



VDL Weweler



Strength through cooperation







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VDL Weweler

Leading through technology

ESTABLISHED IN 1924 IN APELDOORN BY DIRK WEWELER, DUTCH COMPANY WEWELER STARTED OFF AS A WHOLESALE BUSINESS SELLING REPLACEMENT PARTS FOR HEAVY COMMERCIAL VEHICLES. IN 1948, THE COMPANY STARTED PRODUCING SPRINGS AND LATER MOVED ON TO DESIGNING AIR SUSPENSION SYSTEMS.

SINCE 2001 VDL WEWELER BECAME PART OF VDL GROEP, AN INTERNATIONAL INDUSTRIAL FAMILY-OWNED COMPANY, FOUNDED IN 1953 WITH FOUR MAIN DIVISIONS. IT IS A CONGLOMERATE OF FLEXIBLE, INDEPENDENT COMPANIES, EACH WITH ITS OWN SPECIALTY. VDL WEWELER BELONGS TO THE FINISHED PRODUCTS DIVISION. THE OTHER DIVISIONS ARE CAR ASSEMBLY, BUSES & COACHES AND SUBCONTRACTING. THE STRENGTH OF VDL GROEP LIES IN THE MUTUAL COOPERATION BETWEEN THE COMPANIES.

VDL WEWELER HAS APPROXIMATELY 180 EMPLOYEES AND OVER THE LAST NEARLY 100 YEARS HAS DEVELOPED INTO A LEADING INTERNATIONAL DESIGNER AND MANUFACTURER OF (AIR) SUSPENSION SOLUTIONS FOR TRAILERS, TRUCKS AND BUSES.

VDL WEWELER PRODUCES, TESTS AND SELLS AIR SUSPENSION SYSTEMS, AXLE LIFT SYSTEMS AND PARABOLIC SPRINGS.

VDL Weweler's suspension system is characterised by a spring steel parabolic trailing arm, which acts as an integrated roll stabiliser and as a guiding arm for the axle. The spring steel parabolic trailing arms are manufactured and tested in-house and the suspension system is supplied in a modular, do-it-yourself kit.



ADVANCED TECHNOLOGY GUARANTEES QUALITY

VDL Weweler's policy is intended to stimulate innovation of products and production methods, with a focus on cooperation, sustainability, quality, professionalism as well as cost optimization. This approach has resulted in a highly automated production facility, in which robotics play a vital role and where advanced logistics enable large Kanban and Just In Time deliveries around the globe.

Furthermore this has created durable, state of the art, reliable and cost-effective products that are being used by leading OE axle, trailer and truck & bus manufacturers worldwide.

To constantly provide superior value to the customers, VDL Weweler continuously seeks the best solution by carefully listening to the customers' wishes and developing those wishes into efficient high-tech solutions in a creative and flexible manner.

PROFESSIONALISM MAKES THE DIFFERENCE

VDL Weweler has a flat organizational structure with short lines of communication. Continuous effort is put into improving the existing no-nonsense culture in which informal, personal, professional and open communication predominates. The company's culture is best described by the collective VDL credo: "Strength through co-operation".

As within all VDL companies, the heart of VDL Weweler is formed by the dedicated employees and the expert craftsmanship at all levels. VDL Weweler has attained and maintained their competitive position through the efforts of motivated and flexible professionals.

VISION

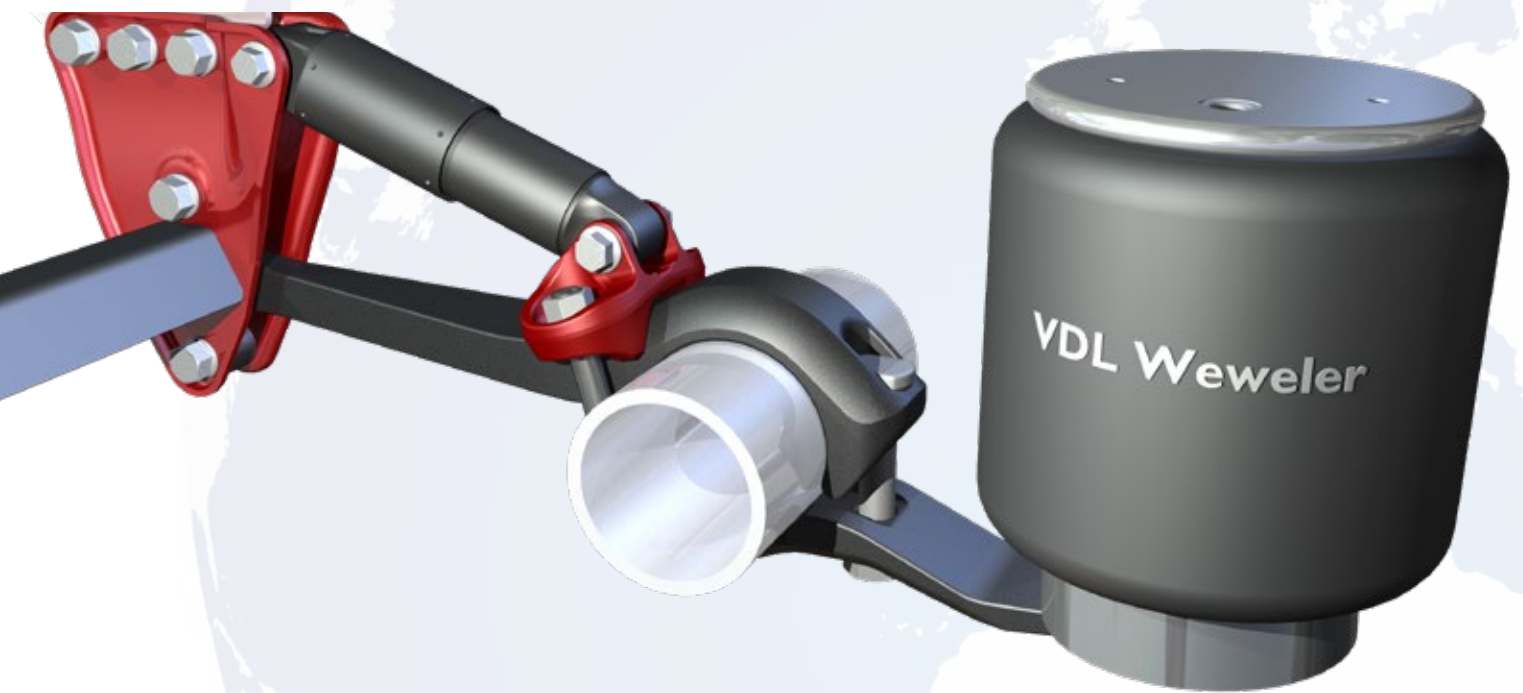
VDL Weweler's vision is to supply the world's transport industry with (customer specific) Modular Bolt-on® Solutions (MBS®).

Modular Bolt-On® Solutions all share the same criteria, by being modular, innovative, light weight, multi-purpose and above all have a philosophy, that is based on minimal components,

cost-effectiveness, a lean supply chain and bolting instead of welding.

By adapting this philosophy, VDL Weweler have created certain "building blocks", that form the basis for every Modular Bolt-On® Solution, and offers a high level of flexibility without the necessity to test every single suspension variety. By using certain building blocks in different configurations, VDL Weweler can create customer or region specific solutions, that are maintenance-friendly and provide the customer with the added-value they are looking for.

Modular Bolt-on® air suspension solutions for example can now combine the finesse of an air suspension system with the simplicity of a mechanical one, creating the perfect package, that can be put together at the customers convenience, without the need for special tooling or special skills, but still offering the possibility to change whatever part needs replacing. (even an axle beam.)



VDL Weweler Leading through technology

THE CURRENT CHAPTER

To maintain the status of technological expert, VDL Weweler officially opened a new high-tech plant in Apeldoorn in 2013. With its unique one-off machinery and advanced robotics, state-of-the-art test facility, optimum logistics, a critical quality policy and world-class craftsmanship, the production plant provided the new basis to ensure VDL Weweler's customers receive the added-value they so desire and deserve.

The impressive 22,000 m² complex in the upmarket Ecofactorij district in Apeldoorn, some 80km west of the German border, is home to a world-unique innovative suspension arm production line that has allowed VDL Weweler to completely reinvent the MBS[®] concept for each target market.

The new production line is capable of three-dimensional metal shaping, presenting a whole range of new design opportunities to the production team.

Using the very latest in 3D design and rolling & forming technology, VDL Weweler creates very strong but cost-effective and lean flexible trailing arms while increasing the product's overall functionality. One of the best examples of such a 3D system has been running successfully in the Siberian mining area for the last 4 years.

The new three-dimensional metal shaping process does not only simplify the engineering process, but also helps improve VDL Weweler's environmental footprint: By preventing waste throughout the forming process and consciously moving to induction-heating, VDL Weweler saves up to 35% of energy for each suspension produced in the new factory and reduces waste to below 1%.



THE NEW CHAPTER

One of VDL Weweler's core strengths is the ability to continuously innovate and prepare for a whole range of future scenarios to ensure not getting caught off guard.

With this in mind and the emerging markets seeking to scale up fast, VDL Weweler is already finalising a new generation of the Modular Bolt-On[®] Solution (MBS[®]).

The concept behind the new generation MBS[®] system is as simple as it is ingenious. The clamping area – including the trailing arm and VDL Weweler's world-unique, non-welded, low weight axle clamping system – is standardised, meaning it's easy to stock and replace. At the same time VDL Weweler still leaves room to customise each system by choosing a conventional or Air Damping solution, or by adding a Bolt-on[®] axle lift.

By way of a simple, bolted connection plate that can be adjusted by the OEM itself without having to interfere with the core suspension design, chassis integration is customisable too. It's a complete package capable of setting a new industry standard.

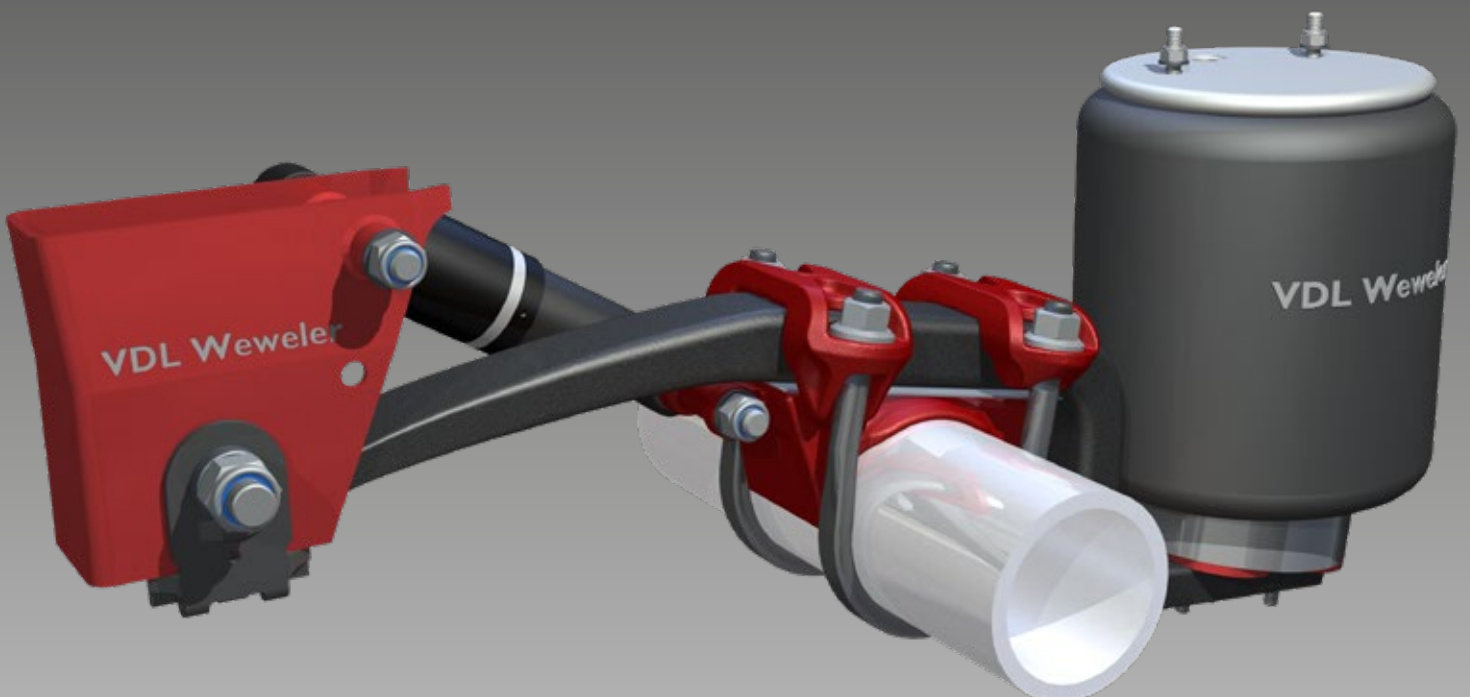
To keep the package affordable, the trailing arm with the integrated axle clamp mechanism is now rolled instead of forged, without compromising on performance. The system is still very much part of the MBS[®] family, and as such superior to a fabricated solution. Especially in countries like China, where the road network can be incredibly demanding on the undercarriage, VDL Weweler needs a solution that is flexible enough to handle the forces that act upon it. As the VDL Weweler's rolled trailing arms are made from flexible spring steel and because welding is avoided, there is less risk of stress cracking in the clamping and axle.

Confident it will set a new industry standard in the developing world, VDL Weweler is planning to set up a dedicated production line for the new 'international' MBS[®] variant. Current planning is for a 2021 opening, but can be brought forward should demand develop differently. Until then, the system will be produced in the company's world-unique manufacturing plant in Apeldoorn, The Netherlands.

FEATURES & BENEFITS

- MBS®-W75 is a compact designed lightweight standard range suitable for 9t. Ø127mm, □120 or thin wall Ø146mm axles and suitable for a wide range of trailers operating on highway conditions. The MBS®-W95 is a variation on the W75 range suitable for the more demanding conditions and can be used on a wide range of trailers operating on/off highway.
- Both ranges make use of an axle seat that only requires welding on one side. The □120 clamping is bolted.
- The axle seats are interchangeable between both ranges.
- Both ranges are also available for 9t. Ø146mm groove axles in combination with the clamped Ø146 axle seat.
- Full ride height range can be achieved by using various hanger brackets and pedestals.
- Weight optimization is achieved by 2D rolling of the flexible high strength spring steel trailing arms.
- The tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width. The hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis. This bracing is mandatory on the MBS®-W95 range.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing, fully interchangeable air springs and low & easy maintenance.

MBS-W

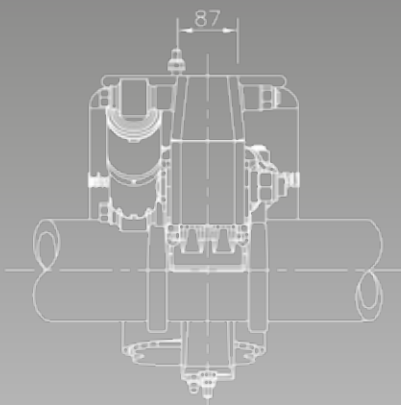
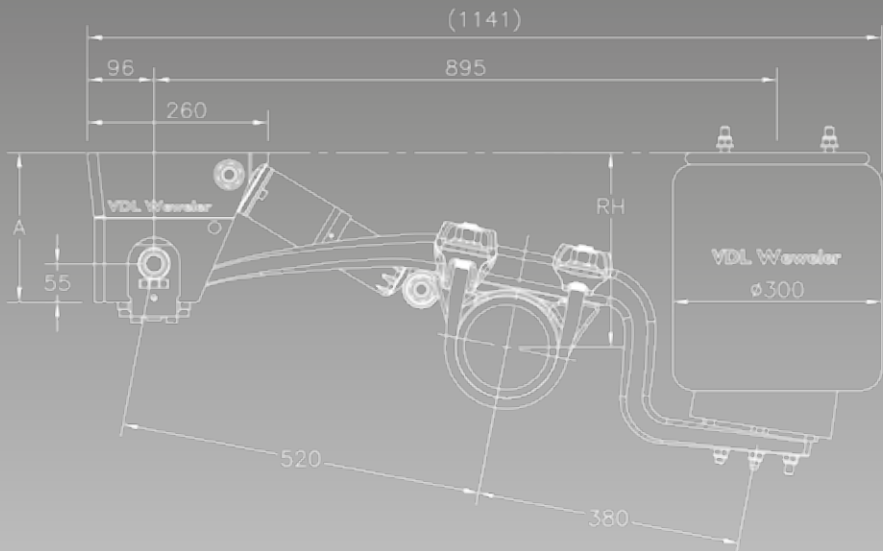
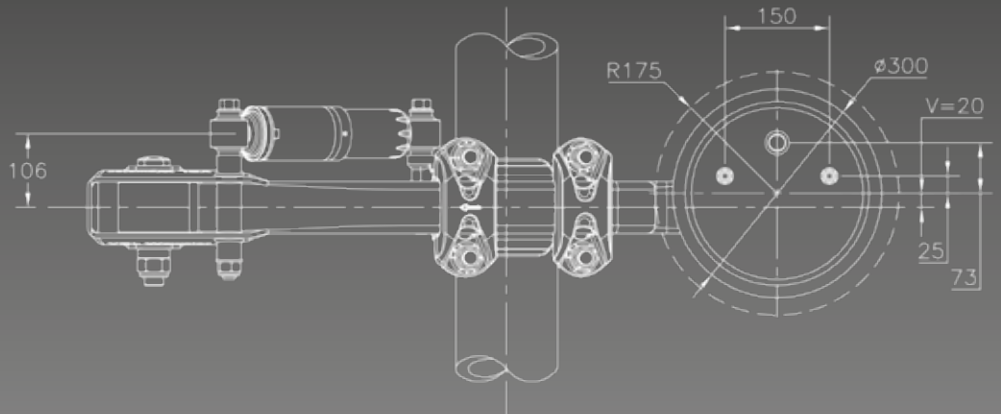


SPECIFICATIONS

- Maximum axle load: 9t
- Single leaf trailing arm: 75x54mm / 95x49mm
- Trailing arm dimensions: L1 = 520mm / L2 = 330mm & 380mm
- Available axle clampings: Ø146mm (welded & clamped), Ø127mm (welded), □120mm (clamped)
- Ride height range: 280-505mm
- Air spring options: Ø300mm & Ø335mm
- Air spring offset options: 20mm / 45mm
- System weight: ≥ 135kg
- Optional Bolt-On® axle lift
- Optional Bolt-On® Splitter®
- Optional in the future with Air damping



Modular Bolt-On Solutions



FEATURES & BENEFITS

- MBS®-W Tipper is a model within the MBS®-W range, specifically design for 'Tipper' and 'Container' trailers operating on/off highway conditions.
- The new range makes use of an axle seat that only requires welding on one side..
- The range is also available for 9t. Ø146mm groove axles in combination with the clamped Ø146 axle seat.
- Weight optimization is achieved by 2D rolling of the flexible high strength spring steel trailing arms.
- The tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width. The hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing, fully interchangeable air springs and low & easy maintenance.

