT 38/ 184 00/F1 36K	380	360-400	250	235	0	A1	F1	184	64	88	35	CDR 3020 09 CDR 3020 11 CDR 3020 12
SZT 41 /268 00/F1 36K	410	390-430	284	269	0	A3	F1	268	83	88	35	
SZT 41 /268 00/F2 36k	410	390-430	284	269	0	A3	F2	268	72	63	56.5	
SZT 40/ 184 05/F1 36K	405	385-425	280	265	50	A1	F1	184	64	88	35	
SZT 43/ 184 10/F1 36K	435	405-455	310	295	100	A1	F1	184	64	88	35	
SZT 44/ 268 05/F1 36K	440	420-460	315	300	50	A3	F1	268	83	88	35	
SZT 47/ 268 10/F1 36K	470	450-490	345	330	100	A3	F1	268	83	88	35	
SZT 44/ 268 05/F2 36k	440	420-460	315	300	50	A3	F2	268	72	63	56.5	
SZT 47/ 268 10/F2 36k	470	450-490	345	330	100	A3	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

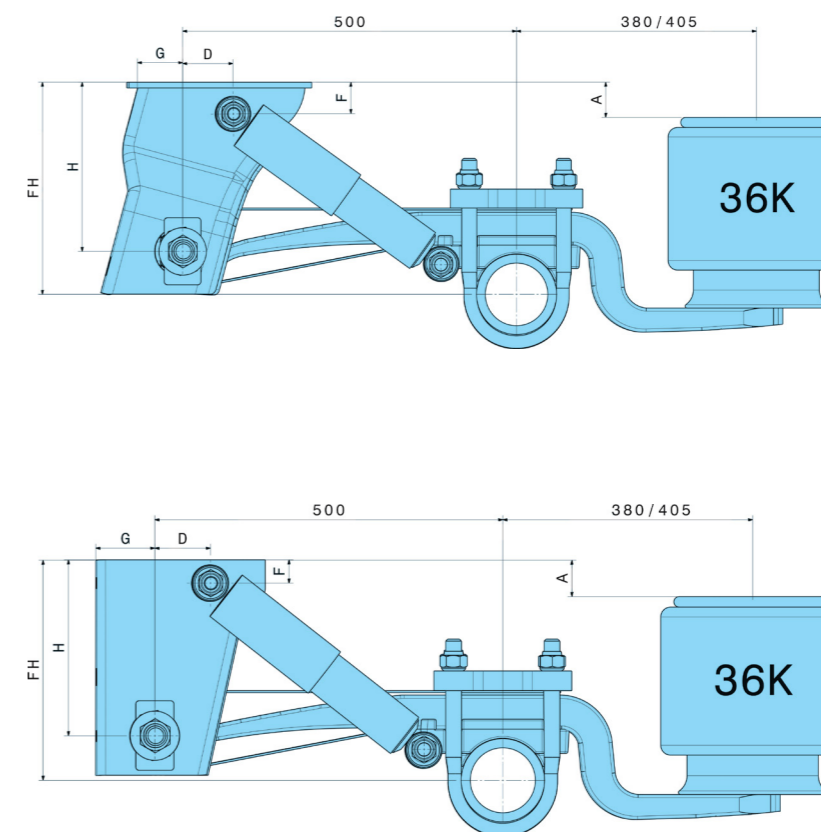
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A ₁ Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H ₁ Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SZT 36 / 184 00/F1 30K	360	340-380	220	205	0	A1	F1	184	64	88	35	CDR 3020 09
SZT 39 / 268 00/F1 30K	395	375-415	255	240	0	A3	F1	268	83	88	35	
SZT 39 /268 00/F2 30k	395	375-415	255	240	0	A1	F2	268	72	63	56.5	
SZT 39 / 184 05/F1 30K	390	370-410	250	235	50	A1	F1	184	64	88	35	
SZT 42 / 184 10/F1 30K	420	400-440	280	265	100	A1	F1	184	64	88	35	
SZT 42 / 268 05/F1 30K	425	405-445	285	270	50	A3	F1	268	83	88	35	
SZT 45 /268 10/F1 30K	455	435-475	315	300	100	A3	F1	268	83	88	35	
SZT 42 /268 05/F2 30k	425	405-445	285	270	50	A3	F2	268	72	63	56.5	
SZT 45 /268 10/F2 30k	455	435-475	315	300	100	A3	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

UP to 9 - 12 t
Air bag 36k - Axle beam: 140×140 - Ø148



UP to 9 - 12 t
Air bag 36k - Axle beam: Ø127



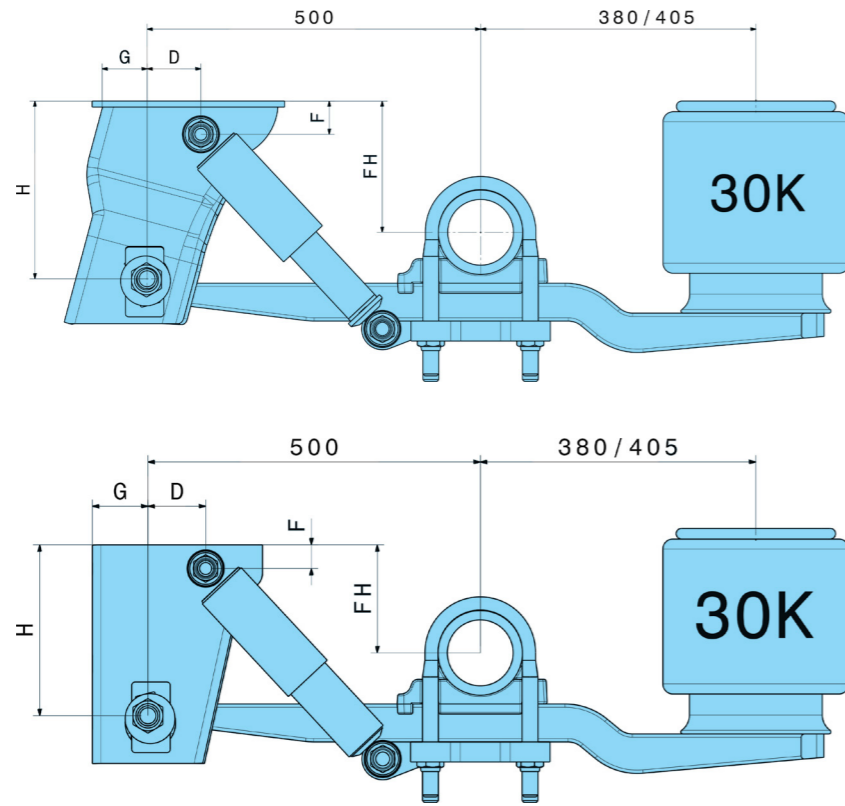
Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X, overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DZT 42 / 268 00/F2 36k	420	400 - 440	318	303	0	A1	F2	268	72	63	56.5	CDRC 4220 09 CDR 4220 09 SDR 4220 09
DZT 44 / 268 05/F2 36k	445	425 - 465	342	327	50	A1	F2	268	72	63	56.5	SDR 4220 12 CD 4345 09 CDC 4345 09
DZT 47 / 268 10/F2 36k	470	450 - 490	367	352	100	A1	F2	268	72	63	56.5	SD 4345 09

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

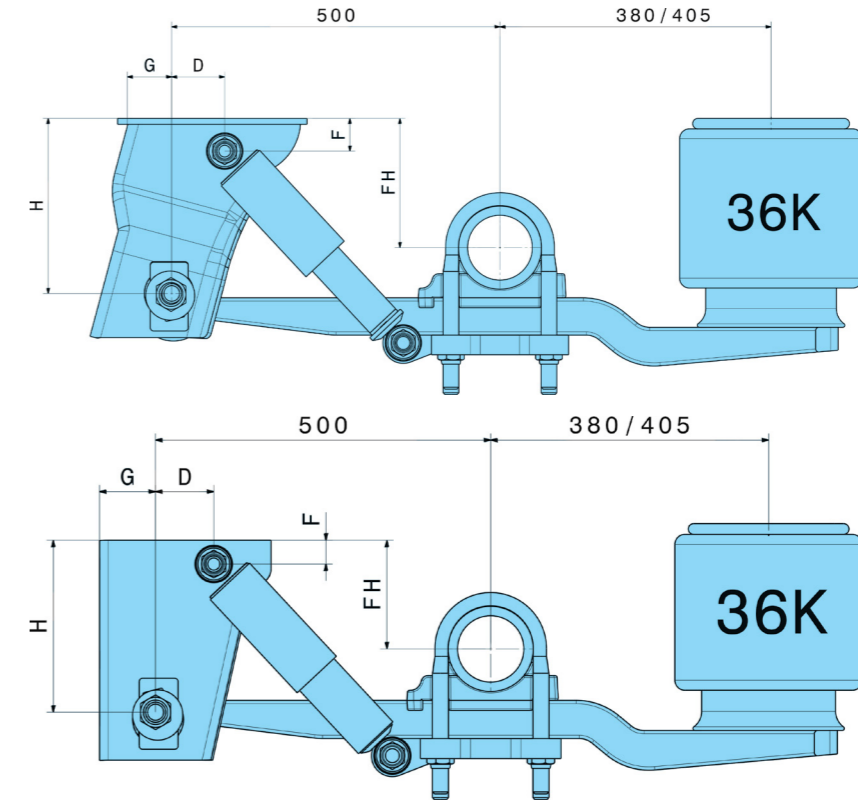
Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X, overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DZT 42 / 268 00/F2 36k	420	400 - 440	298	283	0	A1	F2	268	72	63	56.5	CDR 3020 09 CDR 3020 11 CDR 3020 12
DZT 44 / 268 05/F2 36k	445	425 - 465	237	312	50	A3	F2	268	72	63	56.5	
DZT 47 / 268 10/F2 36k	475	455 - 495	355	340	100	A3	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