MBS-W Tipper

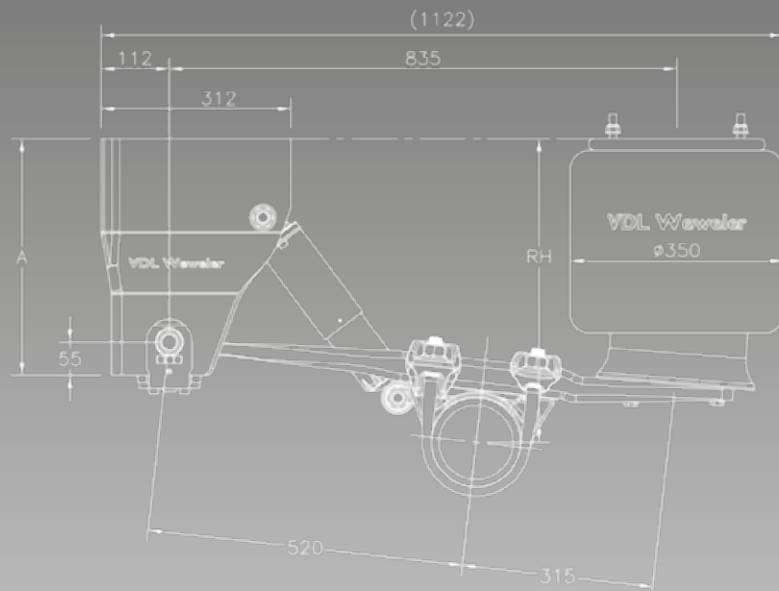
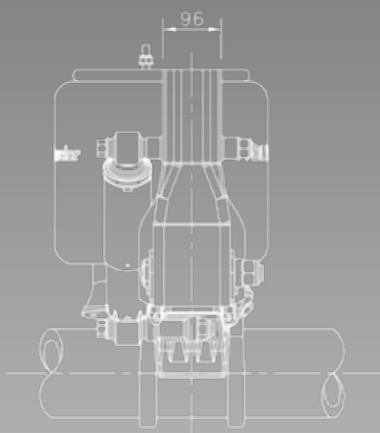
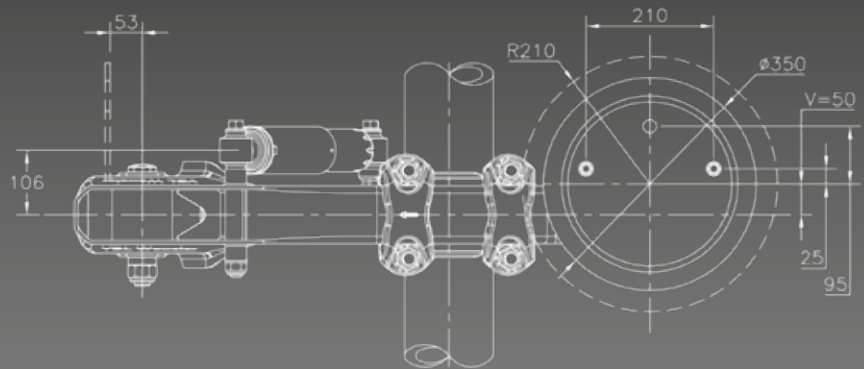


SPECIFICATIONS

- Maximum axle load: 9t
- Single leaf trailing arm: 95x49mm
- Trailing arm dimensions:
L1 = 520mm / L2 = 315mm
- Available axle clampings:
Ø146mm (welded & clamped),
Ø127mm (welded)
- Ride height range: 455-550mm
- Air spring options:
Ø300mm, Ø335mm & Ø350mm
- Air spring offset options:
- 20mm (Ø300mm / Ø335mm)
- 50mm / 90mm (Ø350mm)
- System weight: ≥ 150kg
- Optional Bolt-On® axle lift



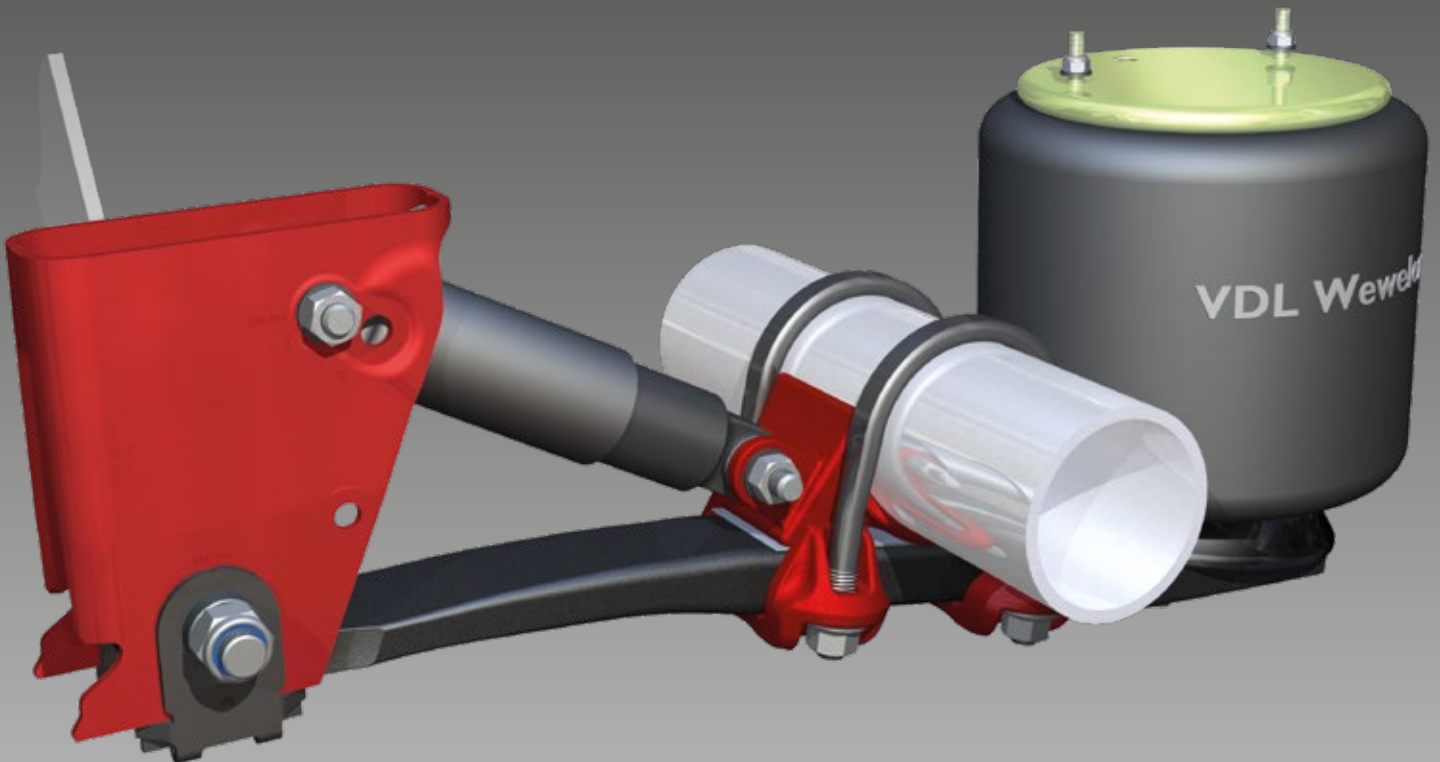
Modular Bolt-On Solutions



FEATURES & BENEFITS

- MBS®-Mega is a specific model within the MBS® range, designed for long stroke “Mega” or ‘Huckepack’ applications.
- This 9t. Mega solution uses a long stroke airbag, which allows for a multi ride height suspension.
- Weight optimization is achieved by 2D rolling of the flexible high strength spring steel trailing arms and the use of open hanger brackets with integrated casted bracings.
- The tapered design of the hanger brackets offers great compatibility and allows for a more optimum frame width.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing, fully interchangeable air springs and low & easy maintenance.
- The MBS®-Mega can optionally be fitted with a Splitter®.

MBS-Mega

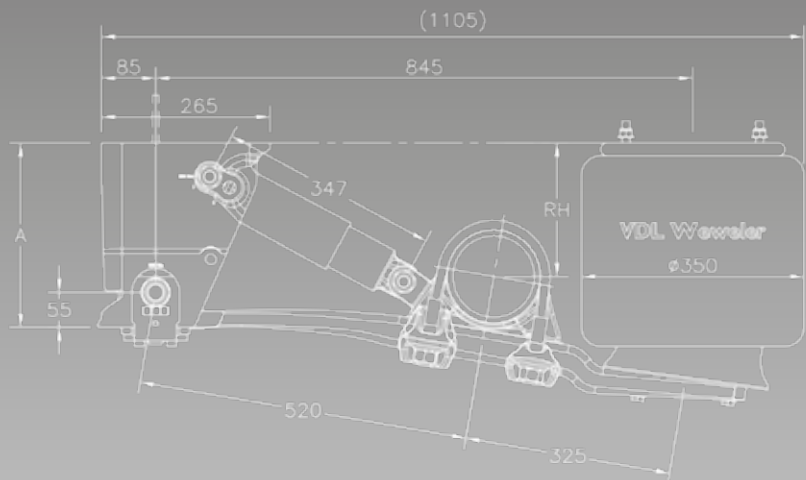
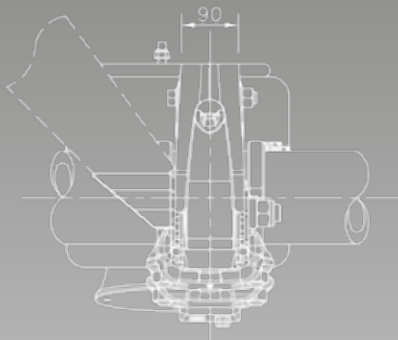
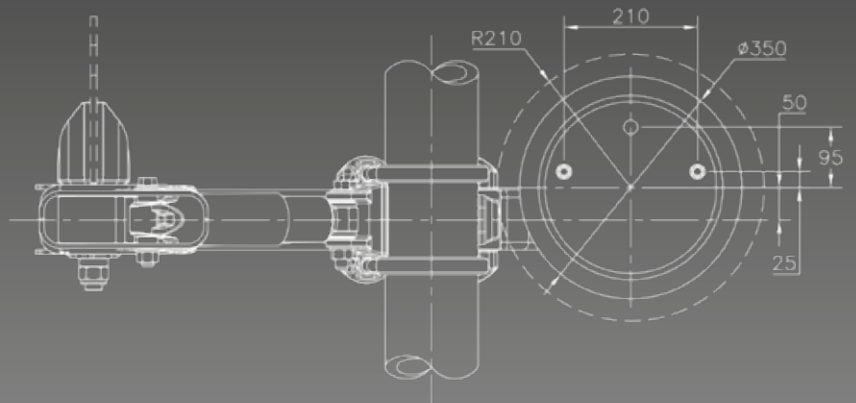


SPECIFICATIONS

- Maximum axle load: 9t.
- Single leaf trailing arm: 95x49mm
- Trailing arm dimensions:
L1=520mm / L2=325mm
- Available axle clamping: Ø146mm
- Ride height range: 180-340mm
- Air spring options:
Ø300mm, Ø335mm and Ø350mm
- Air spring offset options:
- 20mm / 45mm (Ø300mm / Ø335mm)
- 50mm / 90mm (Ø350mm)
- System weight: ≥135kg
- Optional axle lift
- Optional Bolt-On® Splitter®



Modular Bolt-On Solutions



FEATURES & BENEFITS

- The HD 9t. is a well proven, robust single leaf air suspension range, that can best be described as an all-round solution for many trailer types and suitable for most road conditions worldwide.
- This air suspension range is equipped with flexible high strength spring steel trailing arms and can be fitted to all standard trailer axle sizes (Ø127mm, Ø146mm, □120mm and □150mm).
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing, a higher overload threshold and low & easy maintenance.

MBS-HD 9T

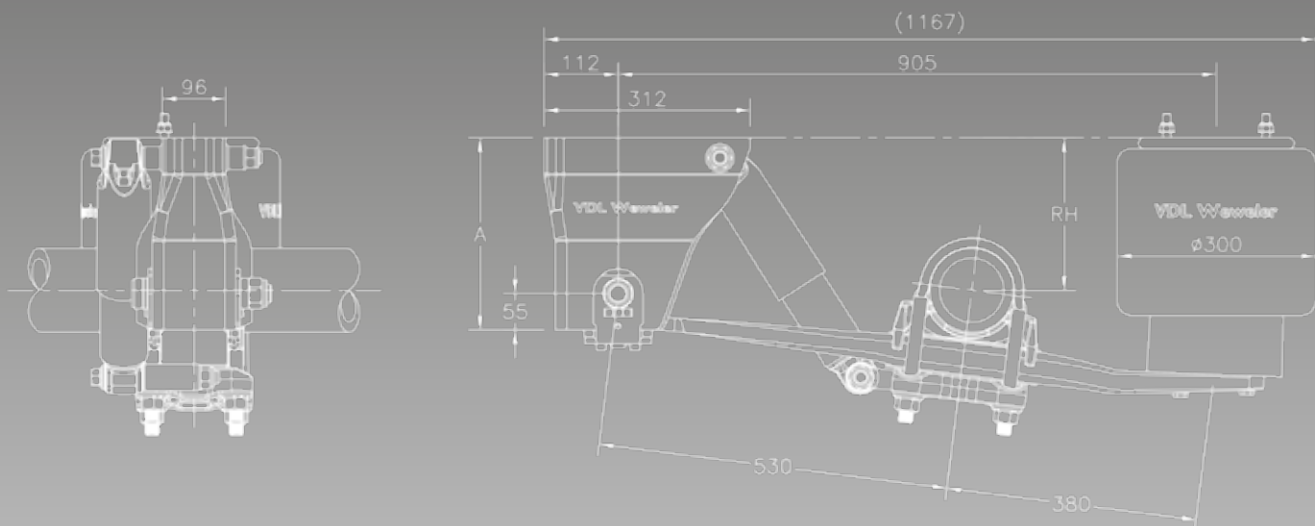
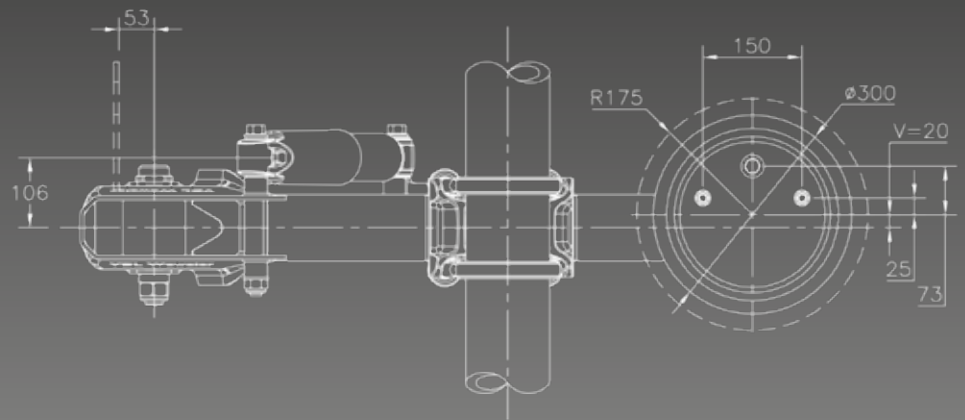


SPECIFICATIONS

- Maximum axle load: 9t
- Single leaf trailing arm: 100x48mm
- Trailing arm dimensions:
L1 = 530mm / L2 = 380mm
- Available axle clampings:
Ø127mm, Ø146mm, □120mm, □150mm
- Ride height range:
 - Underslung: 205-345mm
 - Overslung: 340-525mm
- Air spring options: Ø300 & Ø350mm
- Air spring offset options:
 - 20mm / 65mm (Ø300mm)
 - 30mm / 50mm (Ø350mm)
- System weight: ≥ 138kg
- Optional Bolt-On[®] axle lift



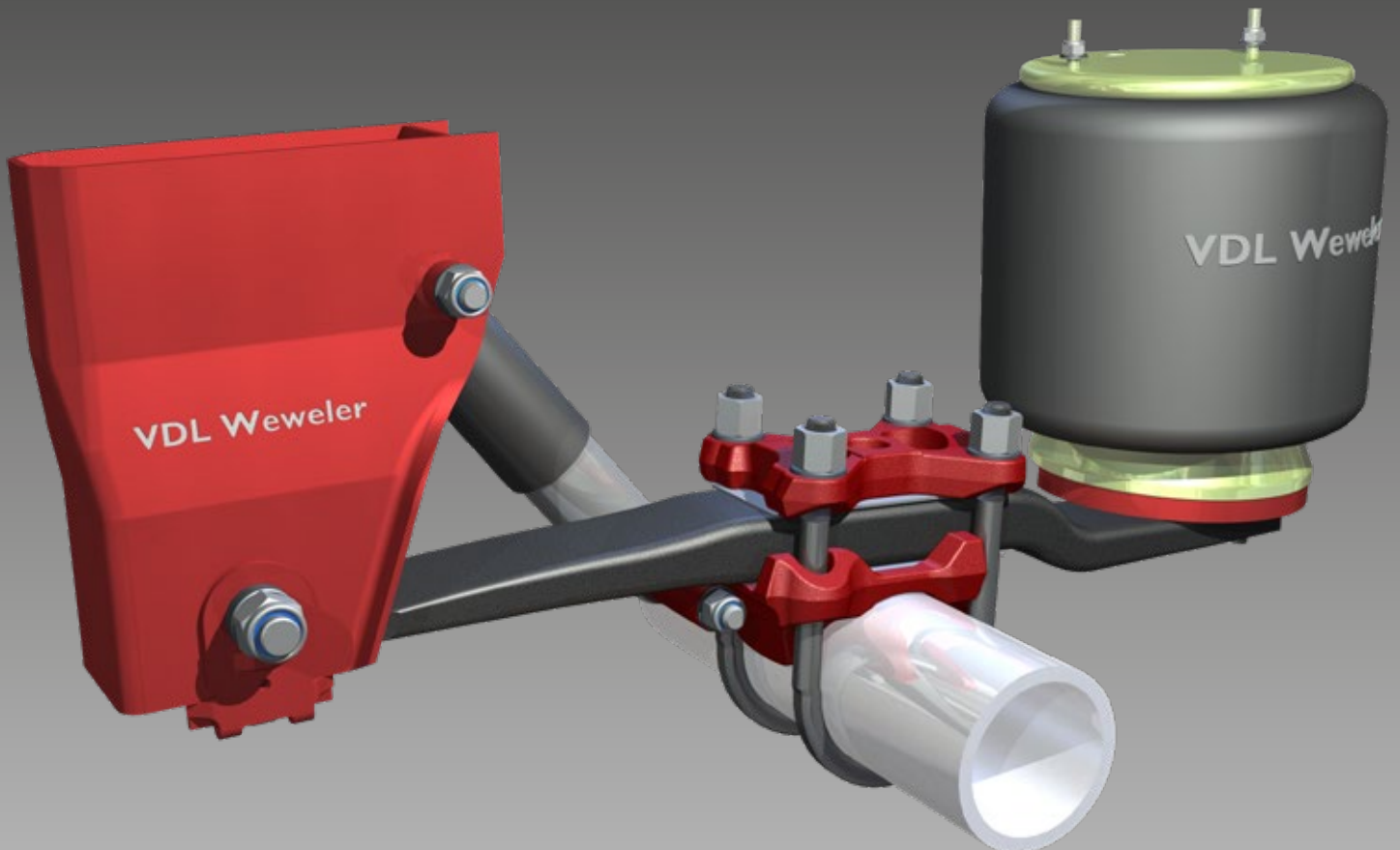
Heavy Duty air suspensions



FEATURES & BENEFITS

- The HD 10t. is a weight conscious 10t. single leaf air suspension range suitable for most trailer types and suitable for the more demanding road conditions worldwide.
- This air suspension range is equipped with flexible high strength spring steel trailing arms and can be fitted to all standard trailer axle sizes (Ø127mm, Ø146mm, □120mm and □150mm).
- Except for the trailing arms, all parts in the suspension are fully interchangeable with the HD 12t. single leaf suspensions.
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing and low & easy maintenance.
- Standard double bounded Steel-Rubber-Steel high density rubber bushings are fitted.