Up To 9t
Air bag 30k / Axle beam: Ø127



Up to 9 - 12 t
Air bag 36k / Axle beam: Ø127



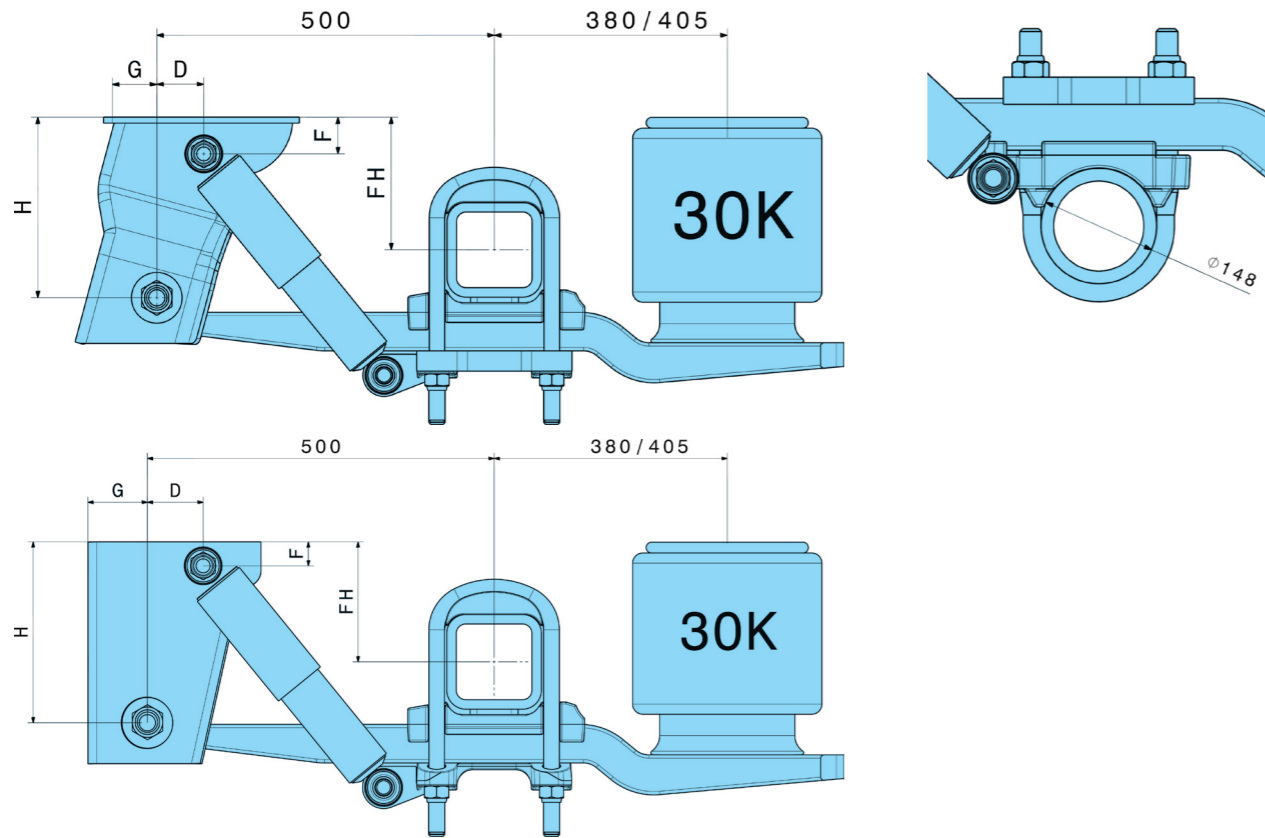
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _j Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFB 23/ 184 00/F1 30k	230	210-250	98	83	0	A1	F1	184	64	88	35	CDR 3020 09 CDR 3020 11 CDR 3020 12
SFB 26 /268 00/F1 30k	265	245-285	134	119	0	A3	F1	268	83	88	35	
SFB 26 /268 00/F2 30k	265	245-285	134	119	0	A1	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

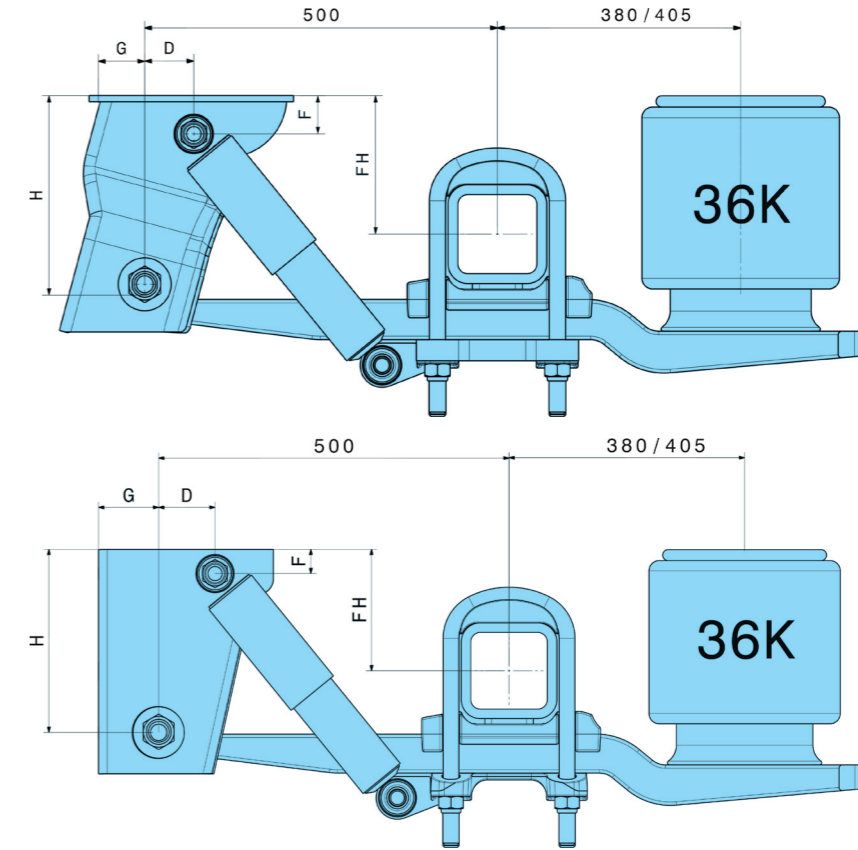
Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _j Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFB 25/ 184 00/F1 36k	250	230-270	125	110	0	A1	F1	184	64	88	35	CDR 3020 09 CDR 3020 11 CDR 3020 12
SFB 28 /268 00/F1 36k	285	265-305	160	145	0	A3	F1	268	83	88	35	
SFB 28 /268 00/F2 36k	285	265-305	160	145	0	A1	F2	268	72	63	56.5	

(1) Sheet No. of Shock absorber
(2) Sheet No. of Hanger bracket

Up to 9t
Air bag 30k / Axle beam: 140*140 - Ø148



Up to 9t - 12t
Air bag 36k / Axle beam: 140*140



Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _s Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _j Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFB 26 /268 00/F1 30k	260	240-280	126	111	0	A3	F1	268	83	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09 CD 4345 09 CDC 4345 09
SFB 26/ 268 00/F2 30k	260	240-280	126	111	0	A1	F2	268	72	63	56.5	SD 4345 09

Air suspension type	F _r Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _s Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _j Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
SFB 27 / 268 00/F1 36k	275	255-295	153	138	0	A3	F1	268	83	88	35	CDRC 4220 09 CDR 4220 09 SDR 4220 09 SDR 4220 12
SFB 27 /268 00/F2 36k	275	255-295	153	138	0	A1	F2	268	72	63	56.5	CD 4345 09 CDC 4345 09 SD 4345 09

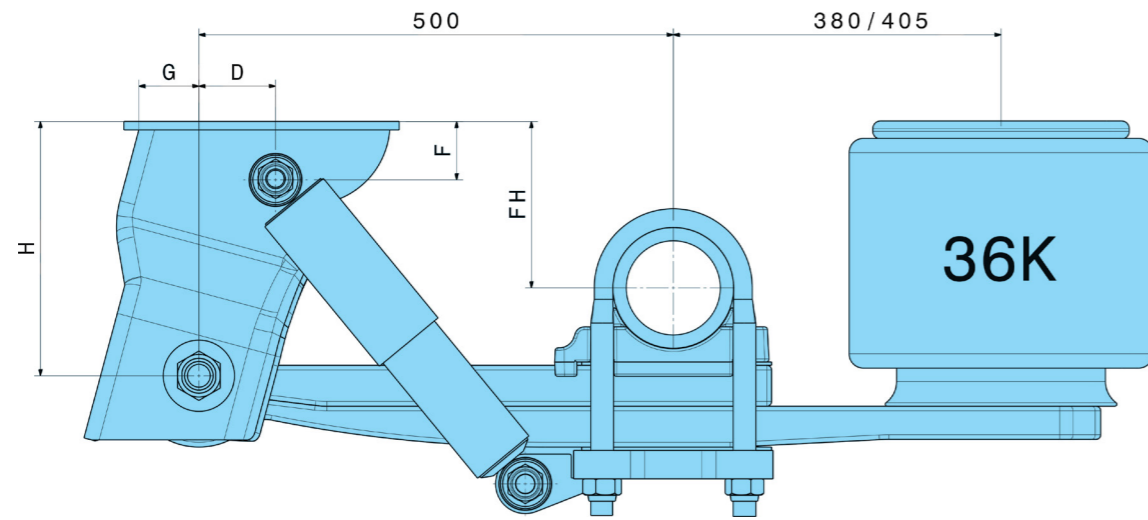
(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

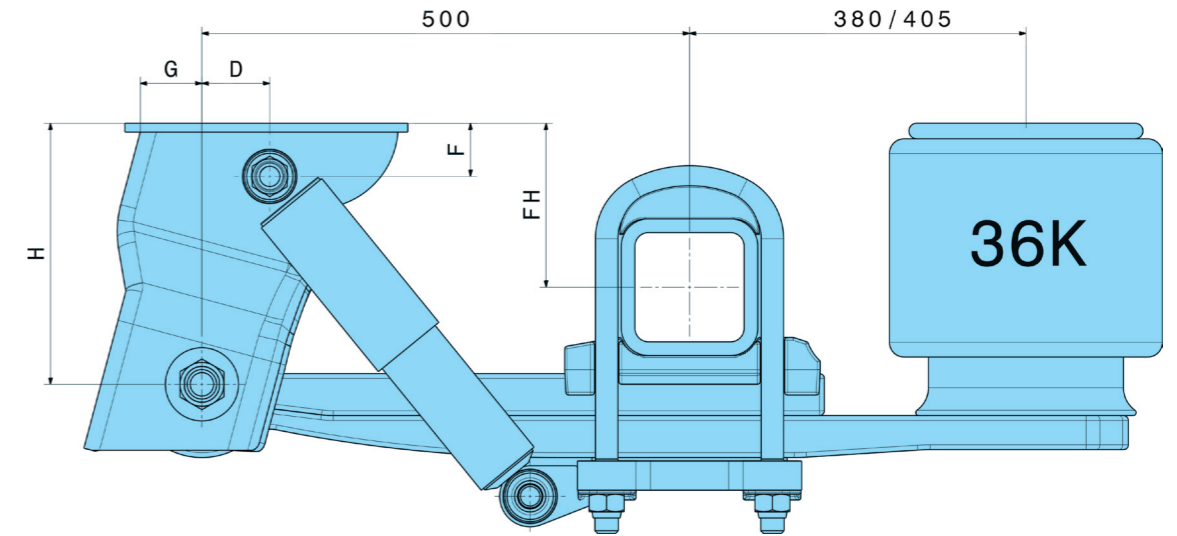
(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

Up to 9 - 12 t
Air bag 36k / Axle beam: Ø127



Up to 9 - 12 t
Air bag 36k / Axle beam: Ø140



Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DFB 28 / 268 00/F2 36k	280	260-300	157	142	0	A3	F2	268	72	63	56.5	CDR 3020 09 CDR 3020 11 CDR 3020 12

Air suspension type	F _i Nominal ride height (mm)	Ride height range (mm)	X; overall height		A _i Air spring bracket height (mm)	Shock absorber ⁽¹⁾	Hanger bracket properties					Axle type
			Unladen without air (mm)	Laden without air (mm)			Hanger bracket type ⁽²⁾	H _i Hanger bracket center (mm)	D (mm)	G (mm)	F (mm)	
DFB 27 / 268 00/F2 36k	270	250-290	150	135	0	A3	F2	268	72	63	56.5	CDRC 4220 09 CDR 4220 09 SDR 4220 09 SDR 4220 12 CD 4345 09 CDC 4345 09 SD 4345 09

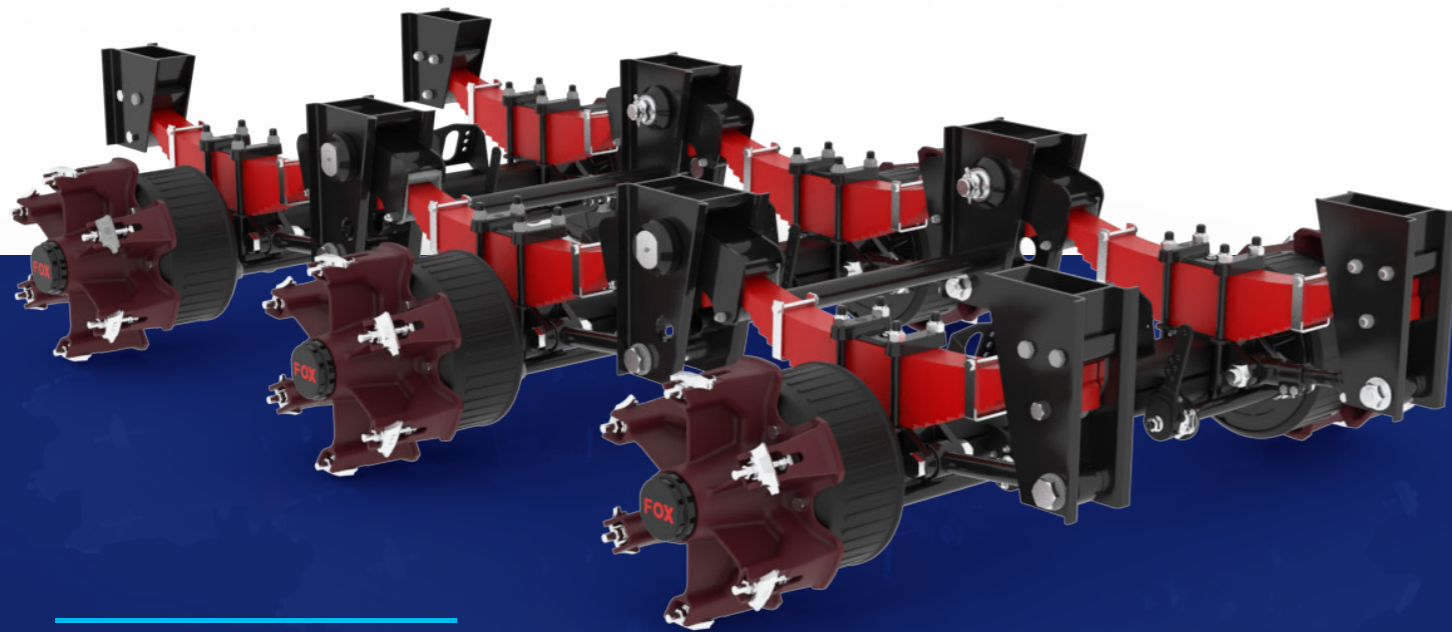
(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