MBS-HD 10T

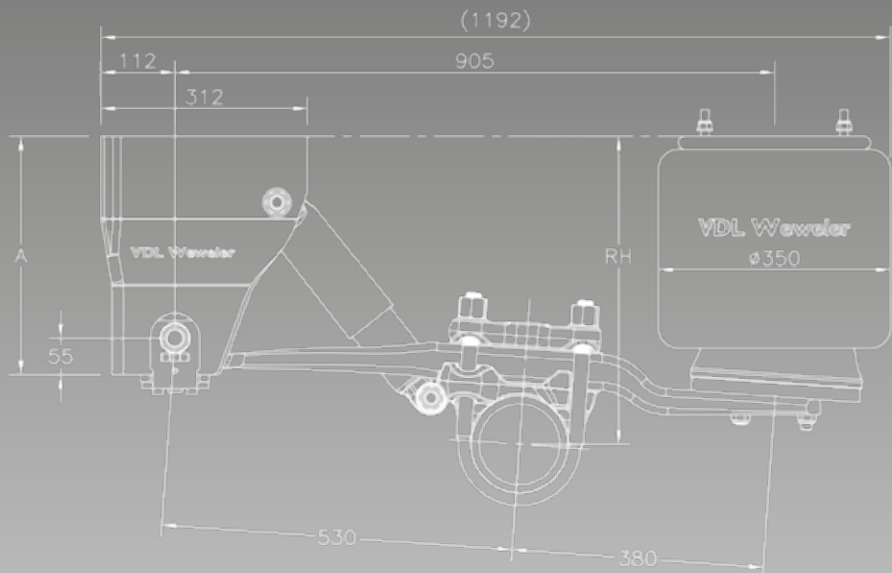
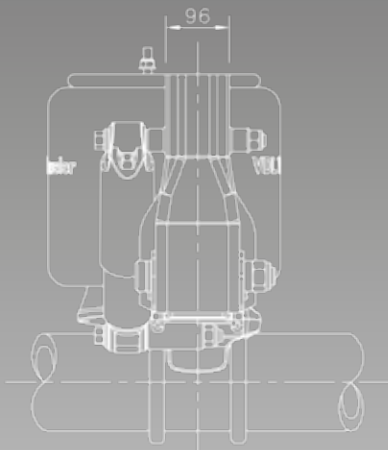
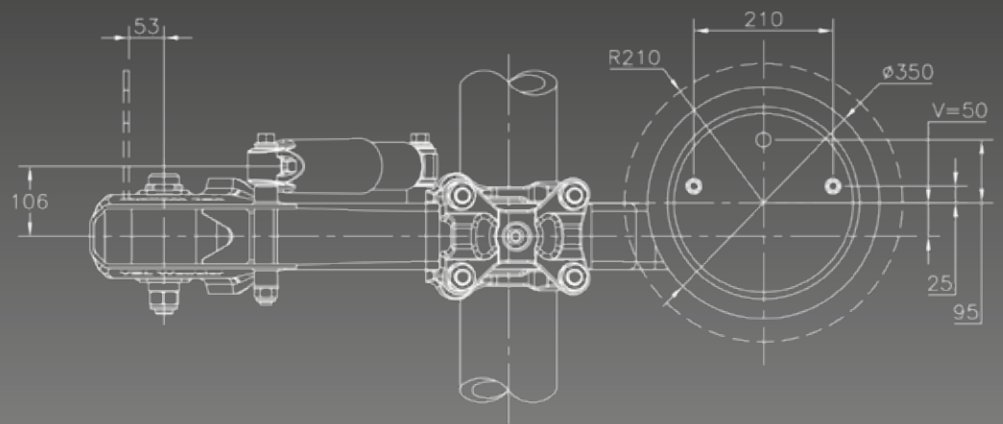


SPECIFICATIONS

- Maximum axle load: 10t
- Single leaf trailing arm: 100x54mm
- Trailing arm dimensions:
L1 = 530mm / L2 = 380mm
- Available axle clampings:
Ø127mm, Ø146mm, □120mm, □150mm
- Ride height range:
- Underslung: 250-375mm
- Overslung: 385-575mm
- Air spring options:
Ø350mm / Ø350mm swivel
- Air spring offset options:
- 30mm / 50mm / 95mm (standard)
- 50mm / 60mm / 75mm / 90mm (swivel)
- System weight: ≥ 180kg
- Optional Bolt-On® axle lift



Heavy Duty air suspensions



FEATURES & BENEFITS

- The HD 11t. is a well proven, extremely robust double leaf air suspension range with an immaculate track record.
- With more than 35 years of experience across the world, this all-round solution can be fitted to any trailer imaginable and is suitable for the toughest road conditions worldwide.
- The twin leaf air suspension range is specifically suitable for narrow track, high center of gravity and rough (off-road) conditions.
- This air suspension range is equipped with flexible high strength spring steel trailing arms and can be fitted to all standard disc brake, drum brake or (self)steered axles equipped with single or dual tires.
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment in the axle clamping, a high overload threshold and very low maintenance.
- For demanding conditions optional double bounded Steel-Rubber-Steel high density rubber bushings or rear-mounted shock absorbers can be fitted.

MBS-HD 11T

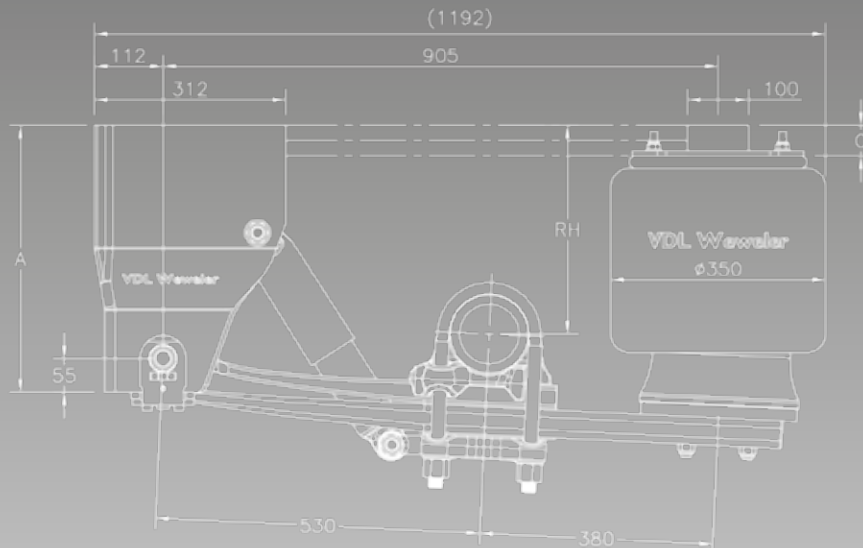
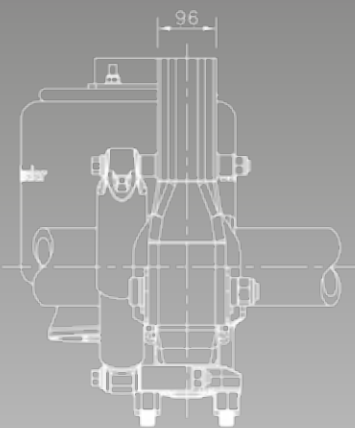
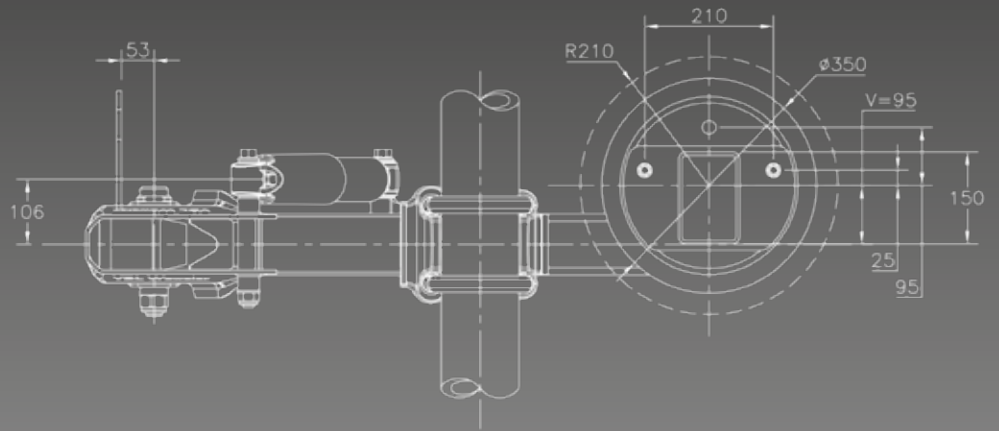


SPECIFICATIONS

- Maximum axle load: 11t
- Twin leaf trailing arm:
100x35mm + 100x45mm
- Trailing arm dimensions:
L1 = 530mm / L2 = 325mm & 380mm
- Available axle clampings:
Ø127mm, Ø146mm, □120mm, □150mm
- Ride height range:
 - Underslung: 200-365mm
 - Overslung: 385-575mm
- Air spring options:
Ø350mm / Ø350mm swivel
- Air spring offset options:
 - 30mm / 50mm / 95mm (standard)
 - 50mm / 60mm / 75mm / 90mm (swivel)
- System weight: ≥ 205kg
- Optional Bolt-On® axle lift



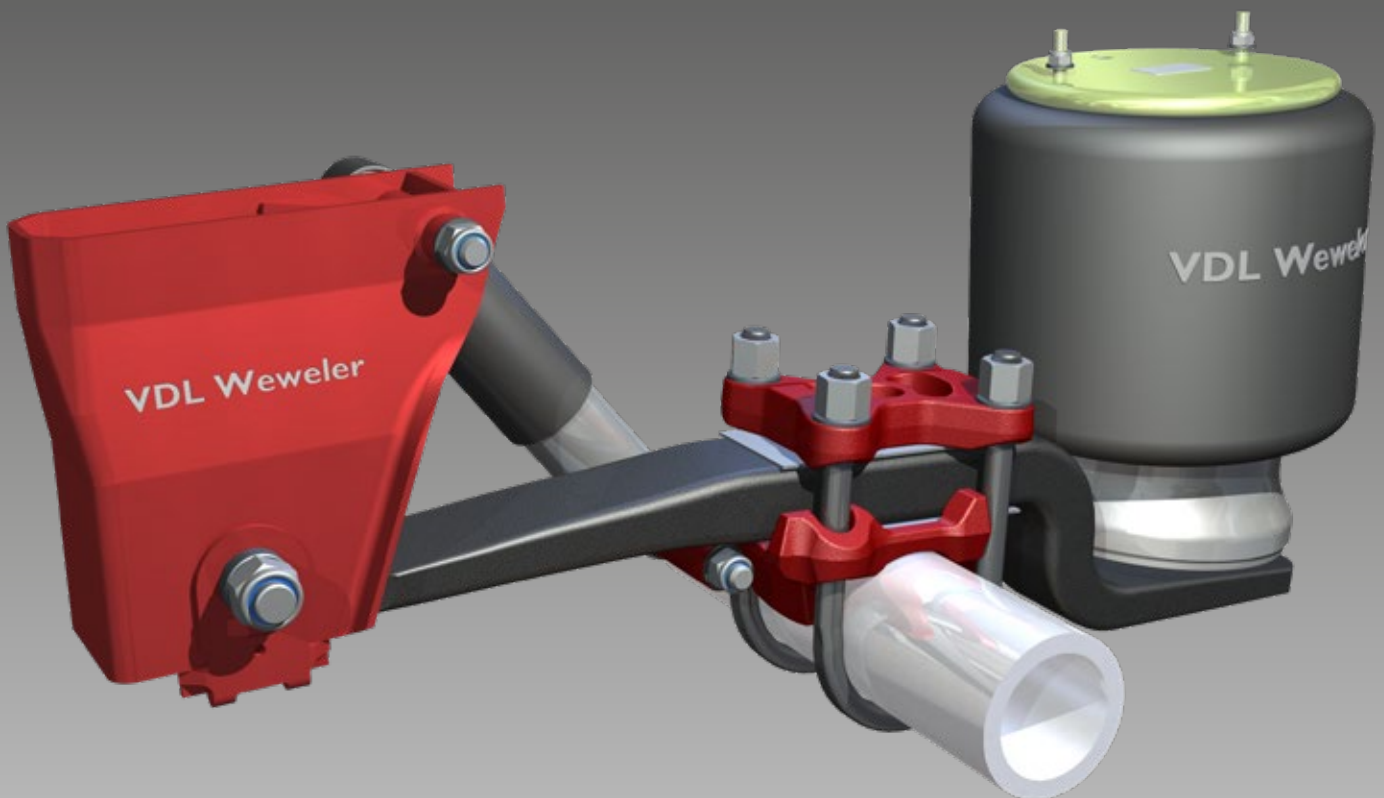
Heavy Duty air suspensions



FEATURES & BENEFITS

- The HD 12t. is a weight conscious 12t. single leaf air suspension range suitable for most trailer types and suitable for demanding road conditions worldwide.
- This air suspension range is equipped with flexible high strength spring steel trailing arms and can be fitted to all standard trailer axle sizes (Ø127mm, Ø146mm, □120mm and □150mm).
- Except for the trailing arms, all parts in the suspension are fully interchangeable with the HD 10t. single leaf suspensions.
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing and low & easy maintenance.
- Standard double bounded Steel-Rubber-Steel high density rubber bushings are fitted.

MBS-HD 12T

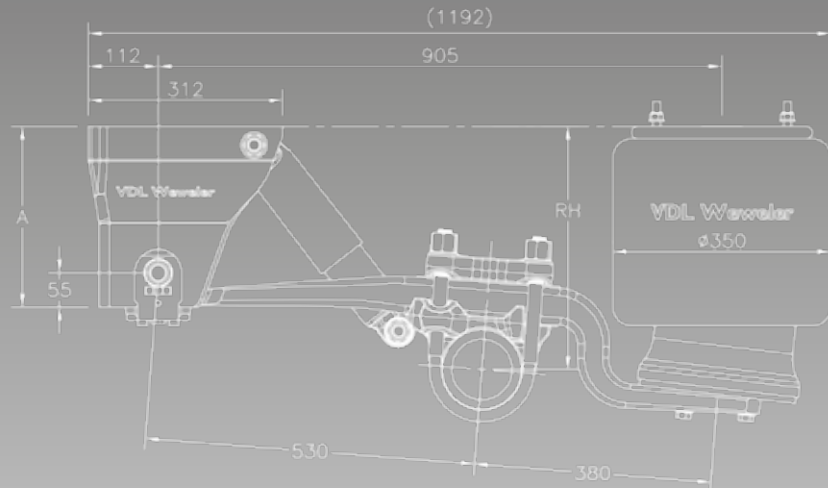
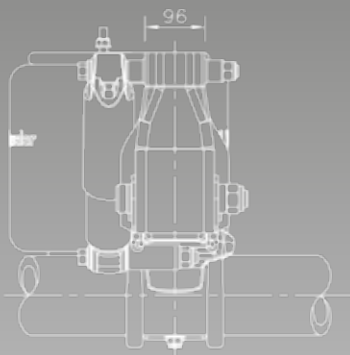
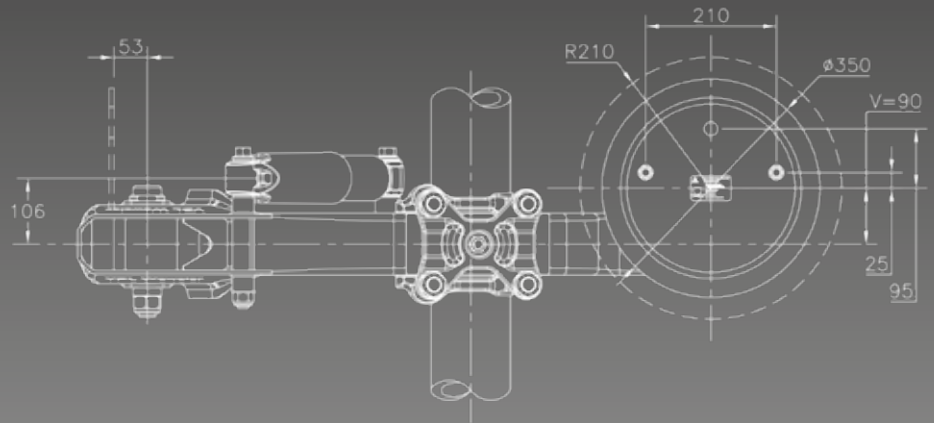


SPECIFICATIONS

- Maximum axle load: 12t
- Single leaf trailing arm: 100x59mm
- Trailing arm dimensions:
L1 = 530mm / L2 = 380mm
- Available axle clampings:
Ø127mm, Ø146mm, □120mm, □150mm
- Ride height range:
 - Underslung: 205-345mm
 - Overslung: 355-575mm
- Air spring options:
Ø350mm / Ø350mm swivel
- Air spring offset options:
 - 30mm / 50mm / 95mm (standard)
 - 50mm / 60mm / 75mm / 90mm (swivel)
- System weight: ≥ 185kg
- Optional Bolt-On® axle lift



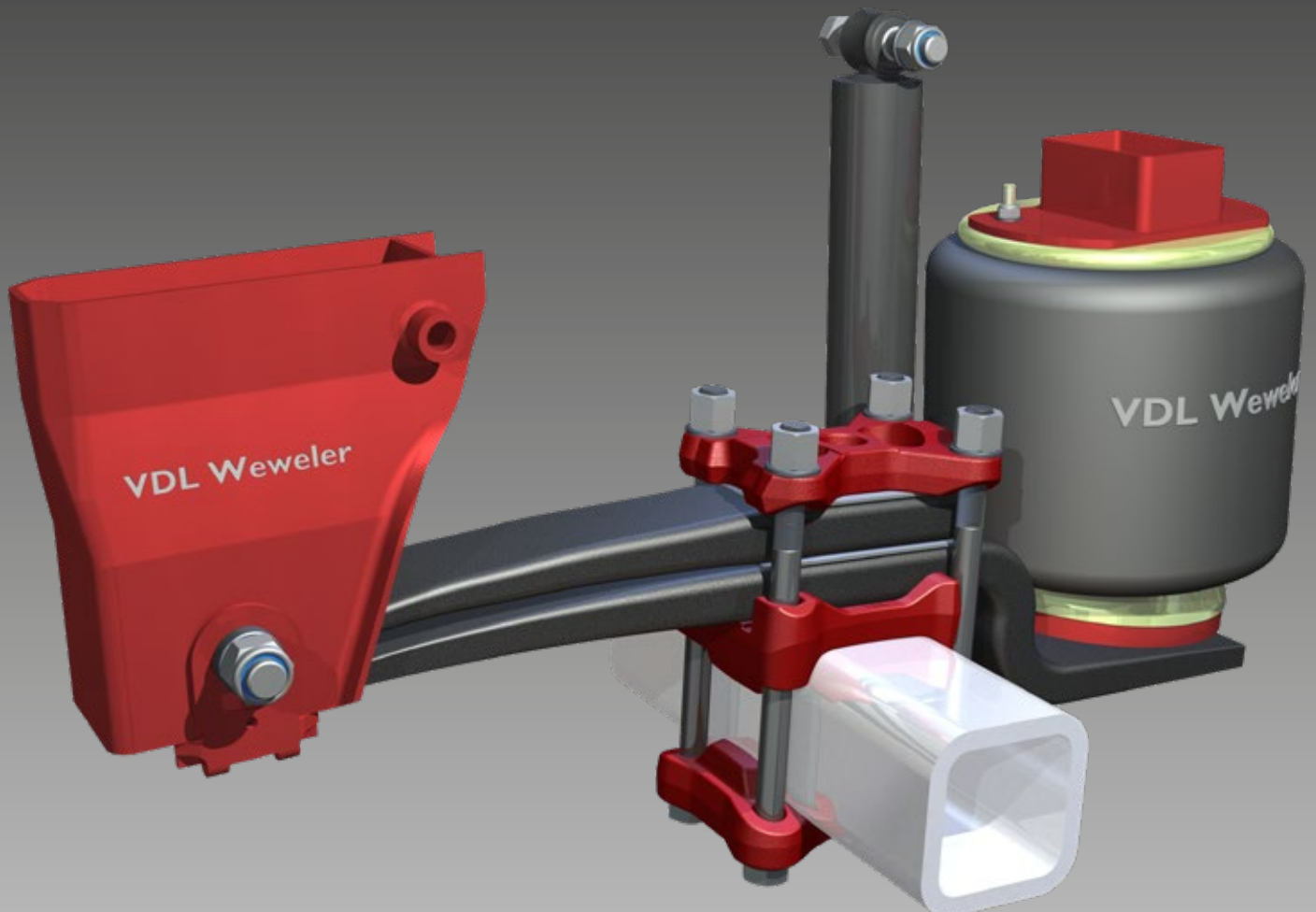
Heavy Duty air suspensions



FEATURES & BENEFITS

- The HD 13t is the strongest double leaf air suspension range VDL Weweler has to offer.
- This well proven, extremely sturdy and robust air suspension range, with more than 35 years of experience across the world, is being used in the harshest off-road environments imaginable.
- Suitable for all standard trailer axle sizes (Ø127mm, Ø146mm, □120mm and □150mm).
- This air suspension range is equipped with flexible high strength spring steel trailing arms that come with double bounded Steel-Rubber-Steel high density rubber bushings.
- This range is specifically suitable for narrow track, high center of gravity and can be fitted to all standard disc brake, drum brake or (self)steered axles equipped with single or dual tires.
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Optional rear-mounted shock absorbers can be fitted.