(1) Sheet No. of Shock absorber

(2) Sheet No. of Hanger bracket

Type identification for mechanical suspension system



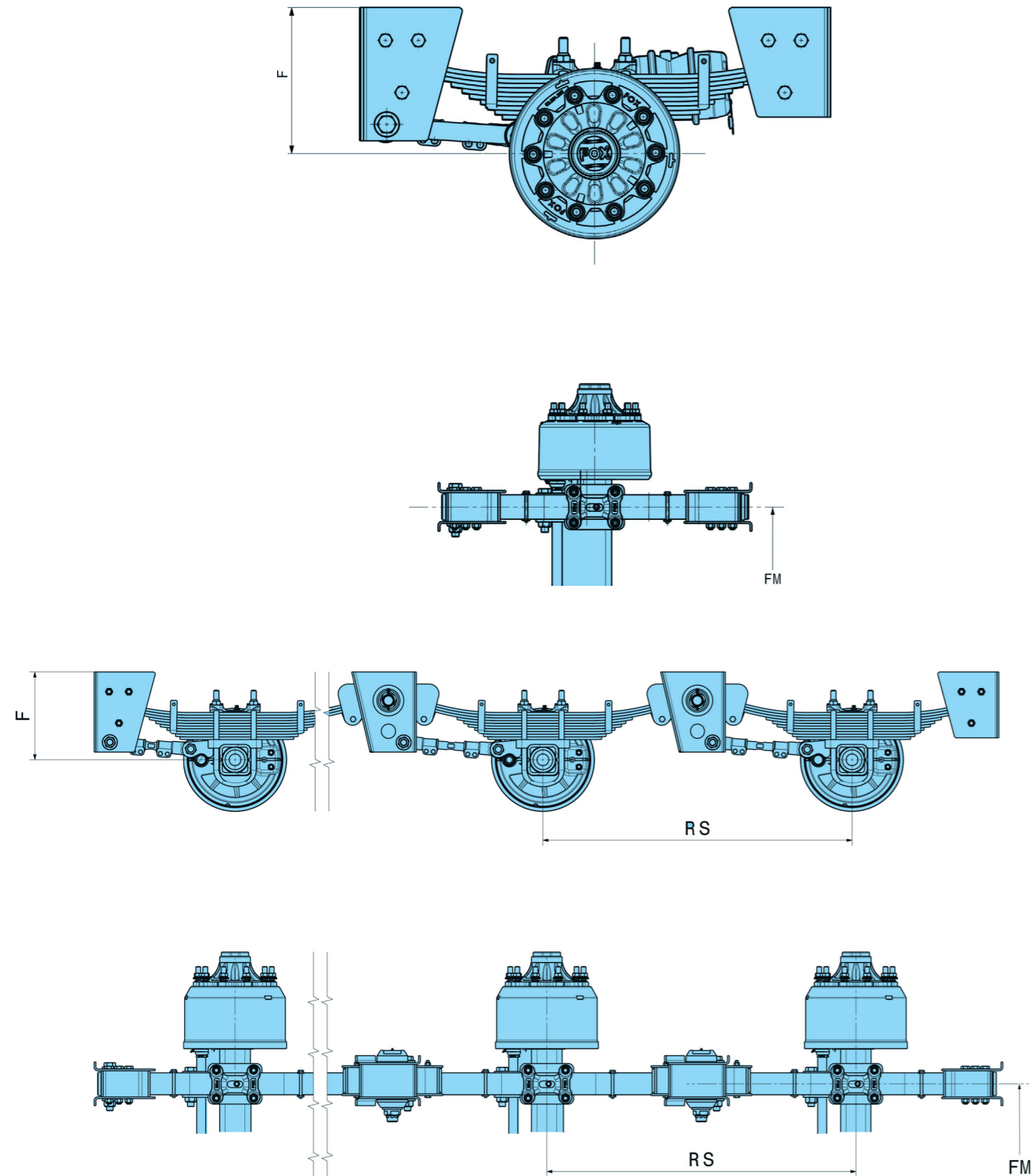
D4

CHAPTER 4

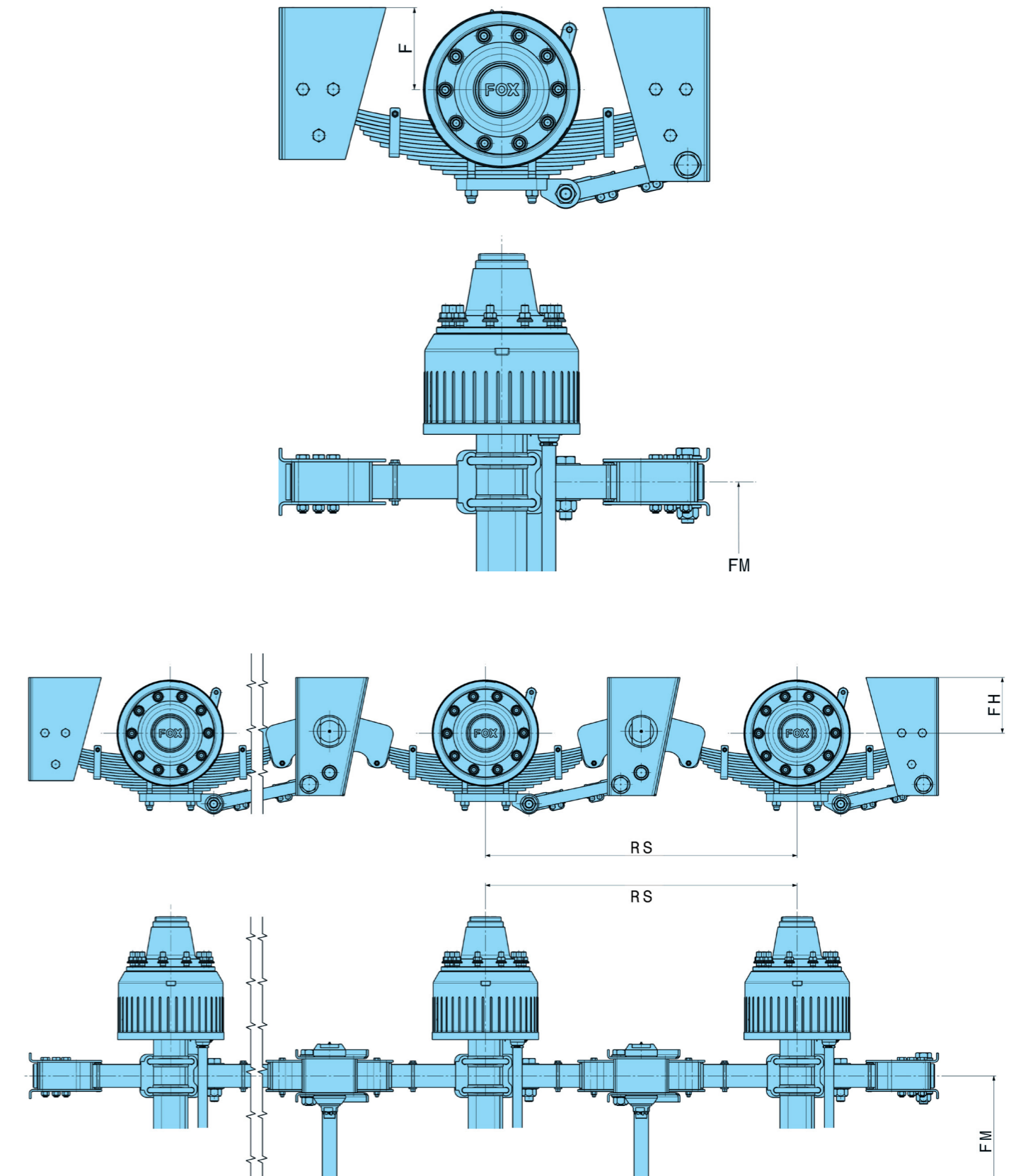
Mechanical suspension system

MS	B	243	16
MS	T	500	16
XX	X	XXX	XX
Axle Load (t)			
Hanger bracket center (mm)			
05			
10			
15			
Multi - leaf spring installation			
T: Leaf spring in top of the axle			
B: Leaf spring in bottom of the axle			
Suspension type			
MS: Mechanical Suspension			

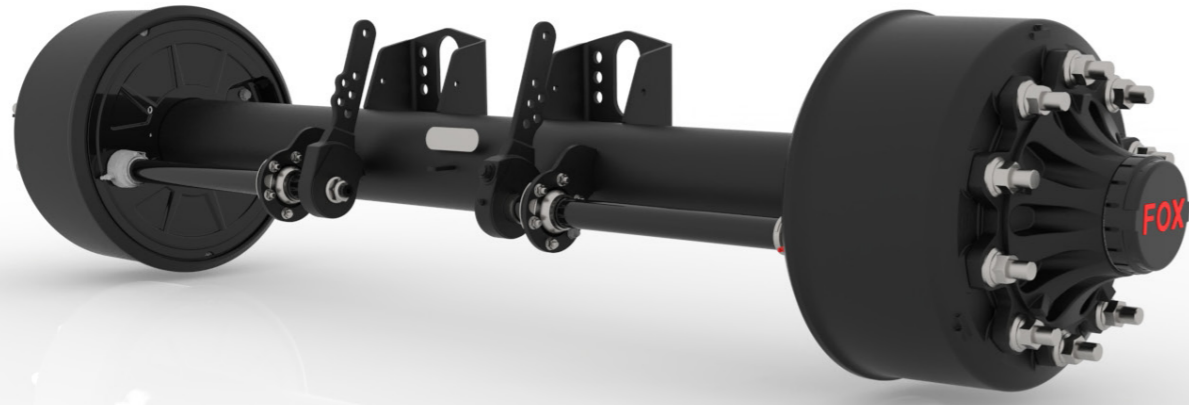
Axles with Mechanical suspension systems for 9 - 12t
MST series:



Axles with Mechanical suspension systems for 16 t
MST and MSB series:



Axles with Mechanical suspension systems for 9- 12 t MST series:



Mechanical suspension type	Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	GM (mm)	Wheel base (RS) (mm)	Wheel connection			Tyre example	F (mm)	Multi -leaf spring type	Overall width (P) (mm)
								Wheel stud	ØH/K (mm)	Offset/M				
MST 400 / 09	SDR 4220 09 CDR 4220 09	9	SN 4220	1860	900	247	1410	10-M22x1.5	280.8 / 335	320	275 / 70 R22.5	400	ML1	2103
MST 400 / 09	SDR 4220 09 CDR 4220 09	9	SN 4220	2050	1200/ 1300	465	1410	10-M22x1.5	280.8 / 335	0	385 / 65 R22.5	400	ML1	2321
MST 500 / 09	SDR 4220 09 CDR 4220 09	9	SN 4220	2040	1200/ 1300	391	1360	10-M22x1.5	280.8 / 335	0	385 / 65 R22.5	500	ML4	2311
MST 500 / 12	SDR 4220 12	12	SN 4220	1860	900	247	1410 / 1500	10-M22x1.5	280.8 / 335	330	295 / 80 R22.5	500	ML2	2103
MST 500 / 12	SDR 4220 12	12	SN 4220	1810	900	270	1410 / 1500	6-M20x21	*	350-360	12 R 220 - 12 R24	500	ML2	2122
MST 500 / 12	SDR 4220 12	12	SN 4220	2050	1300	465	1410 / 1500	10-M22x1.5	280.8 / 335	0	445 / 65 R22.5	500	ML2	2321
MST 500 / 12	SDR 4220 12	12	SN 4220	2300	1150/ 1200	608	1410 / 1500	10-M22x1.5	280.8 / 335	0	385 / 65 R22.5	500	ML2	2550

(*) Trilix type

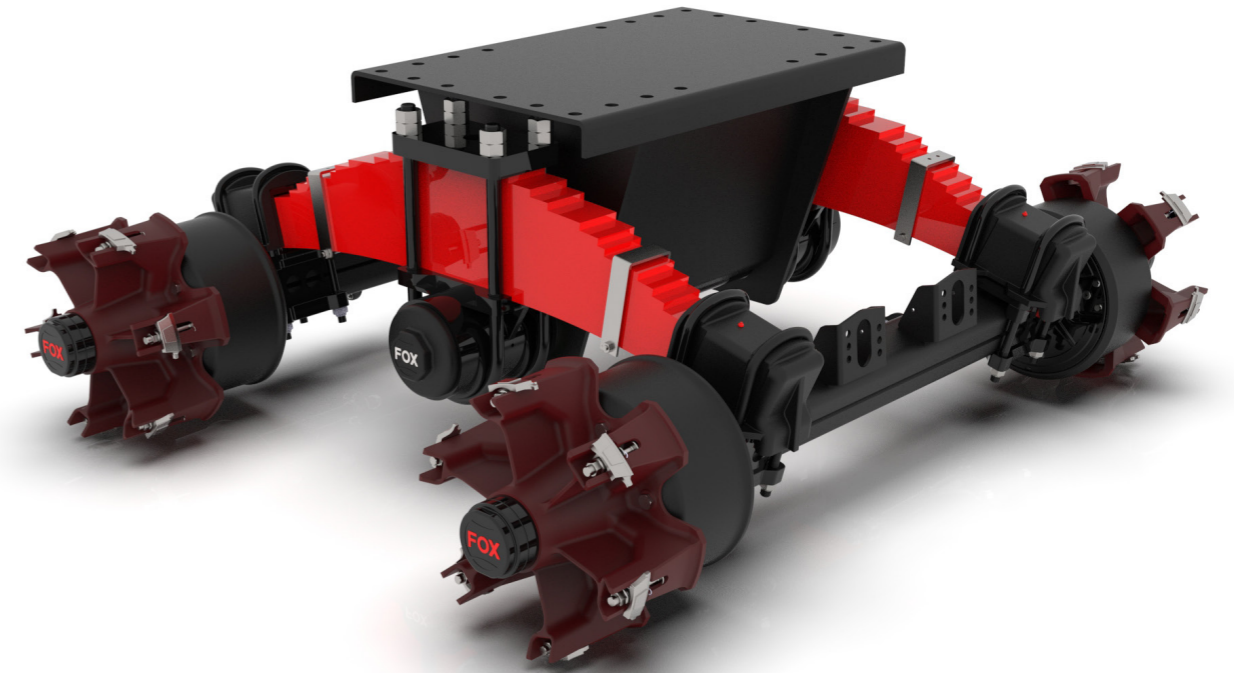
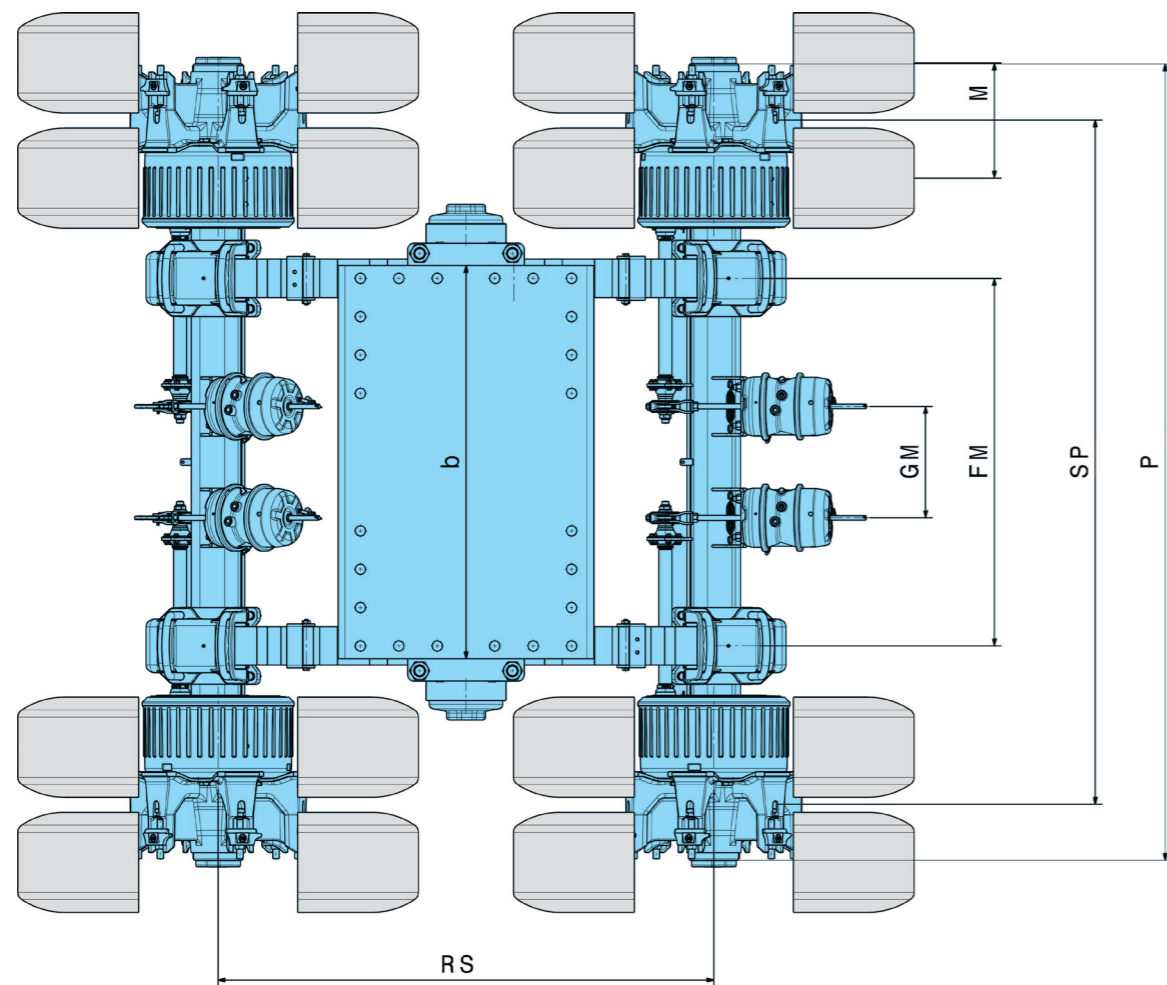
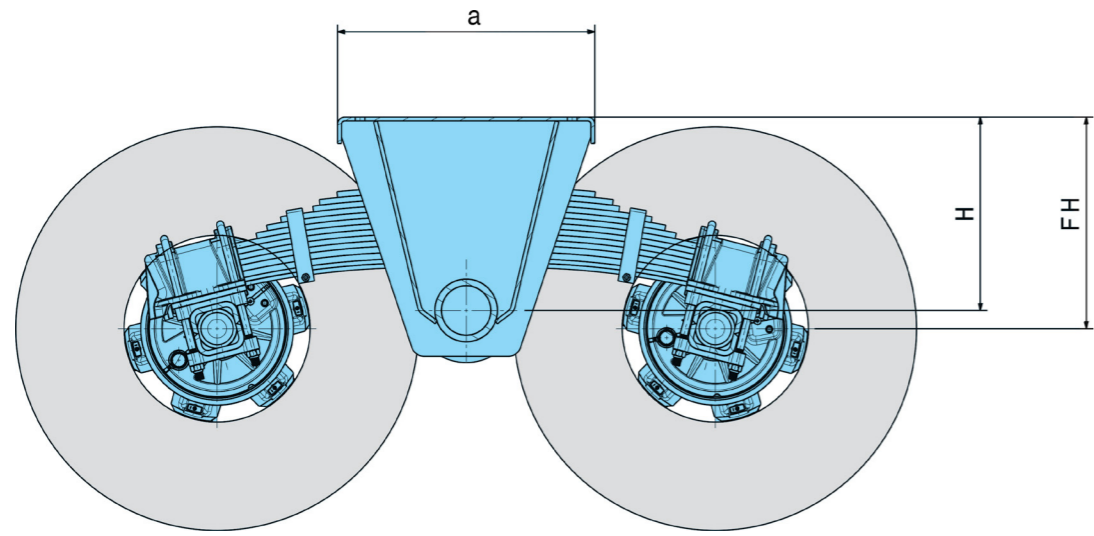
Axles with Mechanical suspension systems for 16 t MST and MSB series:



Mechanical suspension type	Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	GM (mm)	Wheel base (RS) (mm)	Wheel connection			Tyre example	F (mm)	Multi -leaf spring type	Overall width (P) (mm)
								Wheel stud	ØH/K (mm)	Offset/M				
MST 500 / 16	SDR 4220 16	16	SN 4220	1850	900	219	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	500	ML3	2253
MST 500 / 16	SDR 4220 16	16	SN 4220	1950	900	319	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	500	ML3	2353
MST 500 / 16	SDR 4220 16	16	SN 4220	2250	1150/ 1200	608	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	500	ML3	2653
MST 500 / 16	SDR 4220 16	16	SN 4220	2380	1400	753	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	500	ML3	2783
MST 500 / 16	SDR 4220 16	16	SN 4220	1870	900	220	1360 / 1410	6-M20x21	*	360	12 R24	500	ML3	2265
MST 500 / 16	SDR 4220 16	16	SN 4220	1950	900	300	1360 / 1410	6-M20x21	*	360	12 R24	500	ML3	2345
MSB 243 / 16	SDR 4220 16	16	SN 4220	1850	900	219	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	243	ML3	2253
MSB 243 / 16	SDR 4220 16	16	SN 4220	1950	900	319	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	243	ML3	2353
MSB 243 / 16	SDR 4220 16	16	SN 4220	2250	1150/ 1200	608	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	243	ML3	2653
MSB 243 / 16	SDR 4220 16	16	SN 4220	2380	1400	753	1360 / 1410	10-M22x1.5	280.8 / 335	360	12 R24	243	ML3	2783
MSB 243 / 16	SDR 4220 16	16	SN 4220	1870	900	220	1360 / 1410	6-M20x21	*	360	12 R24	243	ML3	2265
MSB 243 / 16	SDR 4220 16	16	SN 4220	1950	900	300	1360 / 1410	6-M20x21	*	360	12 24	243	ML3	2345