MBS-HD 13T

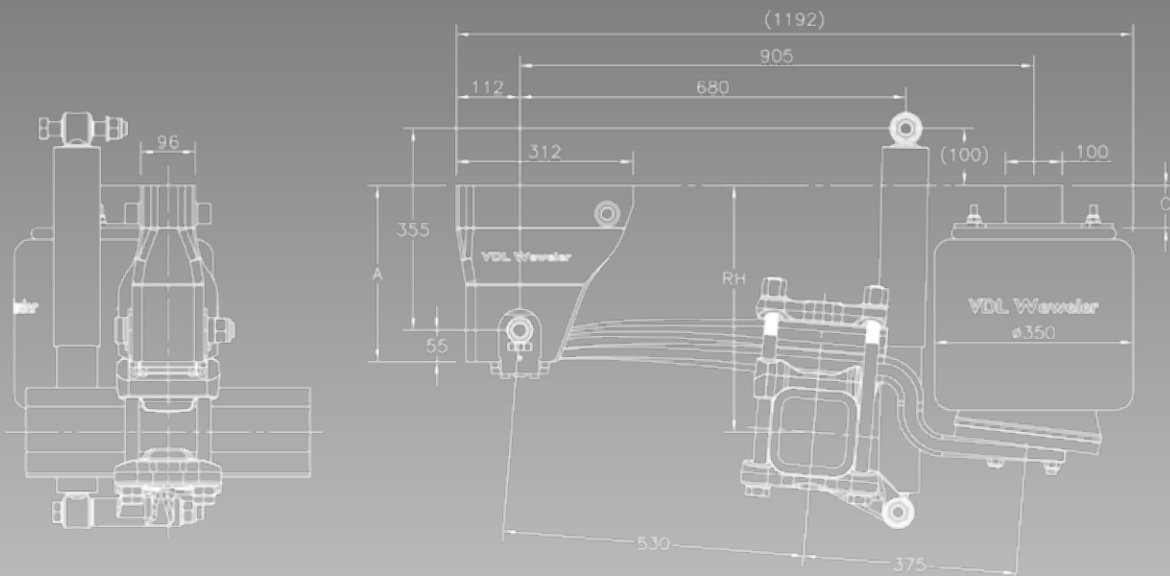
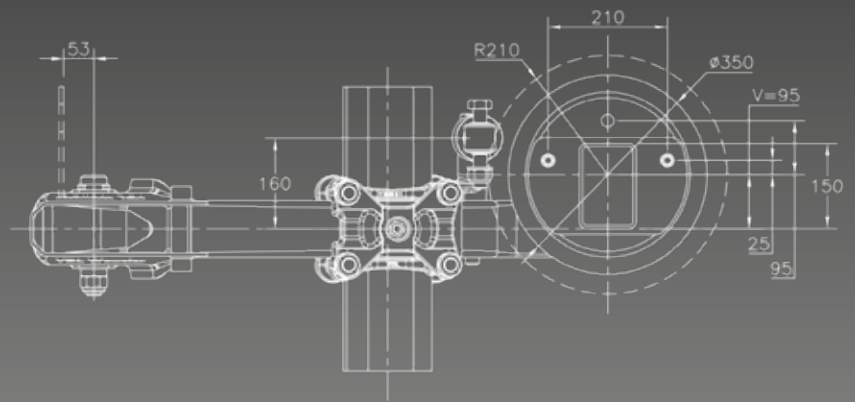


SPECIFICATIONS

- Maximum axle load: 13t
- Twin leaf trailing arm: 100x45mm + 100x45mm
- Trailing arm dimensions: L1 = 530mm / L2 = 325mm & 380mm
- Available axle clampings: Ø127mm, Ø146mm, □120mm, □150mm
- Ride height range:
 - Underslung: 205-335mm
 - Overslung: 395-575mm
- Air spring options: Ø350mm / Ø350mm swivel
- Air spring offset options:
 - 30mm / 50mm / 95mm (standard)
 - 50mm / 60mm / 75mm / 90mm (swivel)
- System weight: ≥ 215kg
- Optional Bolt-On® axle lift



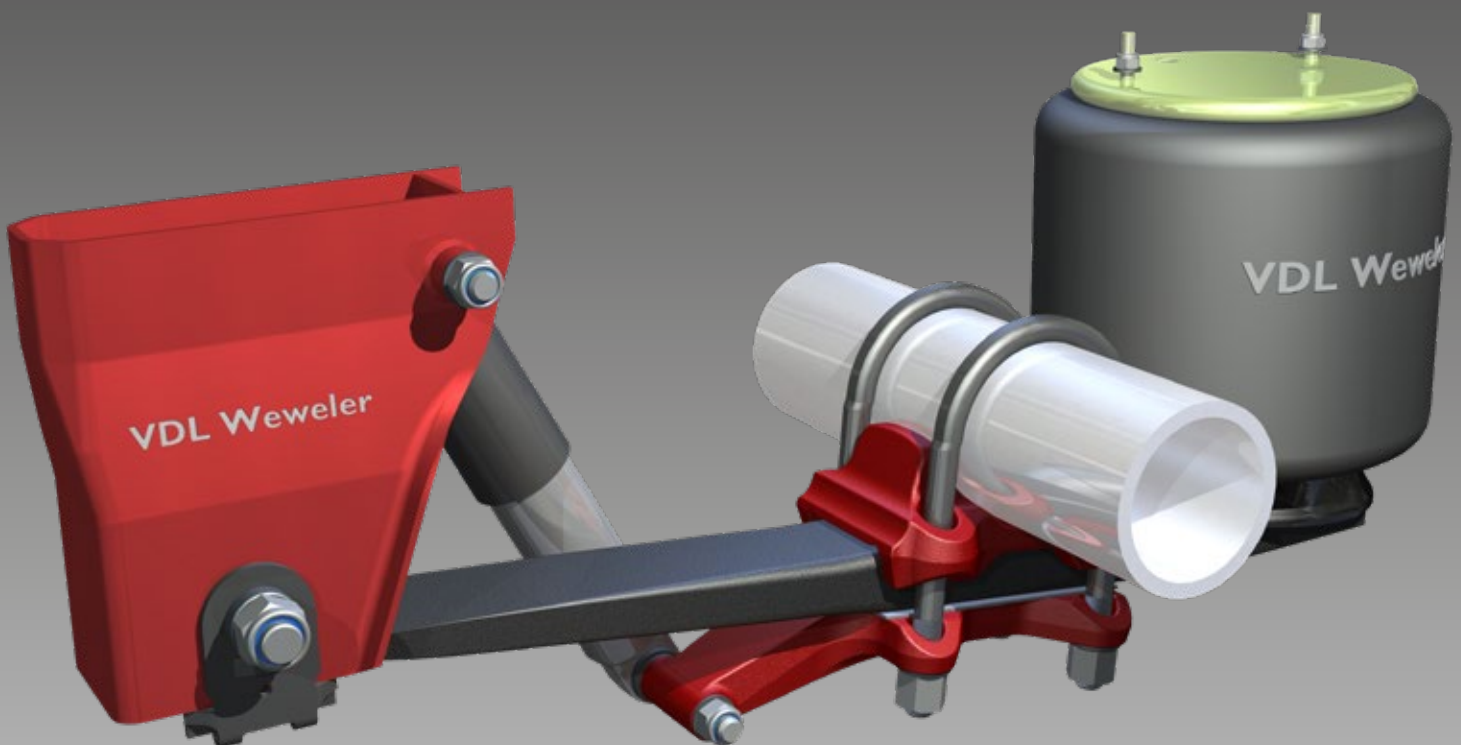
Heavy Duty air suspensions



FEATURES & BENEFITS

- The HD Special is a specific, well proven, robust 9/10t. single leaf air suspension range within the HD family.
- This suspension range is predominantly used in underslung configuration on 17.5 or 19.5 inch axles that require disc brakes and run at low ride height. The longer front-end of the spring steel trailing arms allows for more up and down axle travel, whilst still maintaining enough clearance for the brake booster.
- The air suspension systems are equipped with flexible high strength spring steel trailing arms and can be fitted to all standard trailer axle sizes (Ø127mm, Ø146mm, □120mm and □150mm).
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Used in an overslung configuration, these air suspension systems can be used for tipper applications, with the option of long- or short-stroke air springs.
- Furthermore the suspension offers easy alignment with re-alignment free bushing and low & easy maintenance.

MBS-HD Special

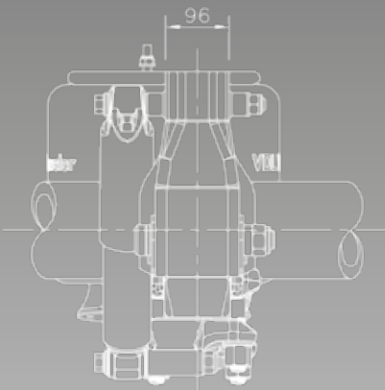
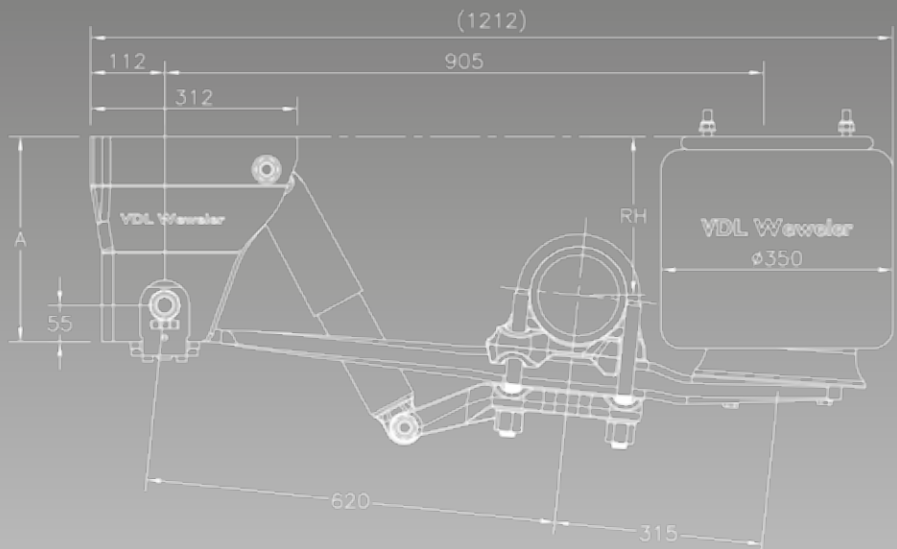
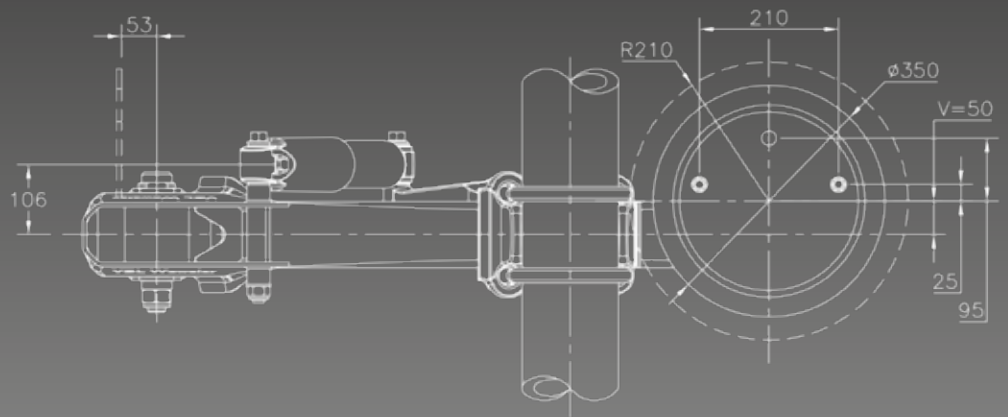


SPECIFICATIONS

- Maximum axle load: 10t / 11t
- Single leaf trailing arms: 100x54mm & 100x59mm
- Trailing arm dimensions:
L1 = 565mm, 620mm & 690mm /
L2 = 315mm, 380mm & 400mm
- Available axle clampings: Ø127mm, Ø146mm, 120mm, 150mm
- Ride height range:
 - Underslung: 195-340mm
 - Overslung: 350-550mm
- Air spring: Ø350mm
- Air spring offset options: 50mm / 90mm
- System weight: ≥ 175kg
- Optional Bolt-On® axle lift



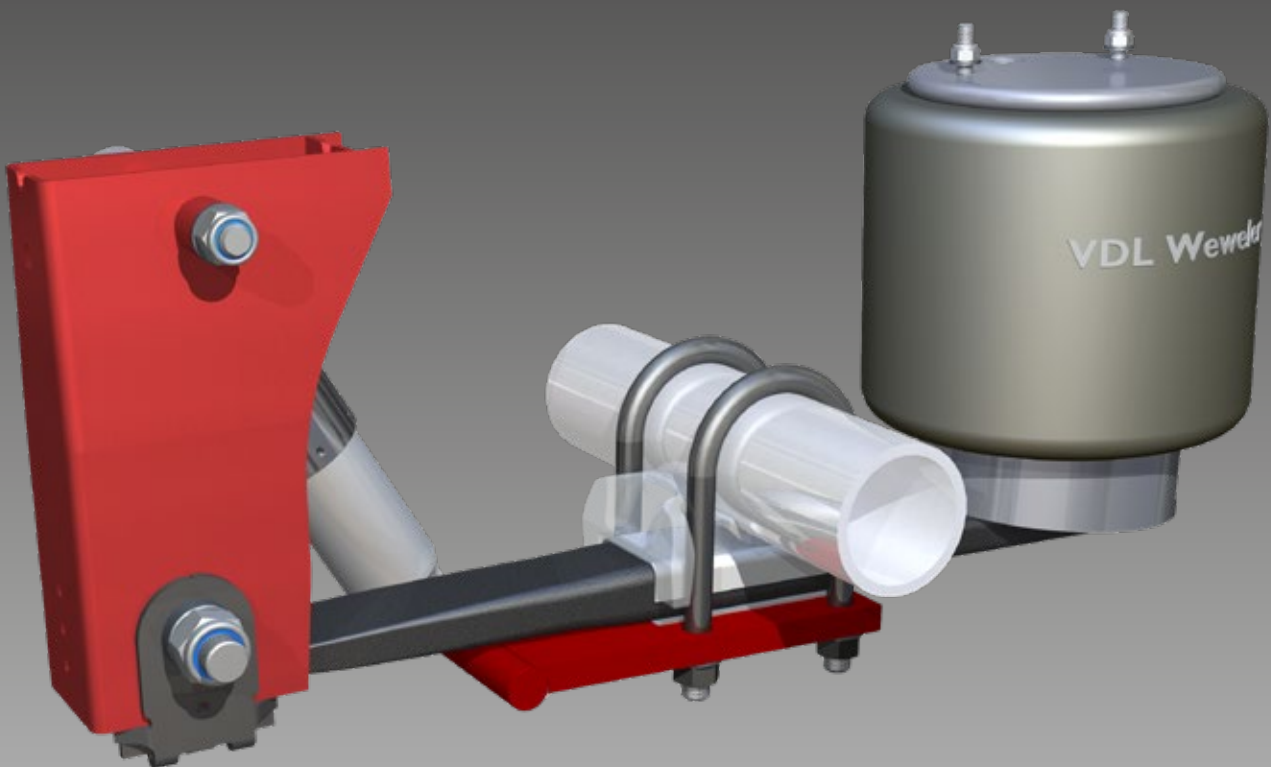
Heavy Duty air suspensions



FEATURES & BENEFITS

- MBS®-MINI is a cost-efficient 5.5t. air suspension.
- Weight sensitivity has resulted in a system that is lighter than most similar solutions in the market.
- In combination with the patented Bolt-On® bracing the axle load can be increased to max. 7t.
- The air suspension which uses flexible high strength spring steel trailing arms and is suitable for lightweight axles and offers a wide range of ride heights.
- The shock absorbers are equipped with high temperature Viton® seals.
- Furthermore the MBS®-MINI offers easy alignment with re-alignment free bushing and low & easy maintenance.
- The axle seat is not supplied by VDL Weweler.

MBS-Mini

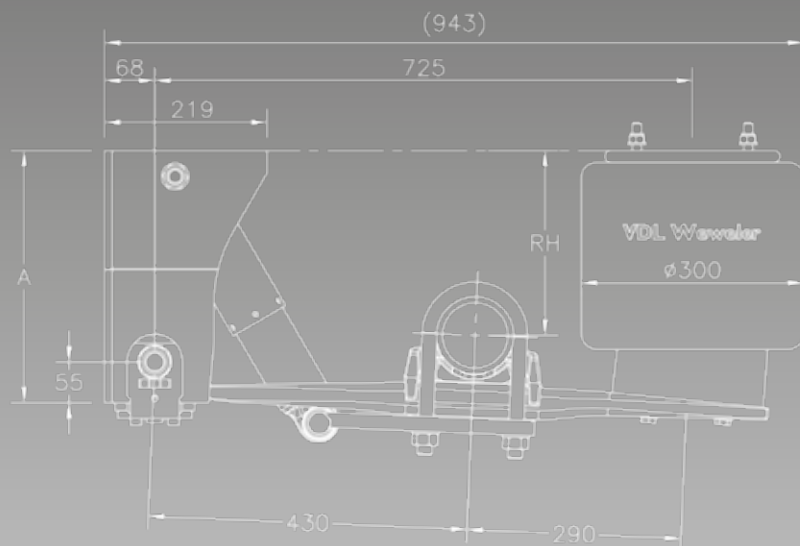
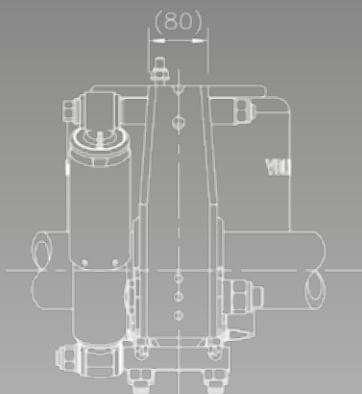
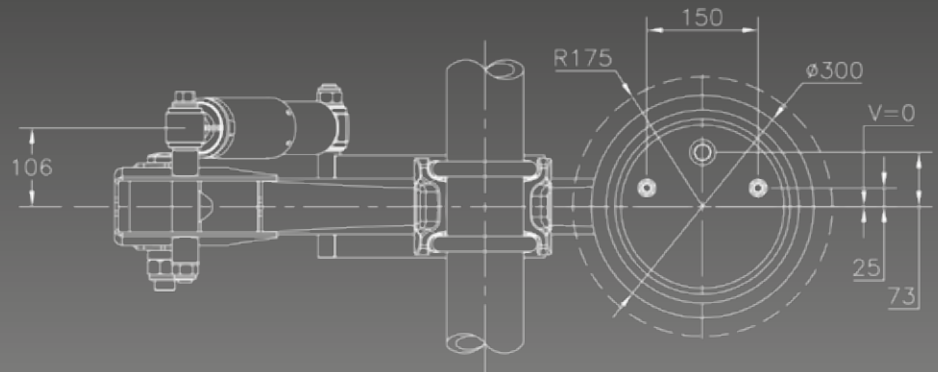


SPECIFICATIONS

- Maximum axle load: 5.5t. – 7t.
- Single leaf trailing arm: 75x43mm
- Trailing arm dimensions:
L1=430mm / L2=290mm
- Suitable for $\varnothing 101.6$ mm axles
- Ride height range:
 - Underslung: 245-410mm
 - Overslung: 430-580mm
- Air spring: $\varnothing 300$ mm
- Air spring offset options:
0mm / 30mm / 50mm
- System weight: ≥ 93 kg



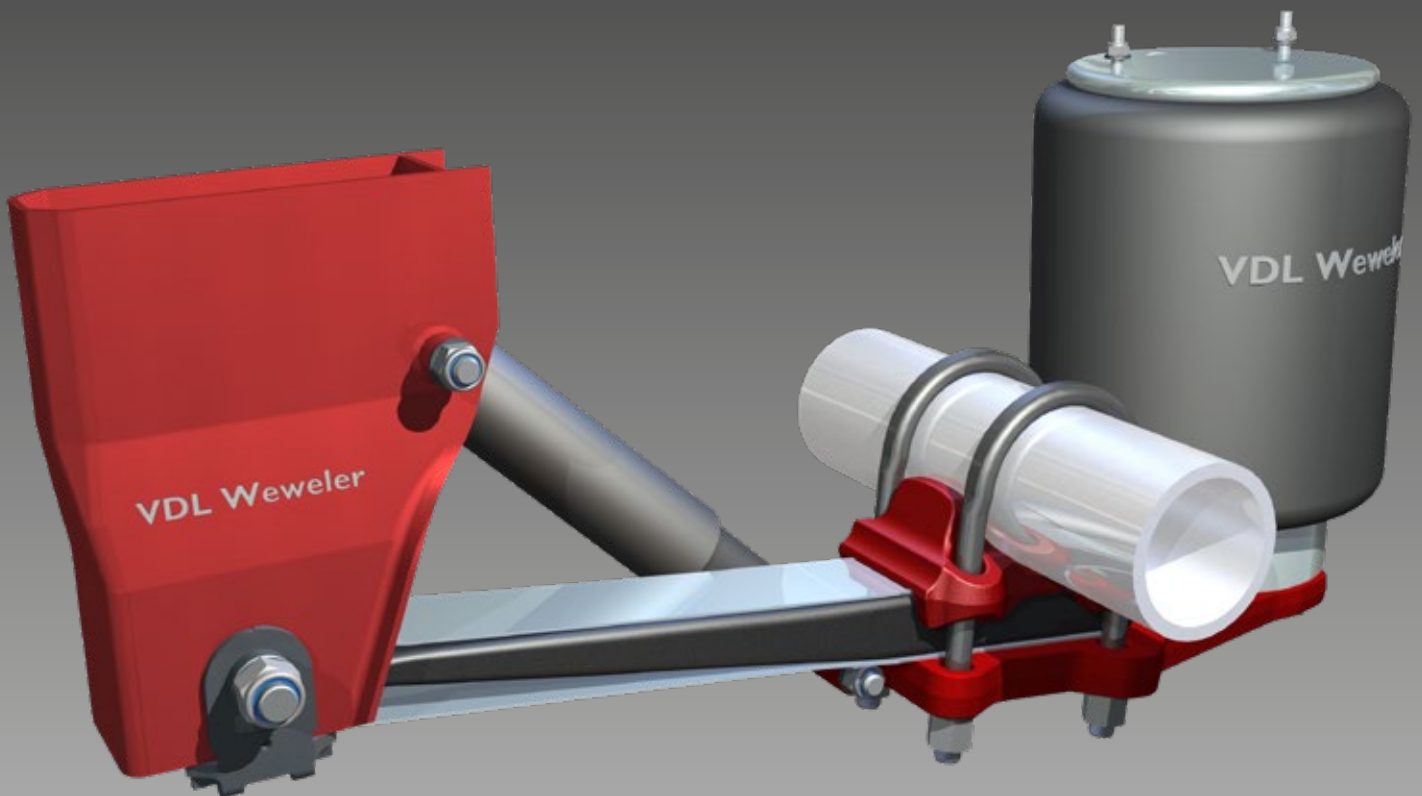
Mini air suspensions



FEATURES & BENEFITS

- The MBS-MAXI system is a 9t. single leaf air suspension specifically designed for swap-body applications. (WF)
- With the Maxi it is possible to use a more common, cost-effective long-stroke air spring whilst still maintaining a total stroke of 440mm.
- The solution is equipped with flexible high strength spring steel trailing arms incl. safety clip and can be fitted to Ø146mm drum or disc brake trailer axles.
- The closed reinforced hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The shock absorbers are equipped with high temperature Viton® seals.
- Furthermore the range offers easy alignment with re-alignment free bushing and low & easy maintenance.

MBS-Maxi

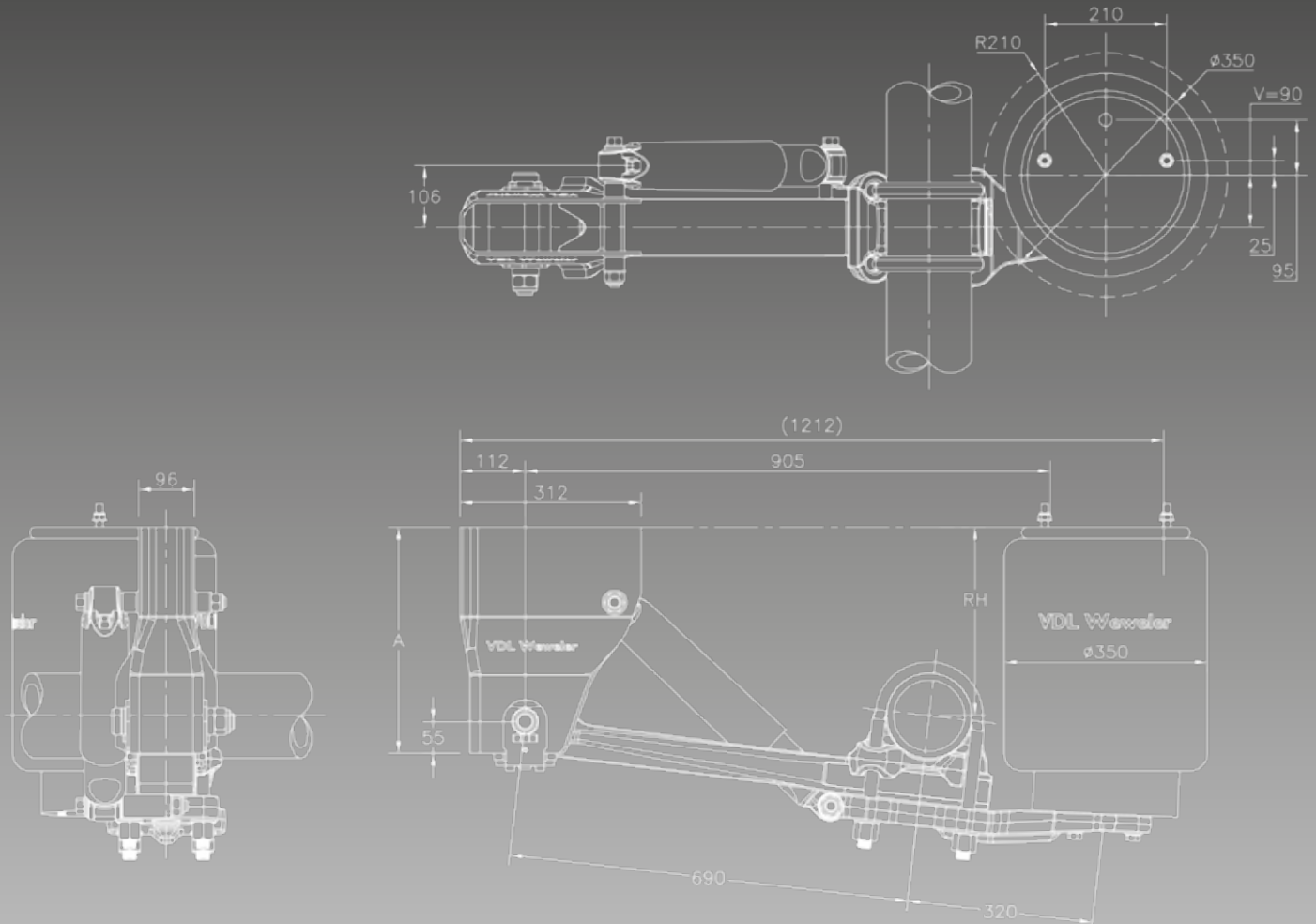


SPECIFICATIONS

- Maximum axle load: 9t
- Single leaf trailing arm: 100x59mm
- System dimensions:
L1 = 690mm / L2 = 310mm
- Available axle clamping: $\varnothing 146\text{mm}$
- Ride height range: 315-555mm
(bump dimension: 245mm)
- Air spring: $\varnothing 360\text{mm}$
- Air spring offset: 90mm
- System weight: $\geq 230\text{kg}$
- Optional Bolt-On[®] axle lift



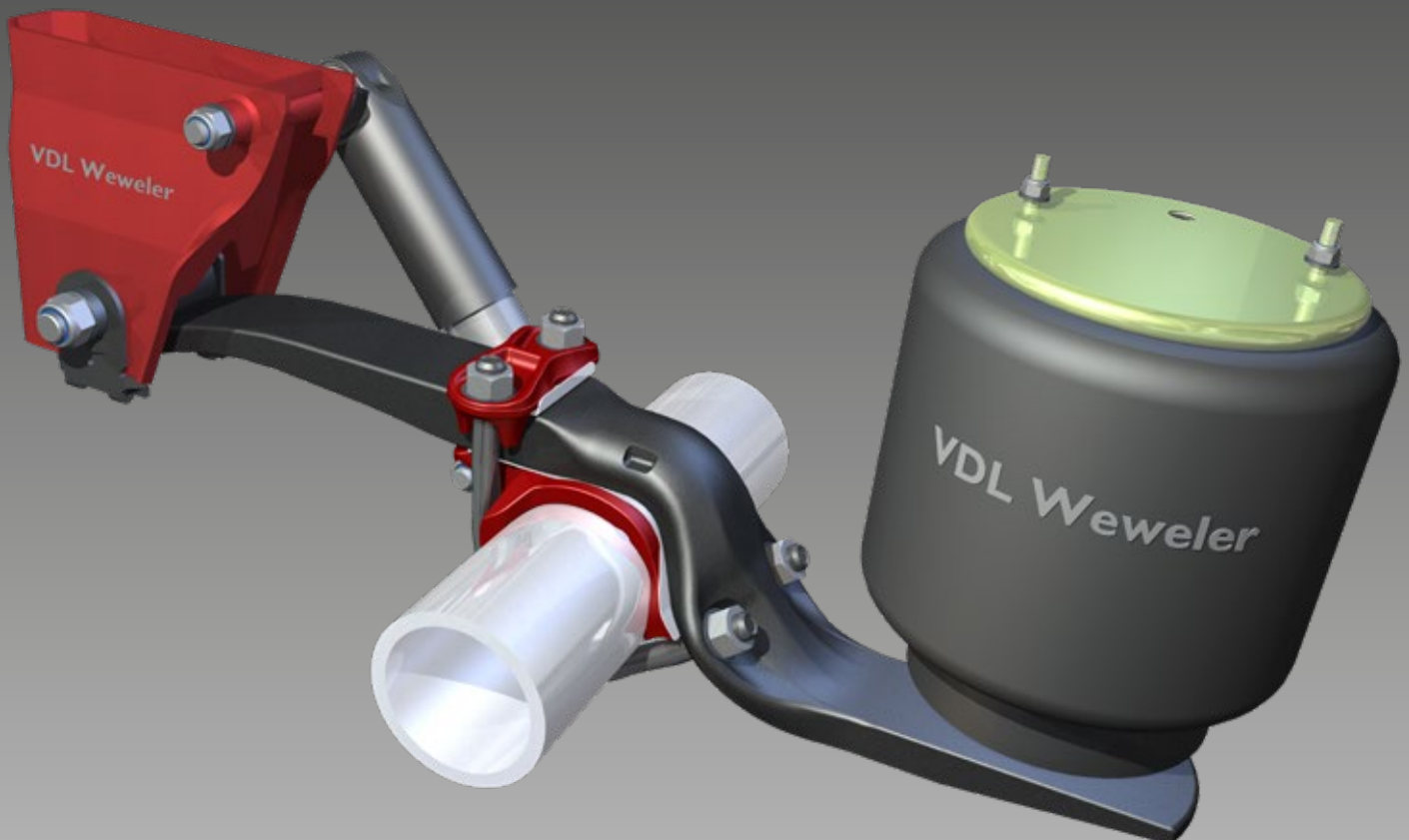
Maxi air suspensions



FEATURES & BENEFITS

- MBS[®]-COBRA is a lightweight compact 3D designed range suitable for 12t. HD Ø146mm axles.
- Specifically suitable for a wide range of lightweight heavy duty trailers operating in demanding (highway) conditions.
- This range makes use of a welded axle seat.
- Full ride height range can be achieved by using various hanger brackets and pedestals.
- Weight optimization is achieved by unique 3D rolling of the flexible high strength spring steel trailing arms.
- The tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width. The hanger brackets can be fitted with a patented casted bracing option, that ensures forces going straight into the chassis.
- The HTLT shock absorbers are equipped with high/low temperature Viton[®] seals and designed to be the stroke limiter of the suspension system.
- Furthermore the range offers easy alignment with re-alignment free bushing, fully interchangeable air springs and low & easy maintenance.
- Standard double bounded Steel-Rubber-Steel high density rubber bushings are fitted.

MBS-Cobra

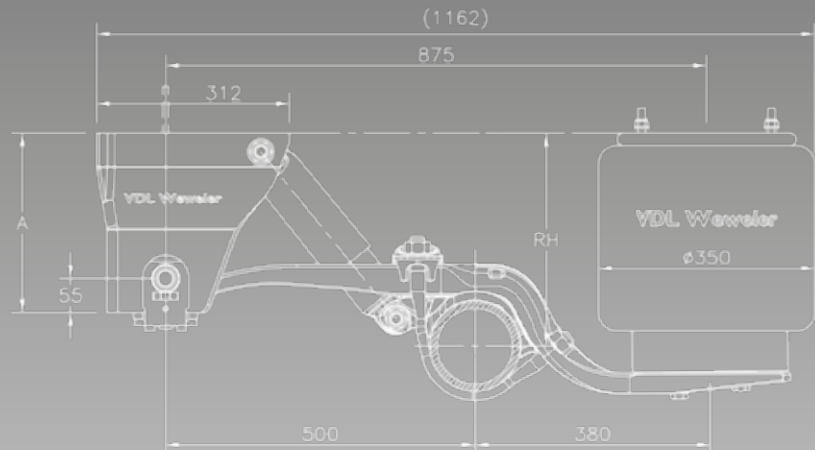
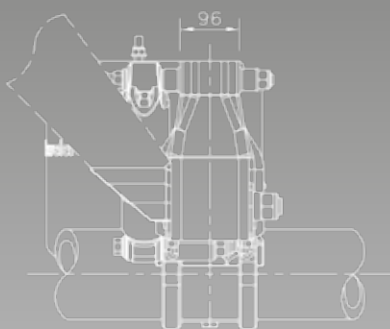
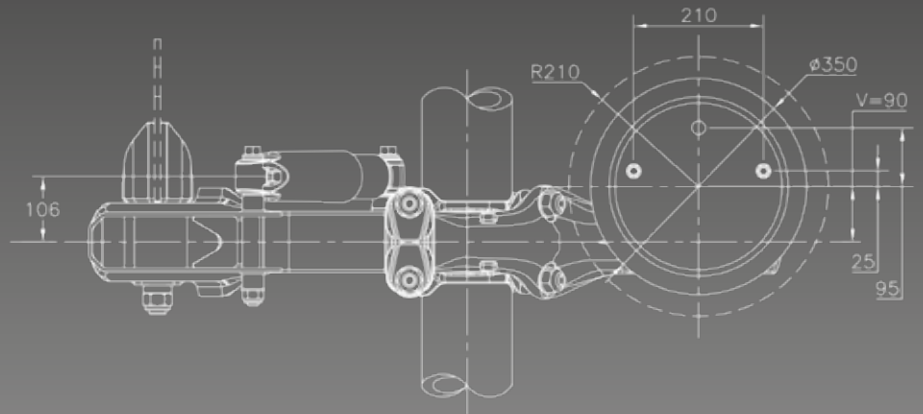


SPECIFICATIONS

- Maximum axle load: 12t.
- Single leaf trailing arm: 3D shaped
- Trailing arm dimensions:
L1 = 500mm / L2 = 380mm
- Available axle clamping: Ø146mm
- Ride height range: 300-460mm
- Air spring options:
Ø350mm / Ø350mm swivel
- Air spring offset options:
- 30mm / 50mm / 95mm (standard)
- 50mm / 60mm / 75mm / 90mm (swivel)
- System weight: ≥ 160kg
- Optional Bolt-On® axle lift
- Optional in the future with Air damping