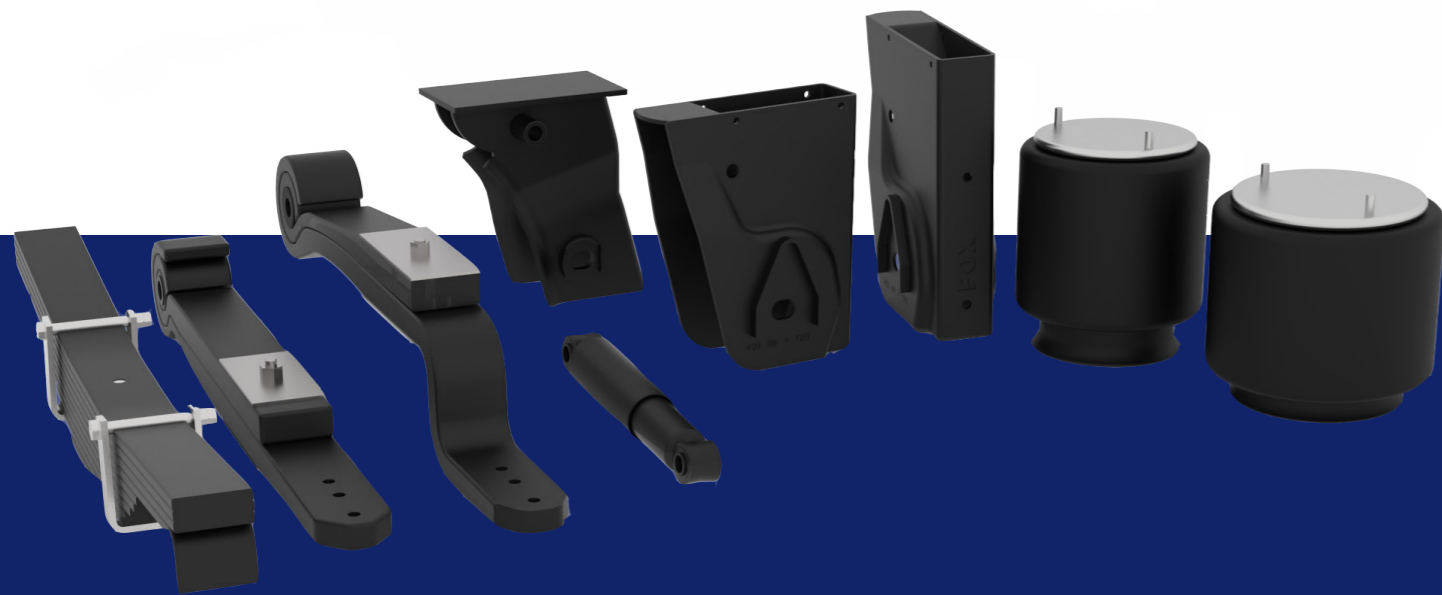
(*) Trilix type

Bogie Axle



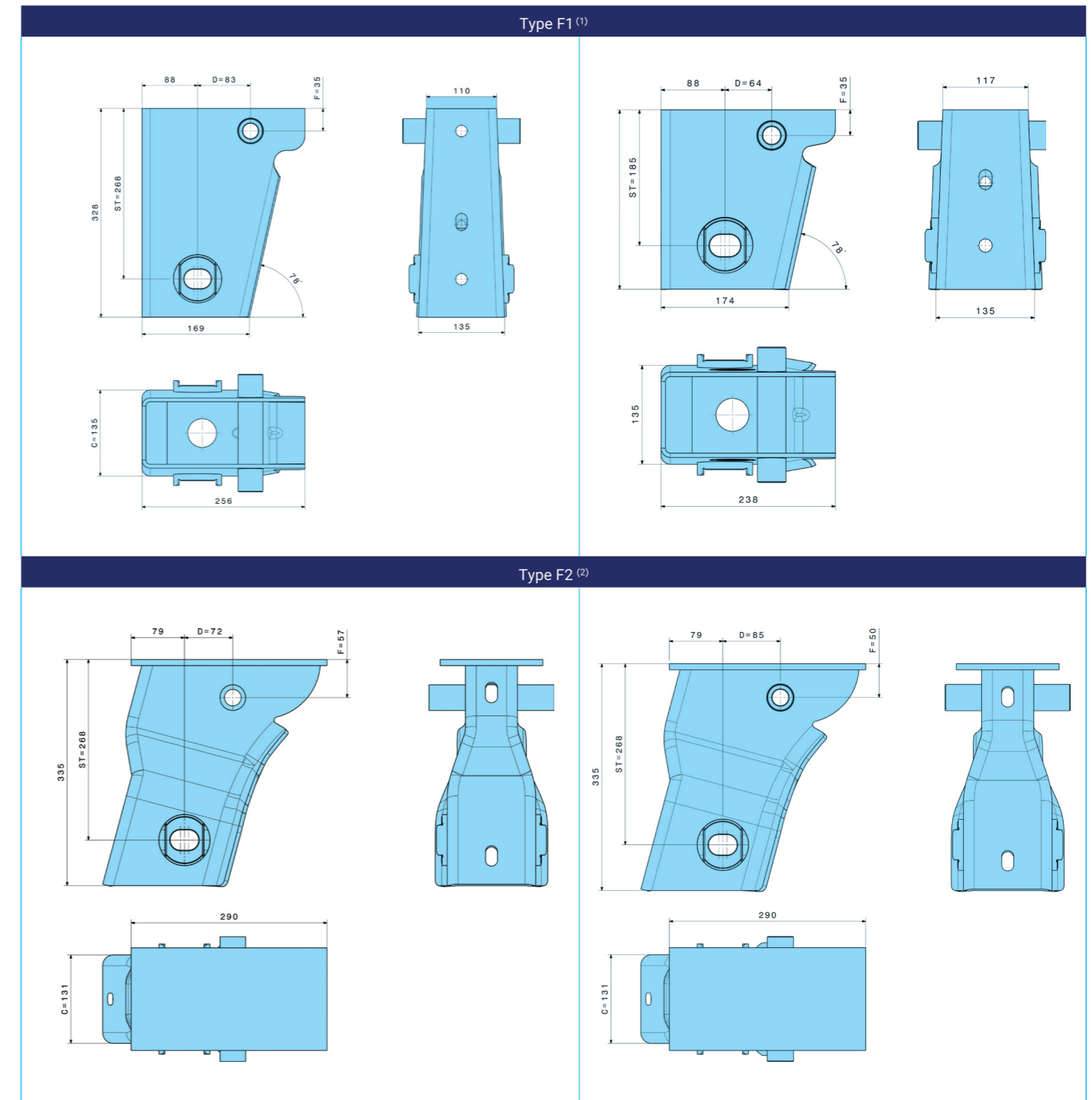
Axle type	Permitted axle load up to 105 km/h (t)	Brake	Track width (SP) (mm)	Spring Centre (FM) (mm)	GM (mm)	Wheel base (RS) (mm)	Axle cross section (mm)	Wheel connection			FH (mm)	High mounting bracket (Axbox) (mm)	Tyre example	Overall width (P) (mm)
								Wheel stud	ØH/K (mm)	Offset/M				
SDR 4220 16	2x16	SN 4220	2150	1150	378	1550	150x150	6-M20x2 10-M22x1.6	— 280.8 / 335	320	656	800x1230x600	12 R24	2813
SDR 4220 16	2x16	SN 4220	1950	900	321	1550	150x150	6-M20x2 10-M22x1.6	— 280.8 / 335	0	660	800x960x600	12 R24	2560
SDR 4220 16	2x16	SN 4220	1810	900	245	1550	150x150	6-M20x2 10-M22x1.6	— 280.8 / 335	0	656	800x980x600	12 R24	2480

Hanger bracket overview



15

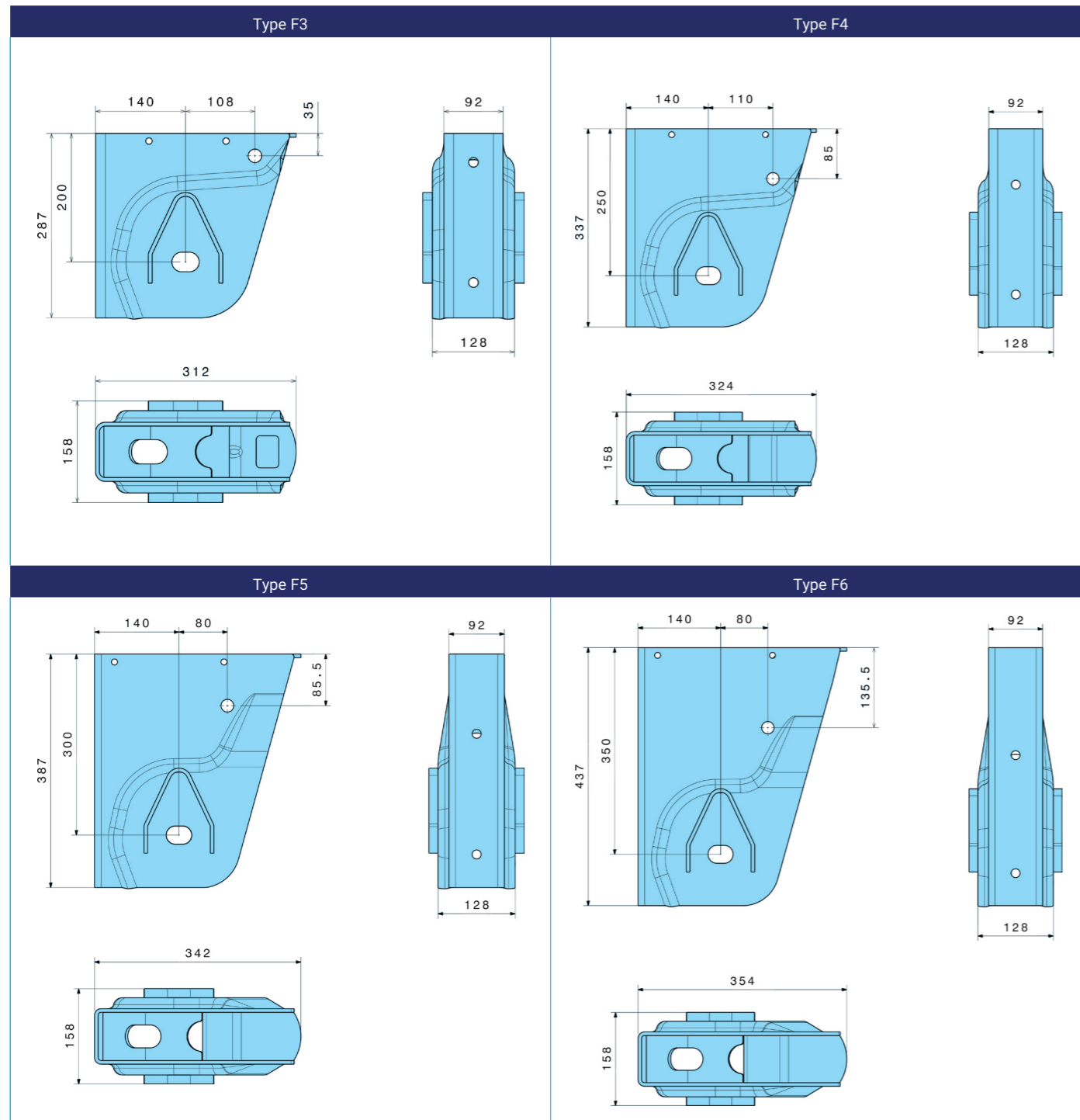
CHAPTER 6
Appendix



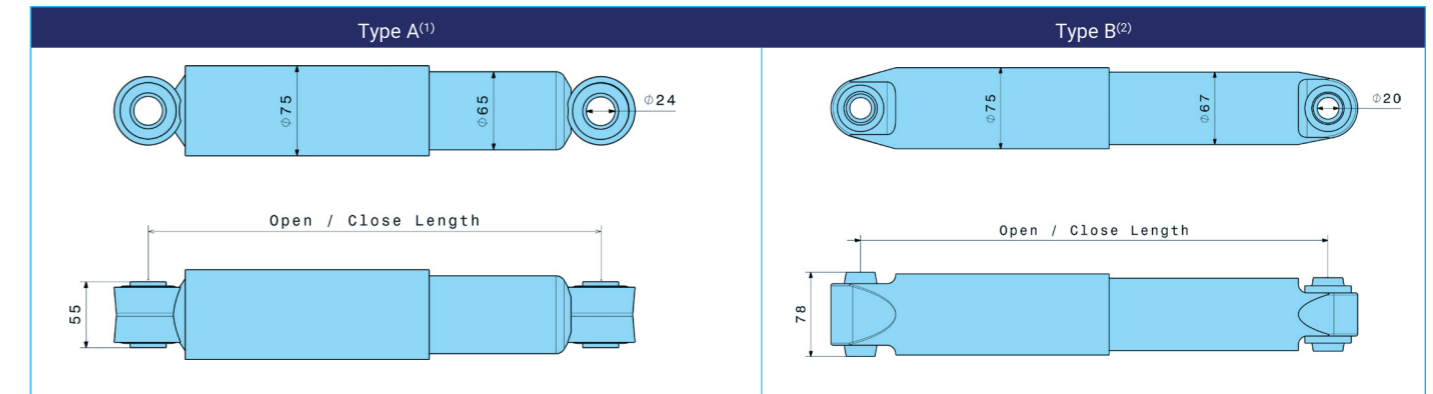
(1) 100 mm trailing arm width

(2) Air suspension hanger brackets with 8 mm wall thickness / Single and double leaf trailing arms available

Hanger bracket overview



Shock absorber overview



	Close Length (mm)	Open Length (mm)	Stroke (mm)
A1	325	495	170
A2	292	429	137
A3	351	541	190

	Close Length (mm)	Open Length (mm)	Stroke (mm)
B1	278	413	135
B2	315	491	176
B3	335	532	197
B4*	318	484	166
B5	300	455	155

*: Custom design

(1) For leaf spring type suspension systems

(2) For intra type suspension system

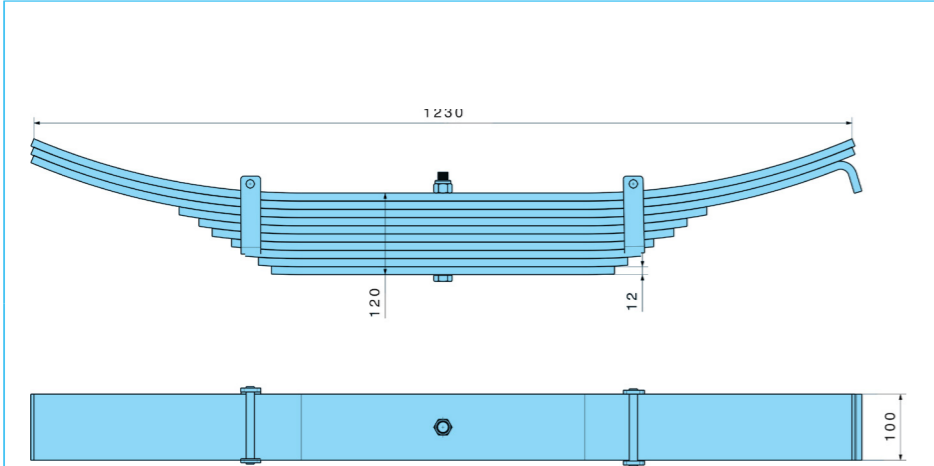
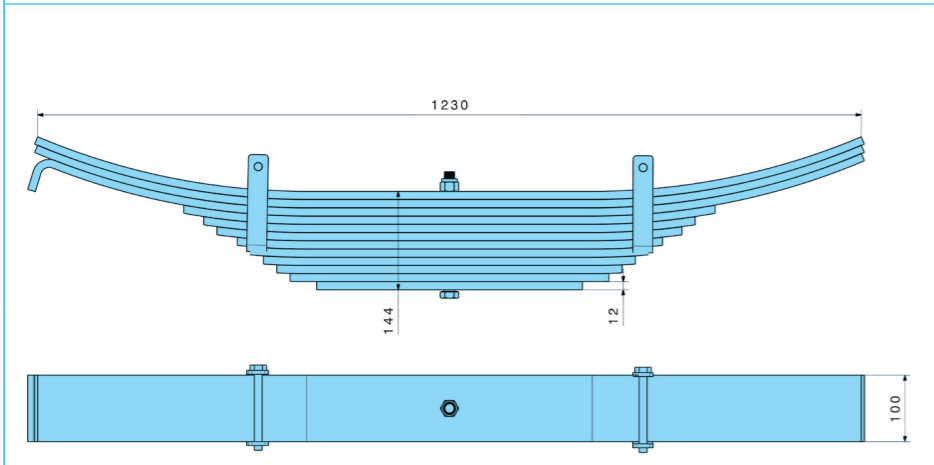
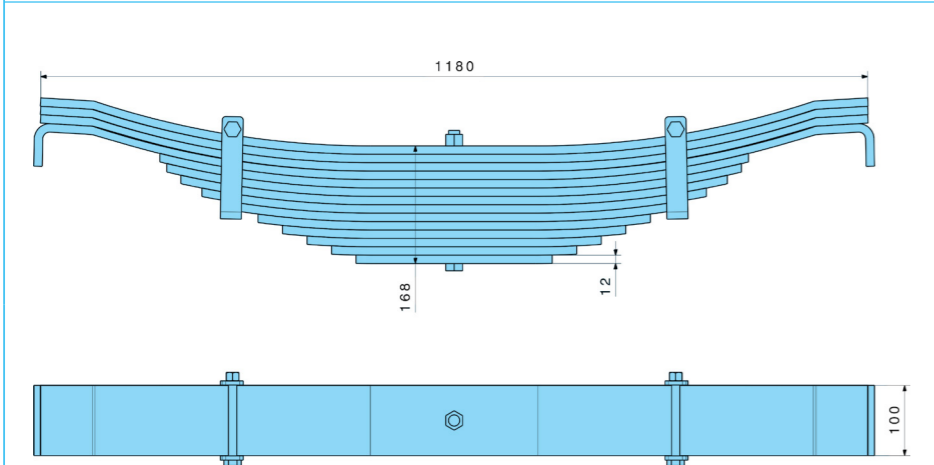
Spring Overview

	<p>Single Z</p>	<p>S1</p>
	<p>Double Z</p>	<p>S2</p>
	<p>Single leaf</p>	<p>S3</p>

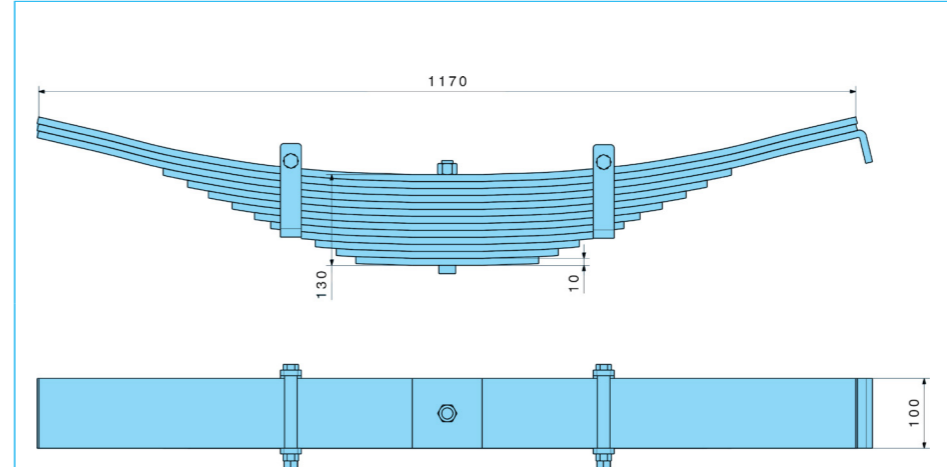
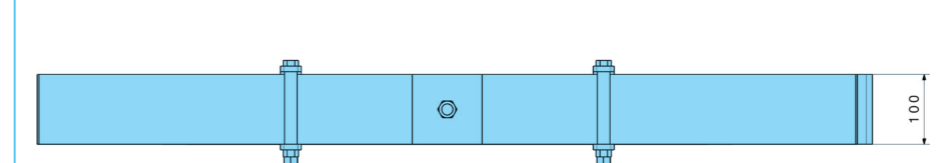
Spring Overview