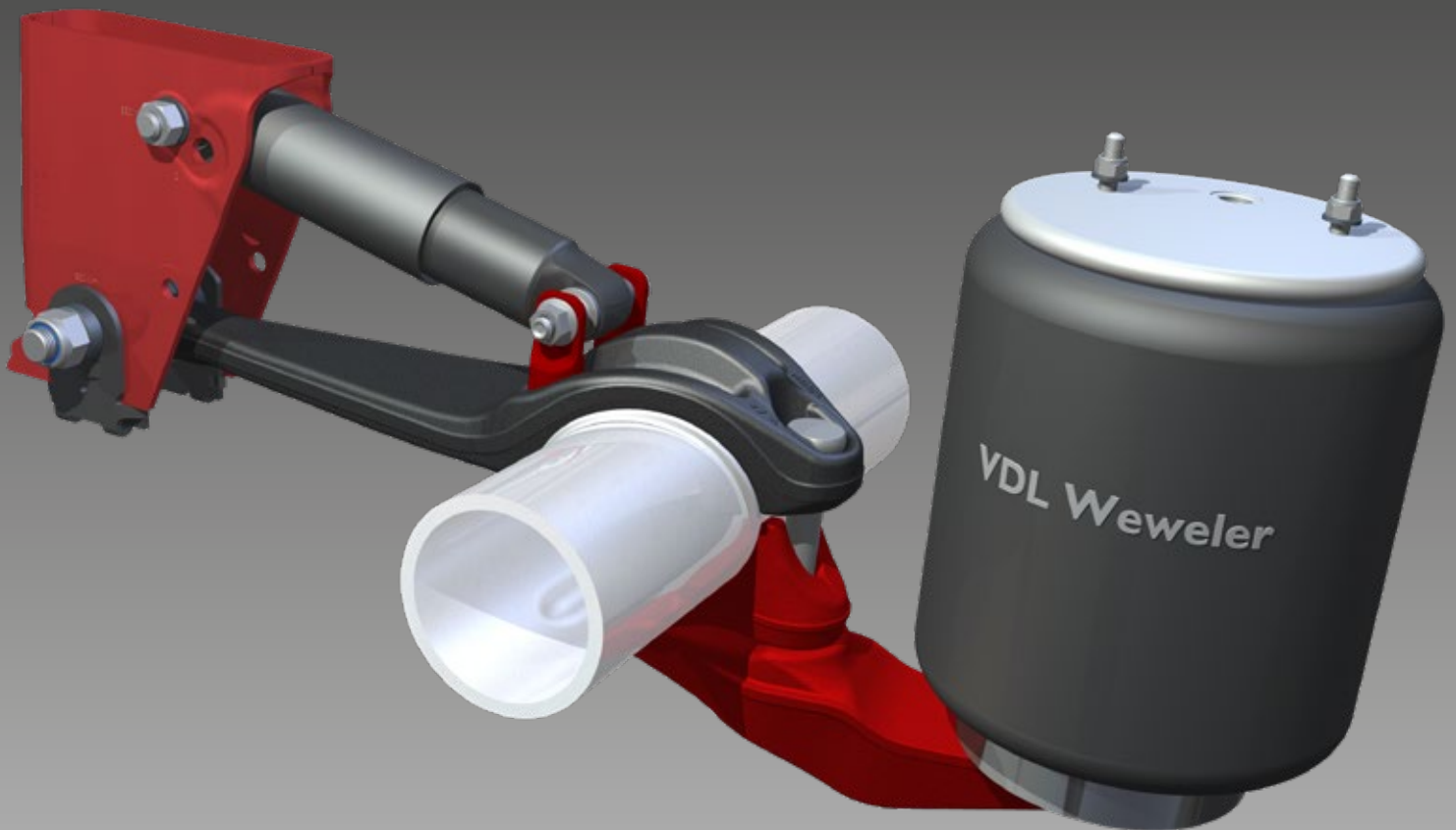
Modular Bolt-On Solutions



FEATURES & BENEFITS

- With numerous patented innovations, the MBS®-GF is a revolutionary light weight air suspension system, suitable for 9t. thin wall Ø146mm grooved axles.
- Sold in Europe through Valx, this multi-purpose air suspension can be used on a wide range of standard trailers operating on highway conditions.
- The air suspension is clamped around the axle using three bolts and is held in position by an ingenious groove in the axle beam, offering unique modularity in spring track.
- A first in trailing arm suspension design, the unique forged flexible trailing arm eliminates the need for U-bolts and U-bolt plates. The tapered trailing arm with its wider clamping area and small diameter maintenance-free bushing provides unequalled roll stiffness while putting less stress on the axle, therefore maximizing the service life.
- By releasing a single bolt, both tail ends can be given offsets of 0, 25, 50, 65, and 90mm in either direction, eliminating the need for a left and right version.
- The HTLT shock absorbers are equipped with high/low temperature Viton® seals and designed to be the stroke limiter.

MBS-GF

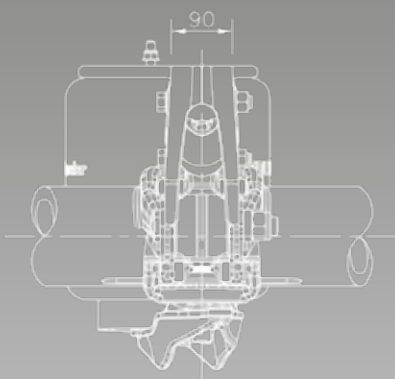
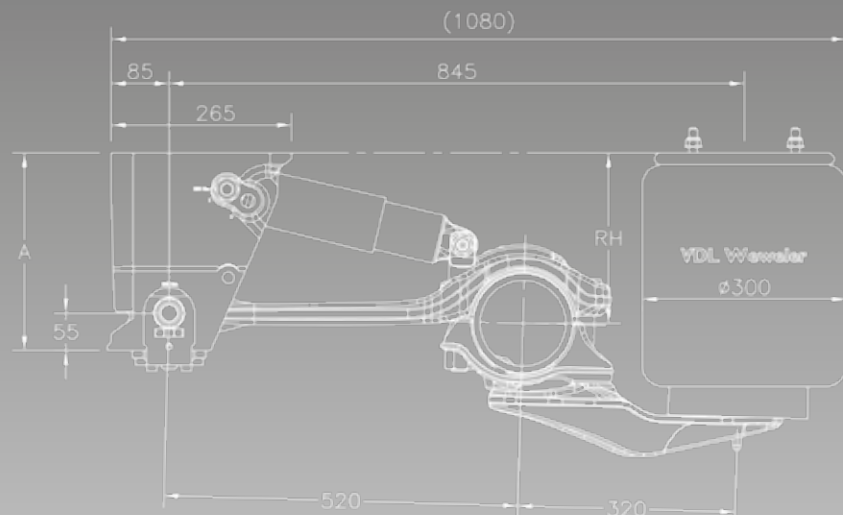
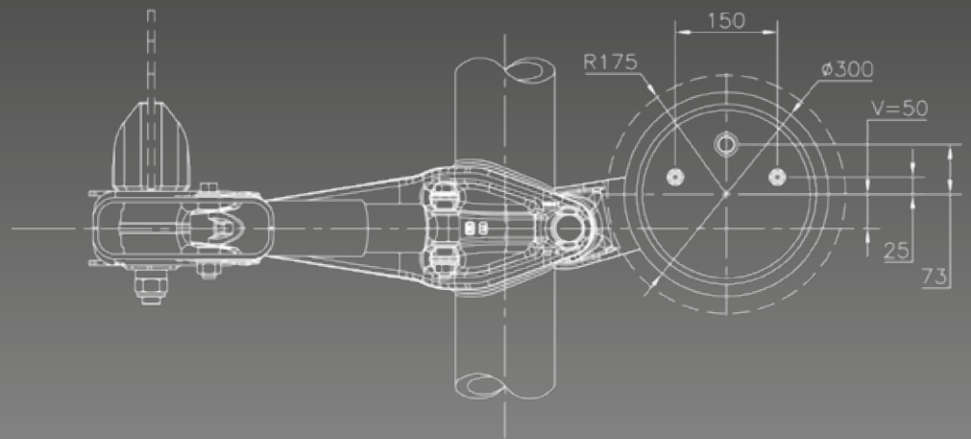


SPECIFICATIONS

- Maximum axle load: 9t / 10t
- Single leaf trailing arm: Forged
- System dimensions:
L1 = 520mm / L2 = 325mm
- Available axle clamping:
Ø146mm (clamped)
- Ride height range:
- MBS-100 Range: 210-450mm
- MBS-200 Range: 310-460mm
- Air spring options: Ø300mm & Ø335mm
- Air spring offset options:
0mm / 25mm / 50mm / 65mm / 90mm
- System weight: ≥ 125kg
- Optional Bolt-On® axle lift
- Optional Bolt-On® Splitter®
- Optional in the future with Air damping



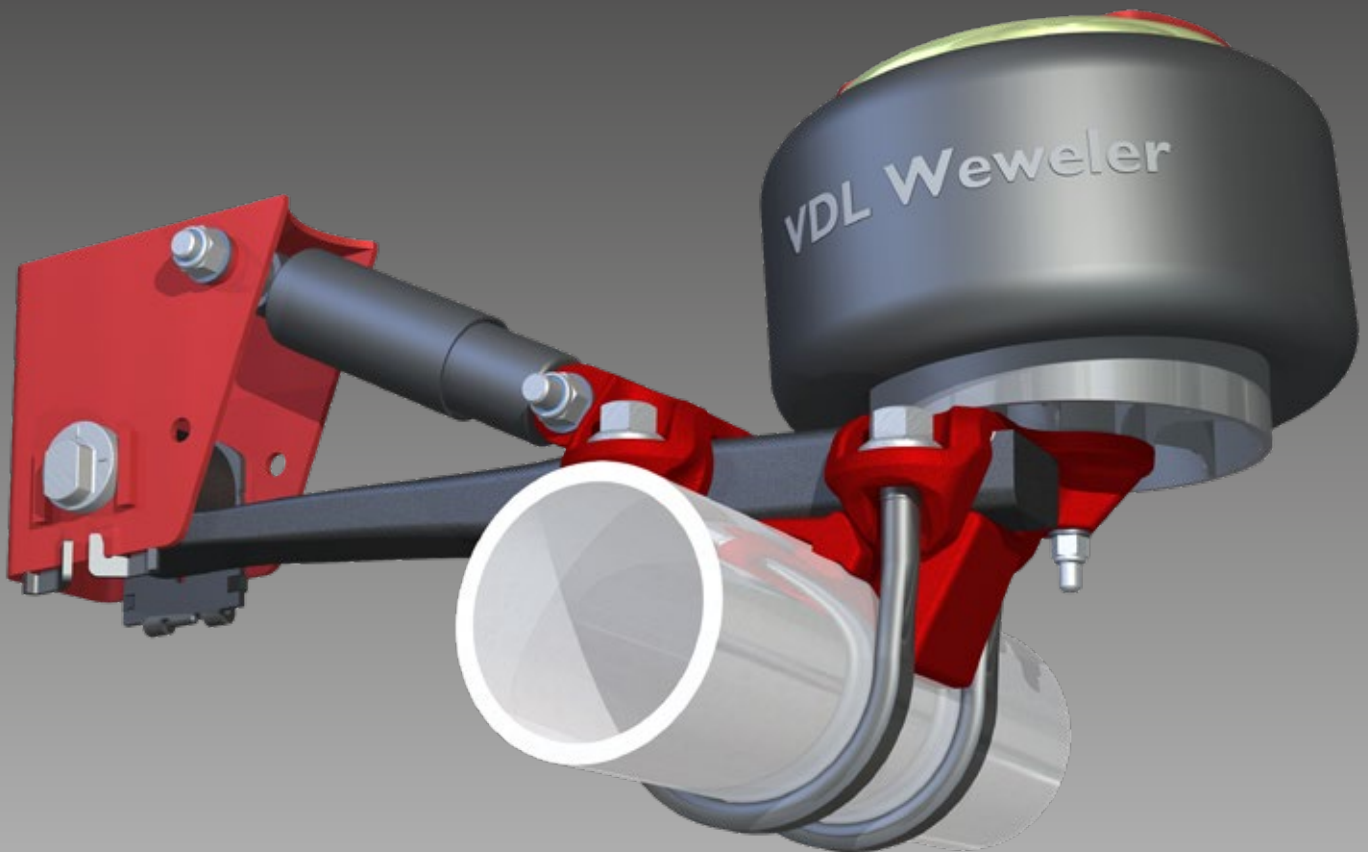
Modular Bolt-On Solutions



FEATURES & BENEFITS

- The MBS[®]-NA is a lightweight air suspension range, that is specifically designed for North America.
- This multi-purpose air suspension range is suitable for 10.5t. thin wall Ø146mm grooved axles.
- Instead of welding, the air suspensions are clamped to the axle and held in place by an ingenious groove in the axle beam, offering unique modularity in spring track and maximizing service life of the axle.
- This unique modular Bolt-On[®] design allows for quick and very easy maintenance and the possibility to change any part in the solution. Even the axle!
- Combine this with a minimum amount of parts and it offers the trailer builder optimized production time and the end-user reduced cost of ownership.
- Compact design is achieved by using center mounted shock absorbers.
- The shock absorbers are designed to be the stroke limiter.
- With a system weight of approximately 110kg, MBS[®]-NA air suspensions are one of the lightest trailing arm suspensions on the market today.
- Furthermore the range offers easy alignment with re-alignment free bushing.

MBS-NA

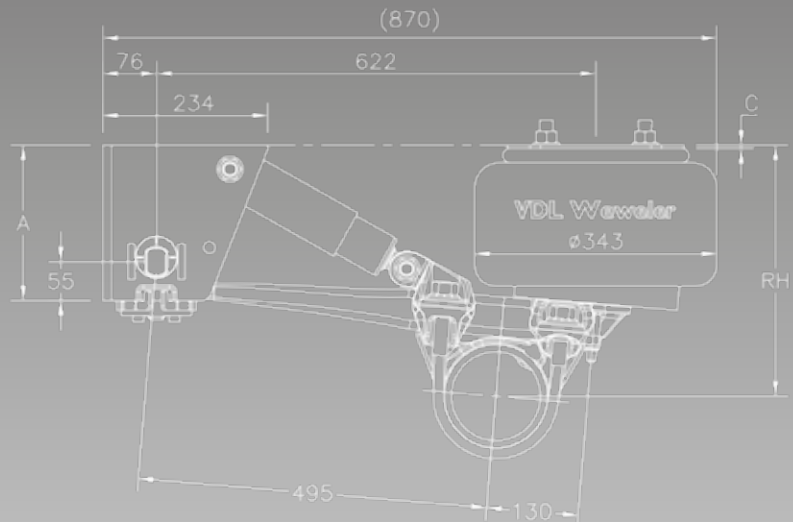
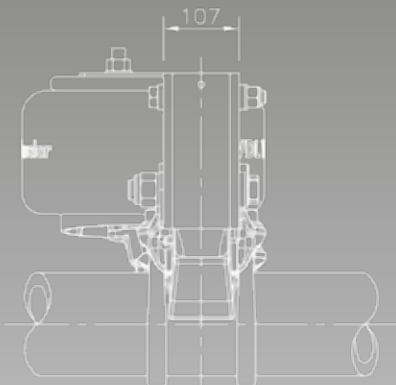
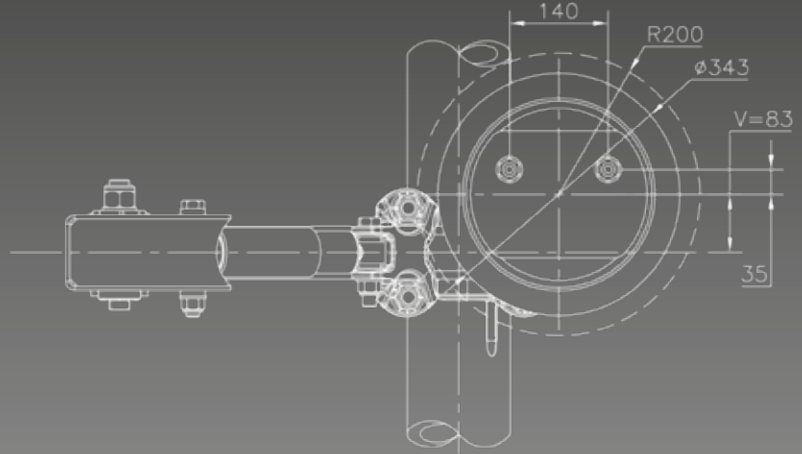


SPECIFICATIONS

- Maximum axle load: 23K (10.5t)
- Single leaf trailing arm: 75x56mm
- System dimensions:
L1=19.5" (495mm) / L2=5.1" (130mm)
- Available axle clamping:
Ø5.75" (Ø146mm) clamped
- Ride height range:
14" (355mm) - 17" (430mm)
- Air spring: Ø13.5" (Ø343mm)
- Air spring offset: 3.25" (83mm)
- System weight: ≥ 245lbs (110kg)
- Optional Bolt-On[®] axle lift
- Optional Bolt-On[®] hanger bracket



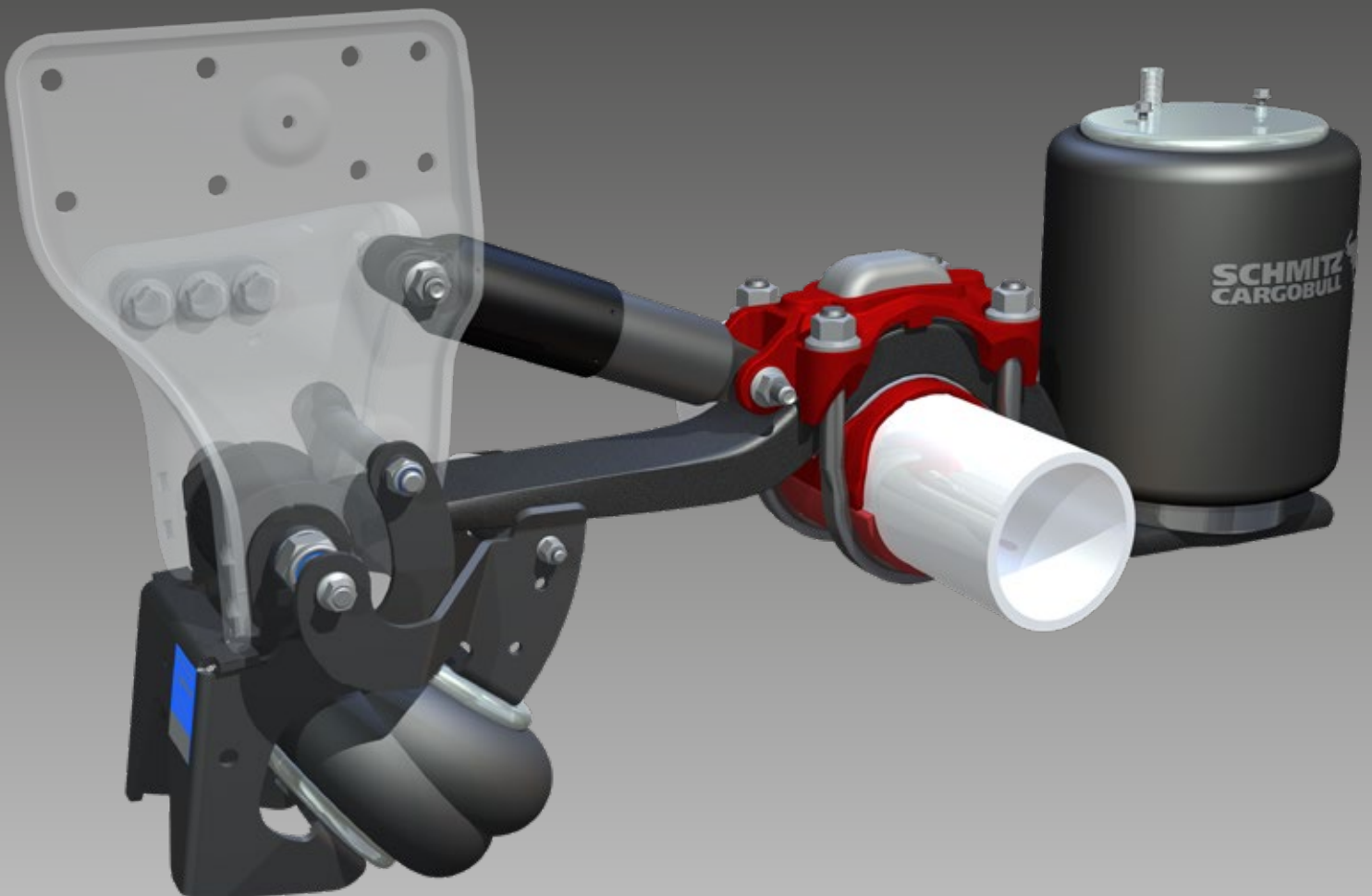
Modular Bolt-On Solutions



FEATURES & BENEFITS

- This revolutionary, high-tech, multi ride height suspension range is designed solely for and in combination with the biggest trailer builder in Europe.
- Sold exclusively through Schmitz Cargobull AG, this multi-purpose, light weight air suspension range is being used on nearly every Schmitz trailer.
- The range is predominantly used on 9t. Ø146mm axles, both in a clamped or welded configuration.
- In the clamped configuration, the air suspension range is held in place by an ingenious, Schmitz patented, indentation in the axle beam.
- The range was specifically designed to allow Schmitz to standardize their chassis and offer them a way to optimize production time.
- The customer specific double-bend spring steel trailing arms allow for an extreme ride height range whilst still using an overslung configuration.
- Compact design is achieved by using center mounted shock absorbers.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter.
- Furthermore the range offers easy alignment with re-alignment free bushing, interchangeable air springs and low & easy maintenance.