	<p>Double leaf</p>	<p>S4</p>
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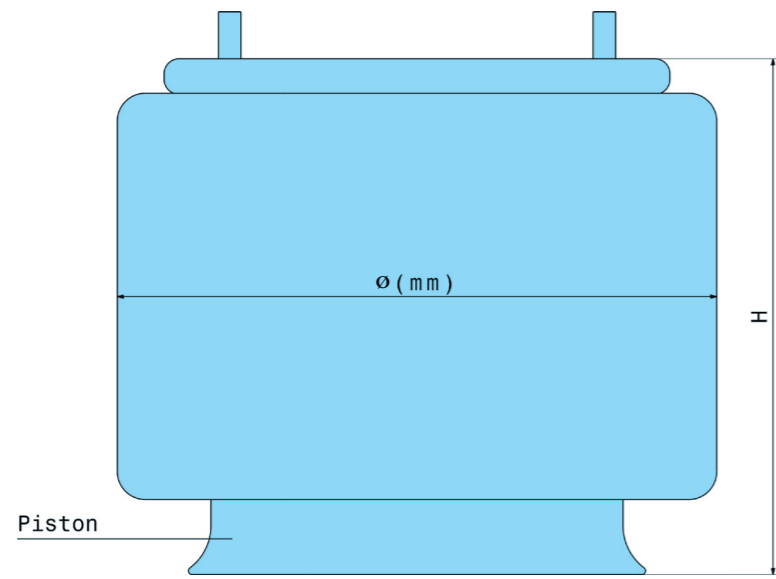
Multi Leaf Spring Overview

 <p style="text-align: center;">Layer: 10</p>	<p>Multi Leaf Spring 9 t</p>	<p>ML1</p>	
 <p style="text-align: center;">Layer: 12</p>	<p>Multi Leaf Spring 12 -14 t</p>		<p>ML2</p>
 <p style="text-align: center;">Layer: 14</p>	<p>Multi Leaf Spring 16 t</p>		

Multi Leaf Spring Overview

 <p style="text-align: center;">Layer: 13</p>	<p>Multi Leaf Spring</p>	<p>ML4</p>
	<p>Wheel base 1360 9t</p>	

Air Bag Overview

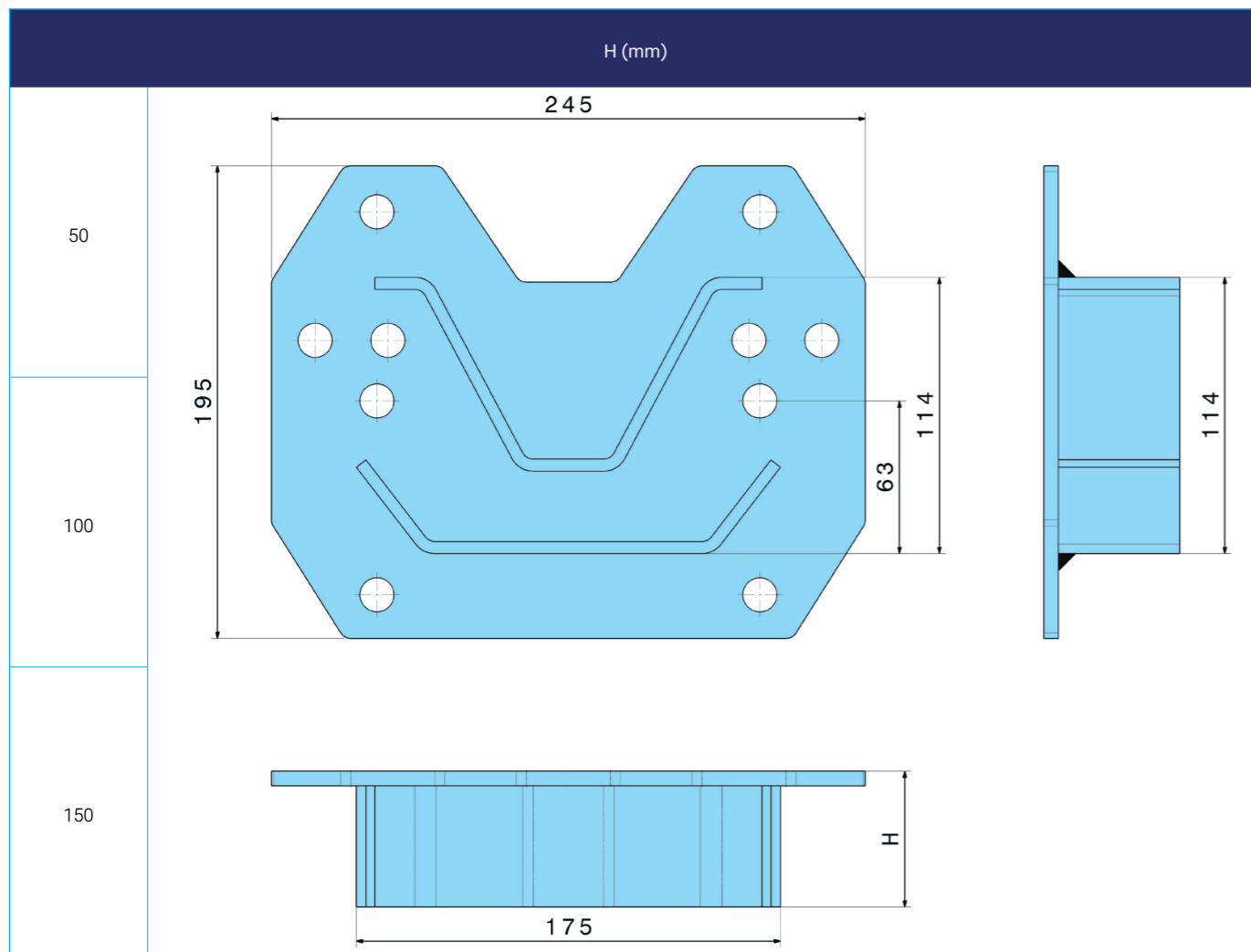


Description	Article number-code	Top view
2619V Hmin= 190 mm Hmax= 560 mm $\varnothing = 300$ mm Plastic piston	619	
2919V Hmin= 190 mm Hmax= 560 mm $\varnothing = 350$ mm Plastic piston	919	
2924V Hmin = 230 mm Hmax = 675 mm $\varnothing = 350$ mm Plastic piston	924	
2927V Hmin = 250 mm Hmax = 795 mm $\varnothing = 350$ mm Plastic piston	927	

Description	Article number-code	Top view	Bottom view
Hmin = 220 mm Hmax = 680 mm $\varnothing = 300$ mm Plastic piston	813		
Hmin = 220 mm Hmax = 550 mm $\varnothing = 300$ mm Plastic piston	30K		
Hmin = 268 mm Hmax = 690 mm $\varnothing = 350$ mm Plastic piston	36K		

Air bag brackets Overview

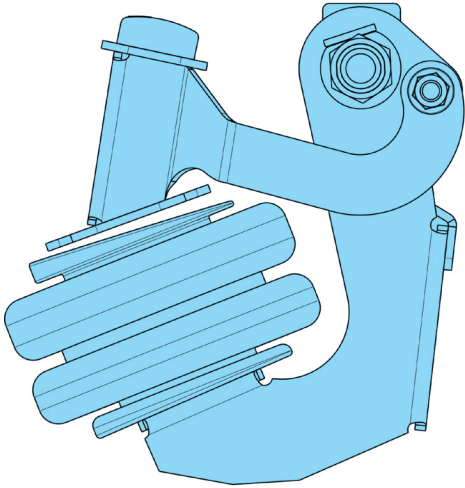
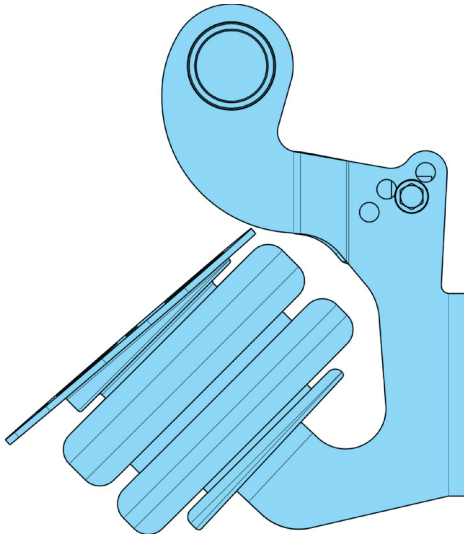
Standard air bag bracket: Steel



Lift Air bag Overview

Description	Article number-code	Lift air bag	Bottom view
H=160 mm ø1 = 160 mm ø2 = 220 mm	A2 220/K02		
			Top view

Lift arm Overview

Article number-code	Lift arm	Hanger bracket Type
AL1	 <p>A technical line drawing of a lift arm (AL1) in blue. It features a curved upper section with two circular mounting points, a central vertical support, and a lower section with five horizontal, parallel bars. A small horizontal bar is attached to the top of the vertical support.</p>	F1-F2
AL2	 <p>A technical line drawing of a lift arm (AL2) in blue. It has a curved upper section with a circular mounting point, a central vertical support, and a lower section with five horizontal, parallel bars. The upper section is more rounded than in AL1.</p>	F3 - F4 - F5 - F6