Schmitz Cargobull

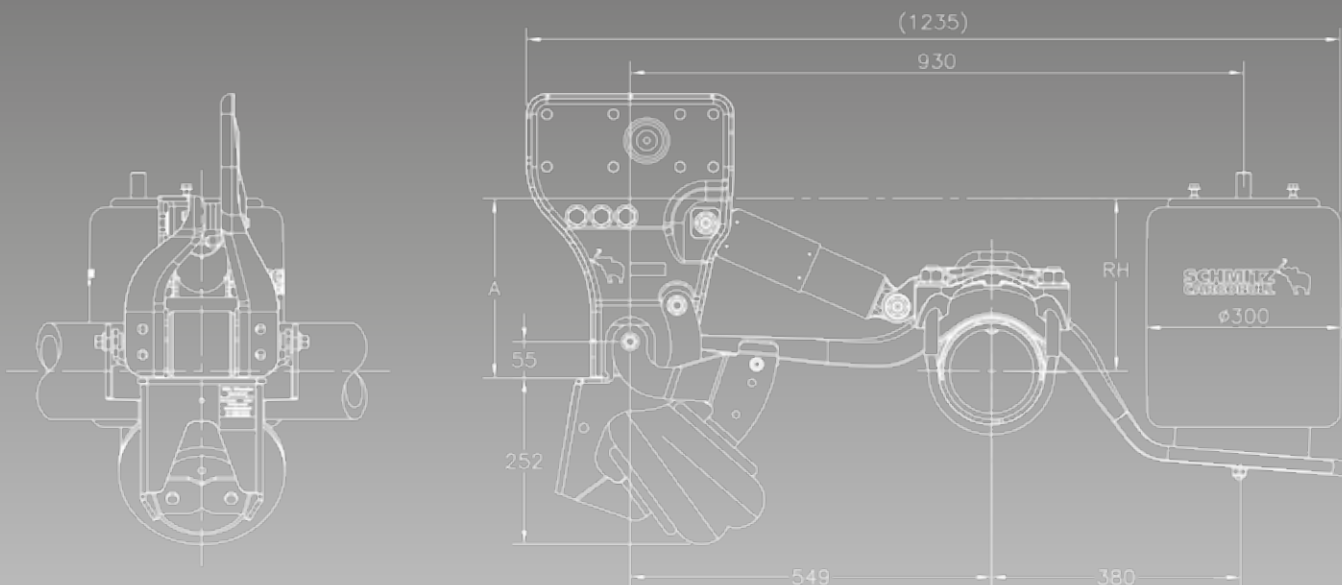
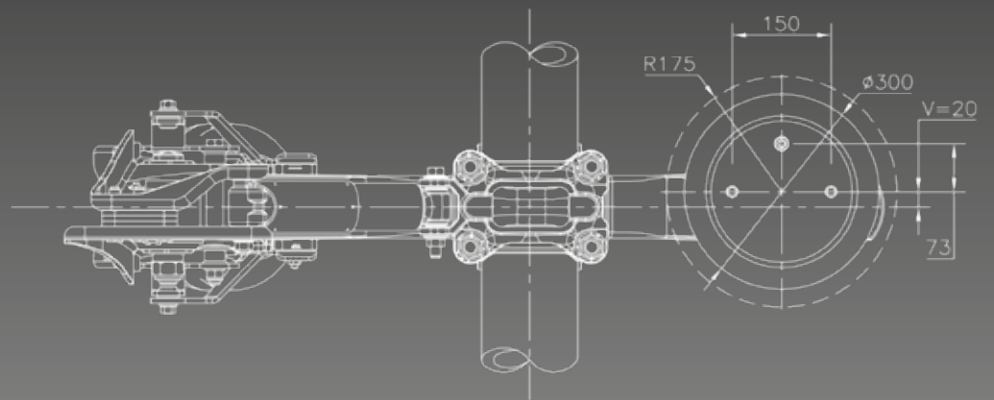


SPECIFICATIONS

- Maximum axle load: 9t / 10t
- Tailor made air suspension range for Schmitz Cargobull
- Suitable for $\varnothing 146\text{mm}$ drum and disc brake axles
- Multi Ride Height system range: 190-540mm (including Mega & Tipper)
- Air spring options:
 $\varnothing 300\text{mm}$ / $\varnothing 335\text{mm}$ / $\varnothing 350\text{mm}$
- Air spring offset options:
- 20mm ($\varnothing 300\text{mm}$)
- 50mm ($\varnothing 335\text{mm}$ / $\varnothing 350\text{mm}$)
- Optional Bolt-On[®] axle lift
- Optional Bolt-On[®] Splitter[®]



MRH air suspensions

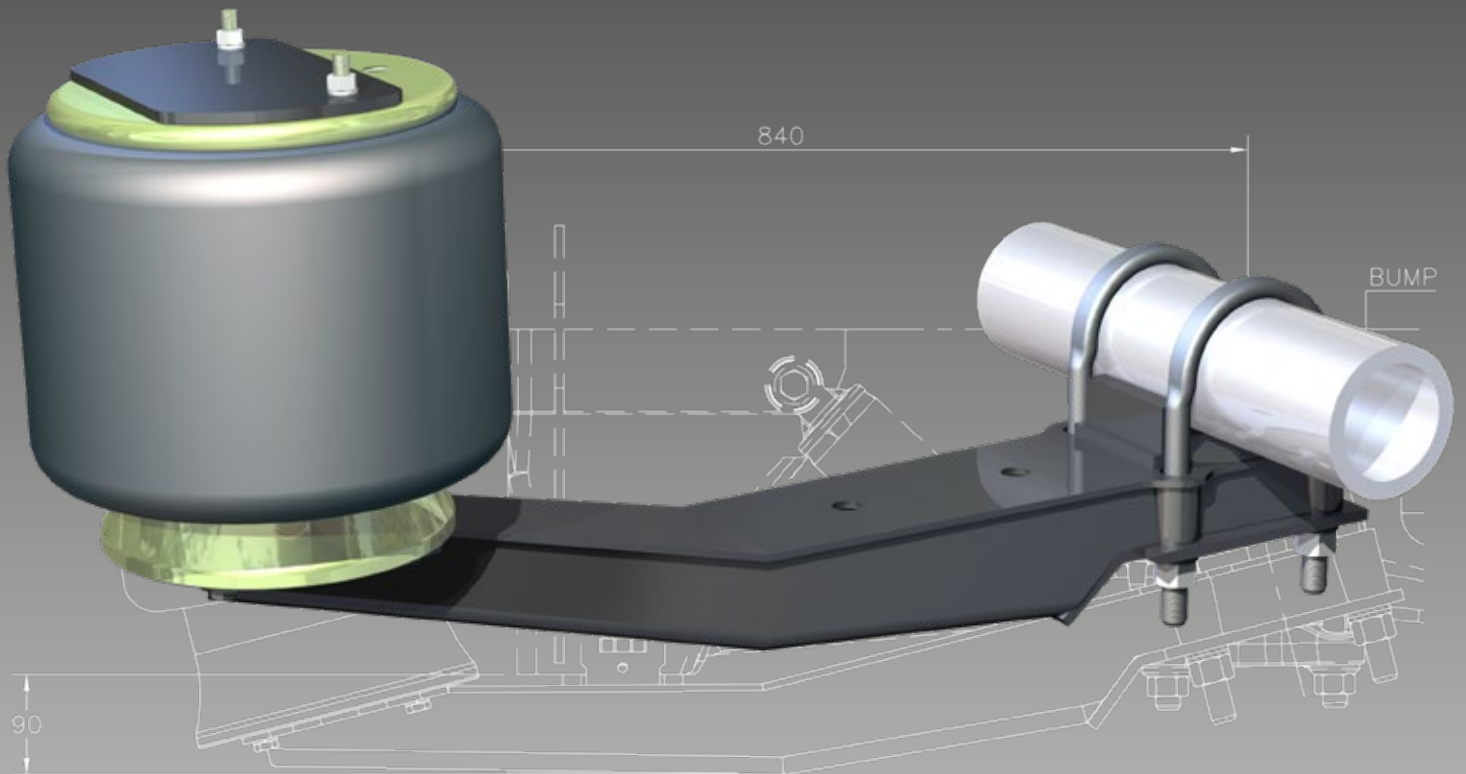


SPECIFICATIONS & BENEFITS

- The Mid Lift range is developed for universal under slung air suspension systems.
- Available for the following axles:
 - AL-138 for Ø127mm axles
 - AL-191 for □120mm axles
 - AL-193 for Ø146mm axles
 - AL-057 for □150mm axles
- Highly suitable for systems that have limited ground clearance.
- Suitable for drum and disc brake systems.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.

MID-LIFT

Universal

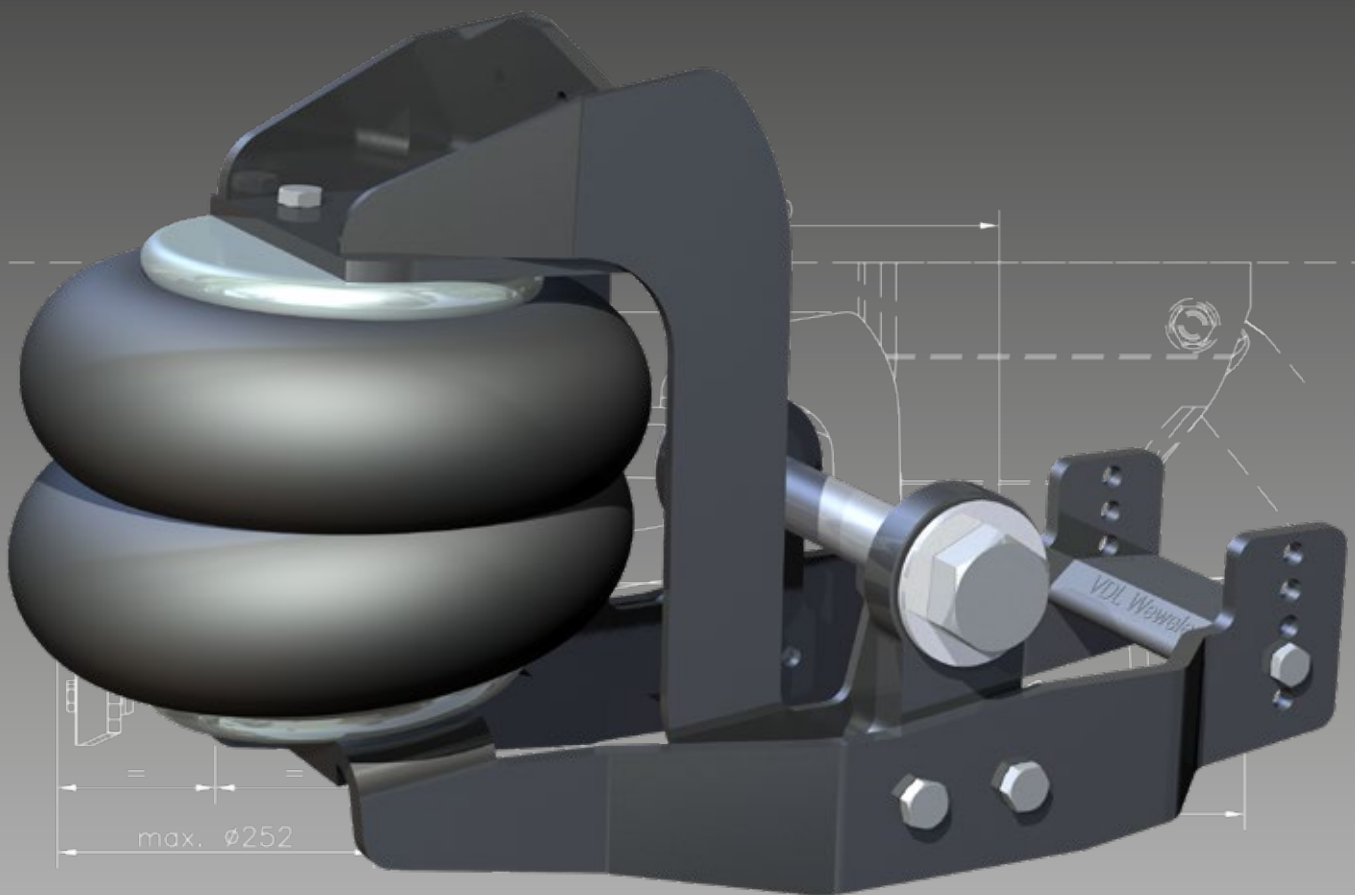


SPECIFICATIONS & BENEFITS

- The AL-491 Mega Axle Lift is developed for VDL Weweler air suspension systems.
- Lightweight alternative for the Mid Lift.
- Highly suitable for systems that have extreme limited ground clearance.
- Suitable for drum and disc brake systems.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-491 |

VDL Weweler

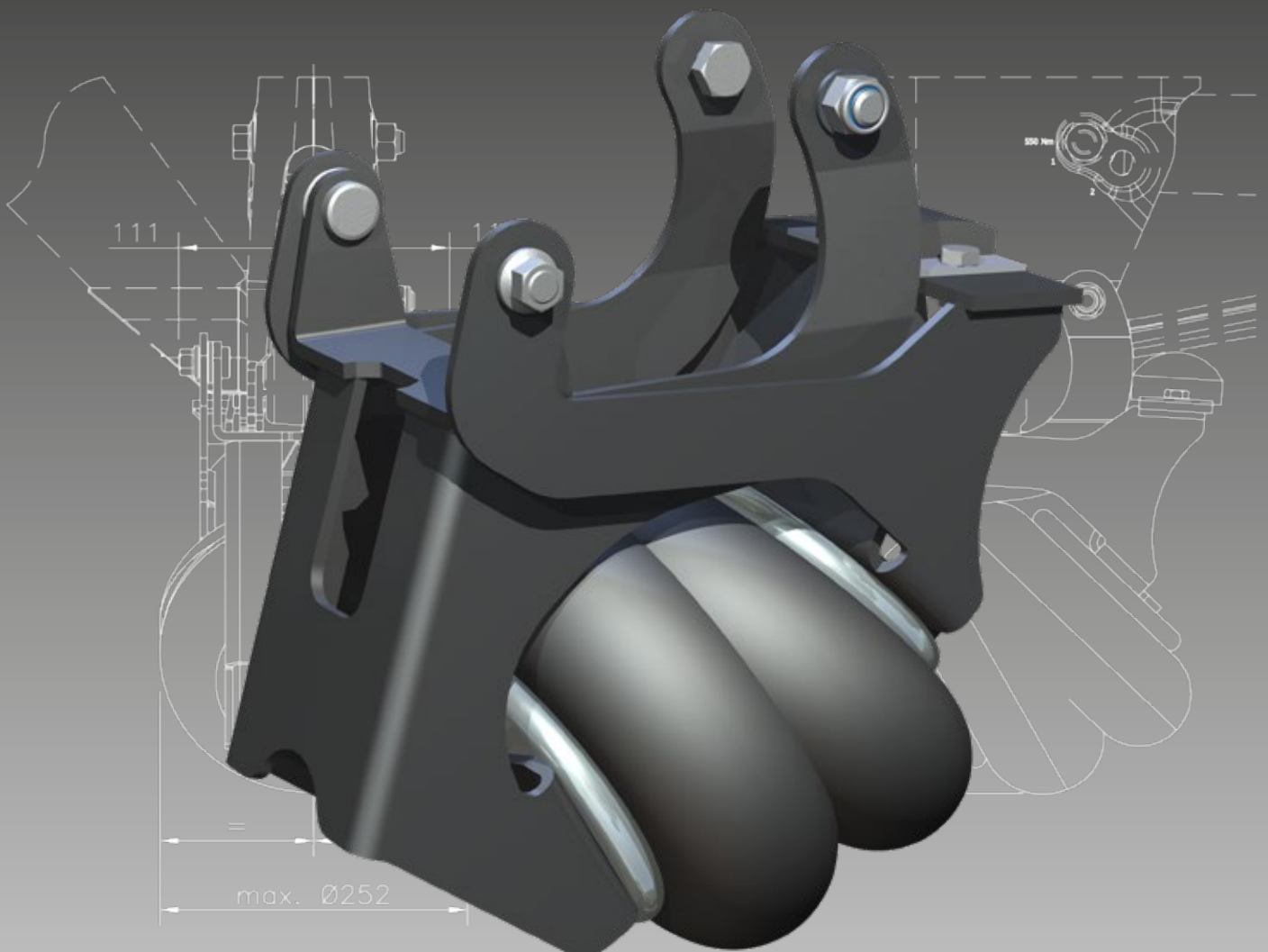


SPECIFICATIONS & BENEFITS

- The Bolt-On® AL-478-II & AL-484-II are developed for VDL Weweler MBS® drum and disc brake systems:
 - MBS-100 range
 - MBS-200 range
 - MBS-V range
 - MBS-W range
- Light weight solution with improved ground clearance.
- The hanger bracket mounted lift design eliminates the need to remove the pivot bolt, resulting in an assembly time of under 5 minutes.
- Extremely suitable for retrofitting.
- Easy to fit, with no special need for specific tools or equipment.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.
- Also available:
 - Bolt-On® axle lifts AL-456, AL-457, AL-462 and AL-494 for the MBS-HD range.

AL-478-II / AL-484-II

VDL Weweler

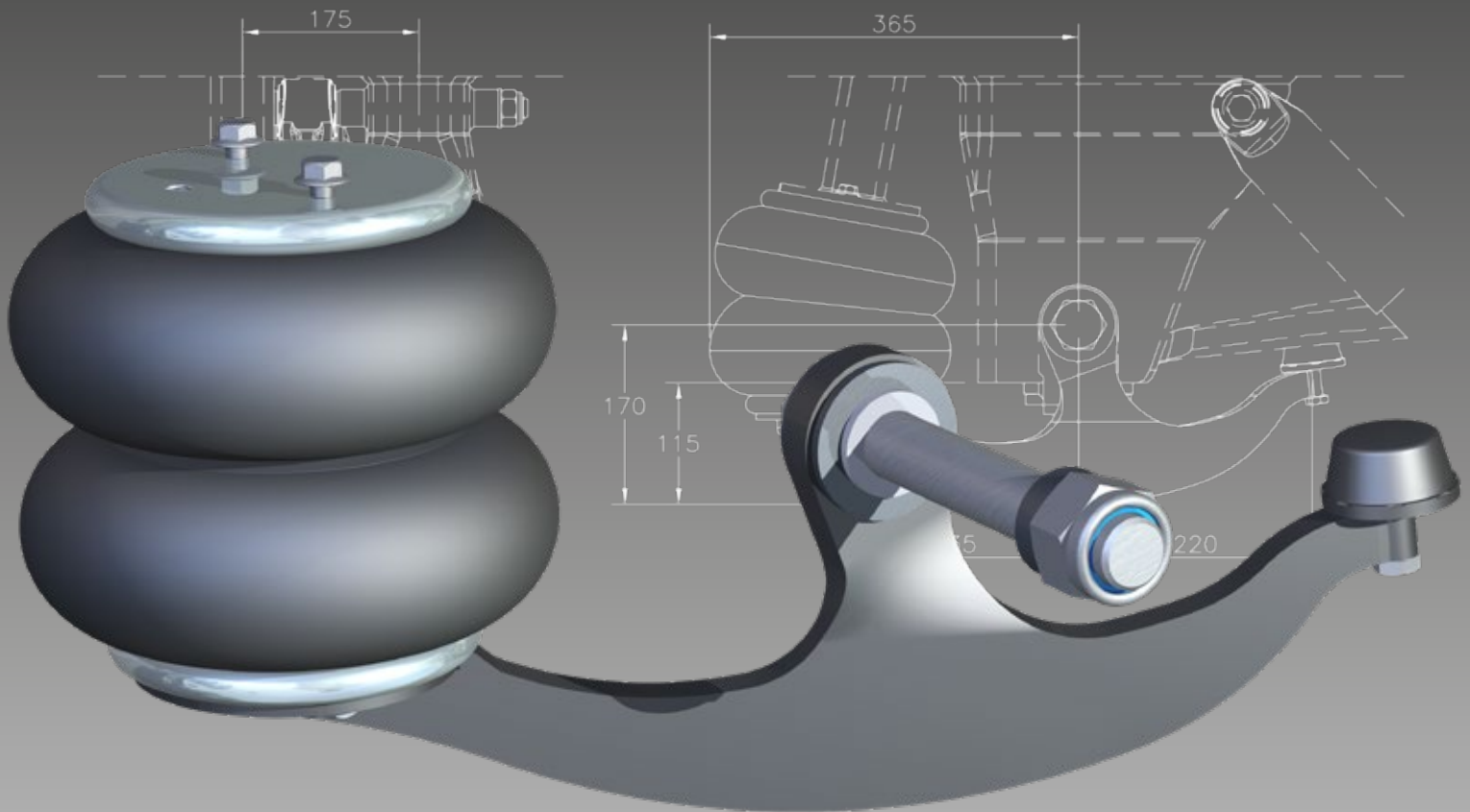


SPECIFICATIONS & BENEFITS

- The universal lightweight Bolt-On AL-495 "Rocker" axle lift is developed and suited for several different running gear brands.
- Specific for low loader applications with disc or drum brakes and small 17.5" tires. Also for (self) steer axles.
- Optimal ground clearance on low underslung applications. The axle lift is also suitable for overslung suspensions
- The clever patented rocker design places the air spring ingeniously on the inside of the vehicle, protecting it from the tires and potential debris. With the additional advantage that the axle lift is also suitable for nearly all axles under a vehicle.
- Suitable for truck applications with the advantage that the lift air spring is located underneath the chassis rail.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-495

Universal

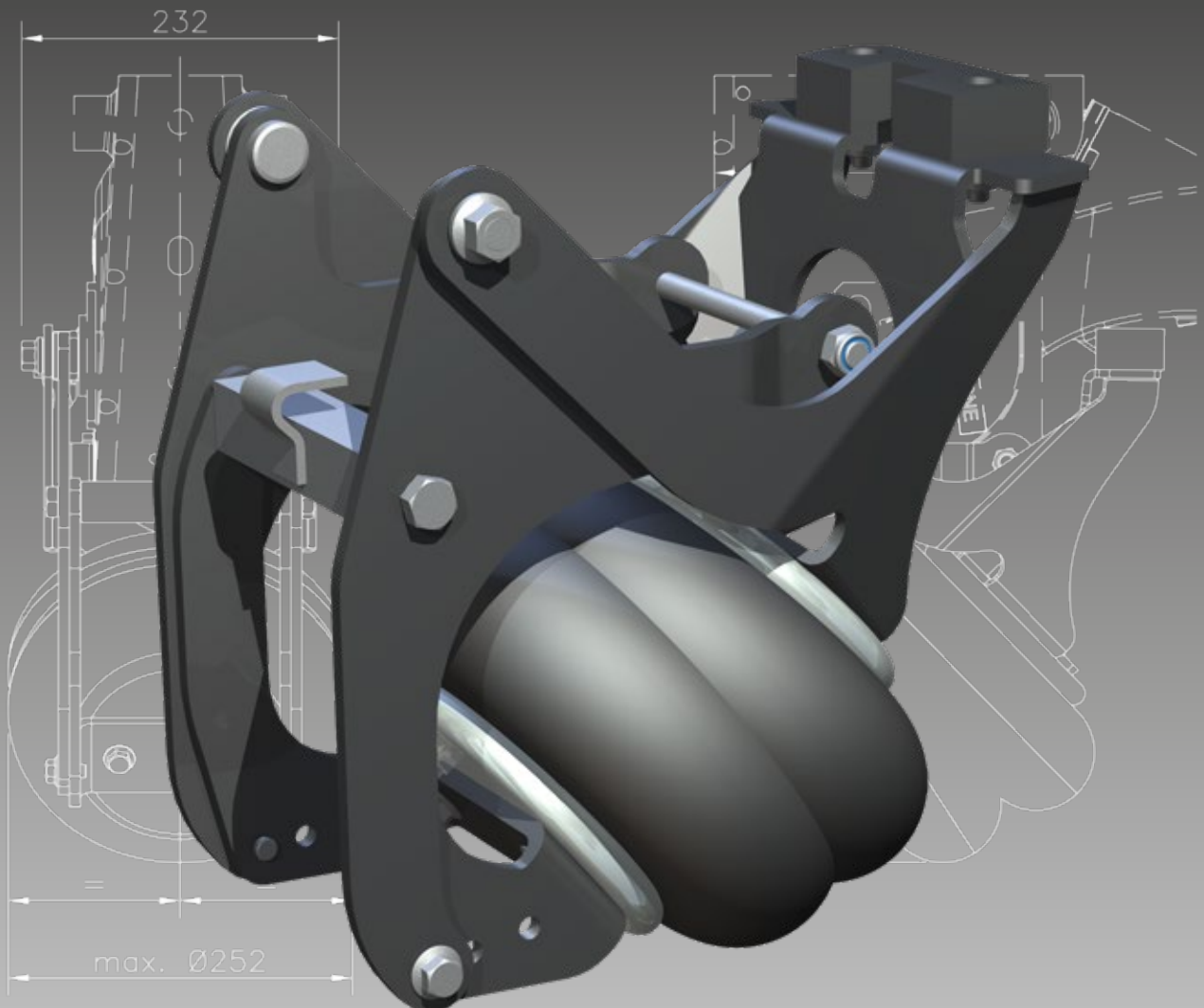


SPECIFICATIONS & BENEFITS

- The Bolt-On® AL-490-II is developed for BPW Eco Air Compact drum and disc brake systems:
 - AU / AM / BM / BO
- The AL-490-II can be used with the welded and bolted bracing.
- One lightweight solution that covers the whole BPW EAC range without the need of any additional parts.
- The hanger bracket mounted lift design eliminates the need to remove the pivot bolt, resulting in an assembly time of under 5 minutes.
- Extremely suitable for retrofitting.
- Easy to fit, with no special need for specific tools or equipment.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.
- Also available:
 - Bolt-On® axle lift AL-459 for BPW SL
 - Bolt-On® axle lift AL-476 for BPW ALII

AL-490-II

BPW EAC

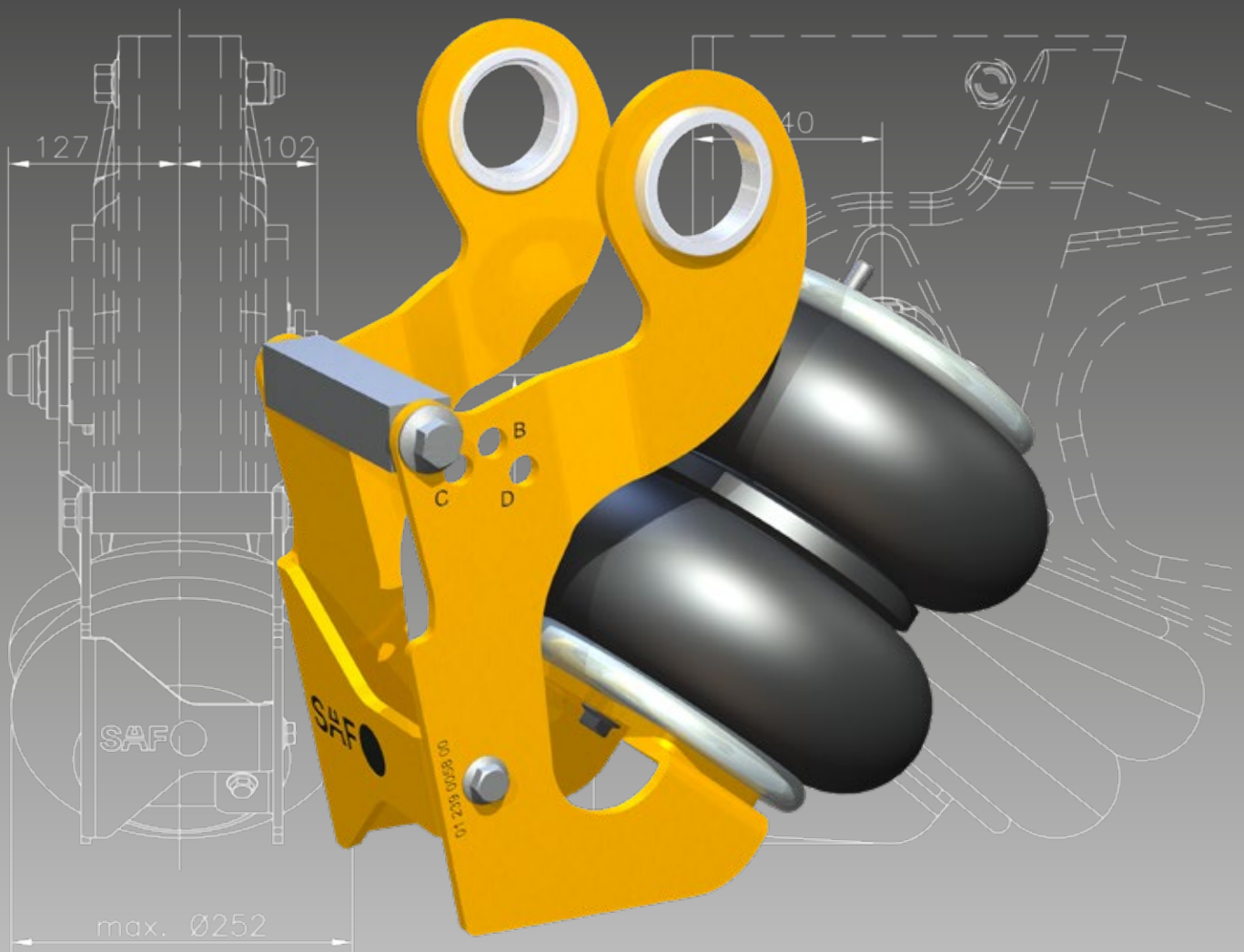


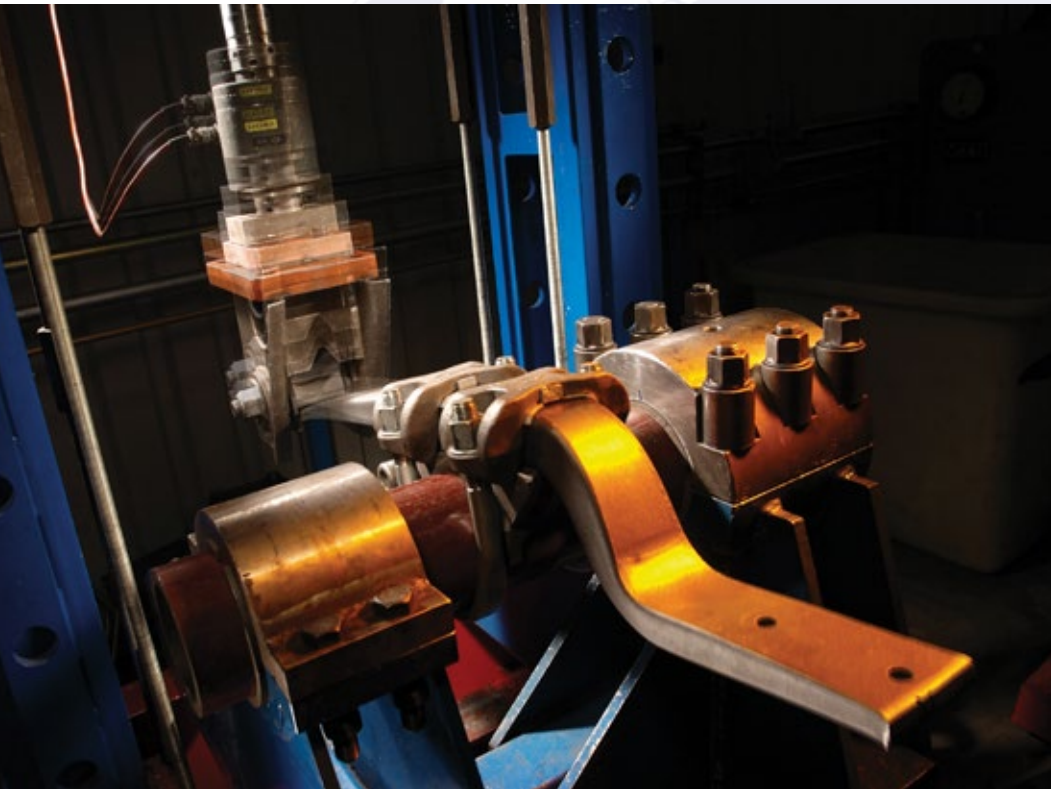
SPECIFICATIONS & BENEFITS

- The Bolt-On® AL-489-II is developed for SAF Intradisc Plus and Intradrum air suspensions:
 - IU Serie
 - IO Serie
- Sold exclusively through SAF-Holland.
- Lightweight solution with improved ground clearance.
- The patented hook lift design eliminates the need to remove the pivot bolt, resulting in an assembly time of under 5 minutes.
- Extremely suitable for retrofitting.
- Easy to fit, with no special need for specific tools or equipment.
- All axle lifts parts are end-coated.
- Reduced tire wear, fuel consumption and maintenance cost.
- Also available:
 - Bolt-On® axle lift AL-460-II for SAF Modul.

AL-489-II

SAF Intra

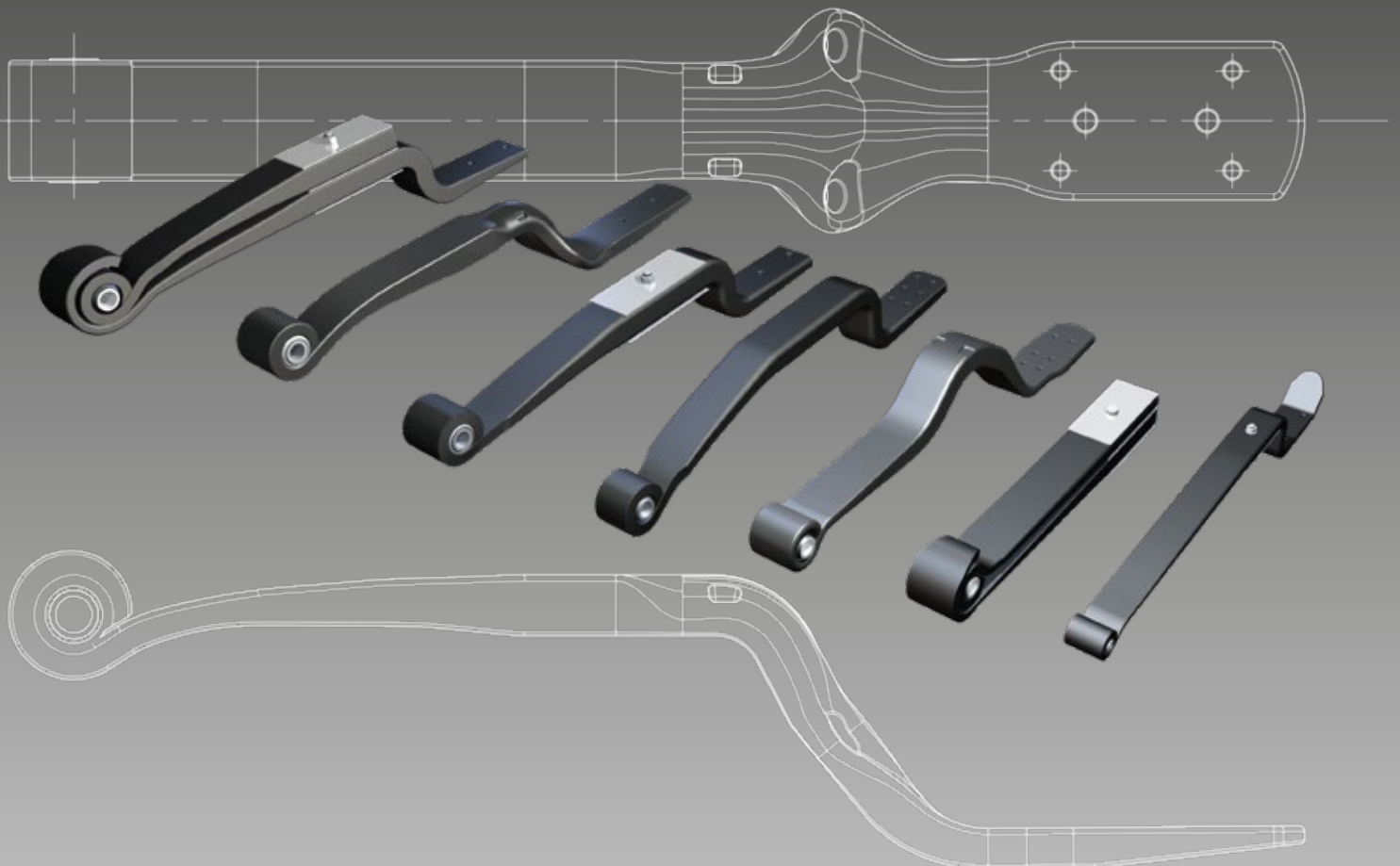




FEATURES & BENEFITS

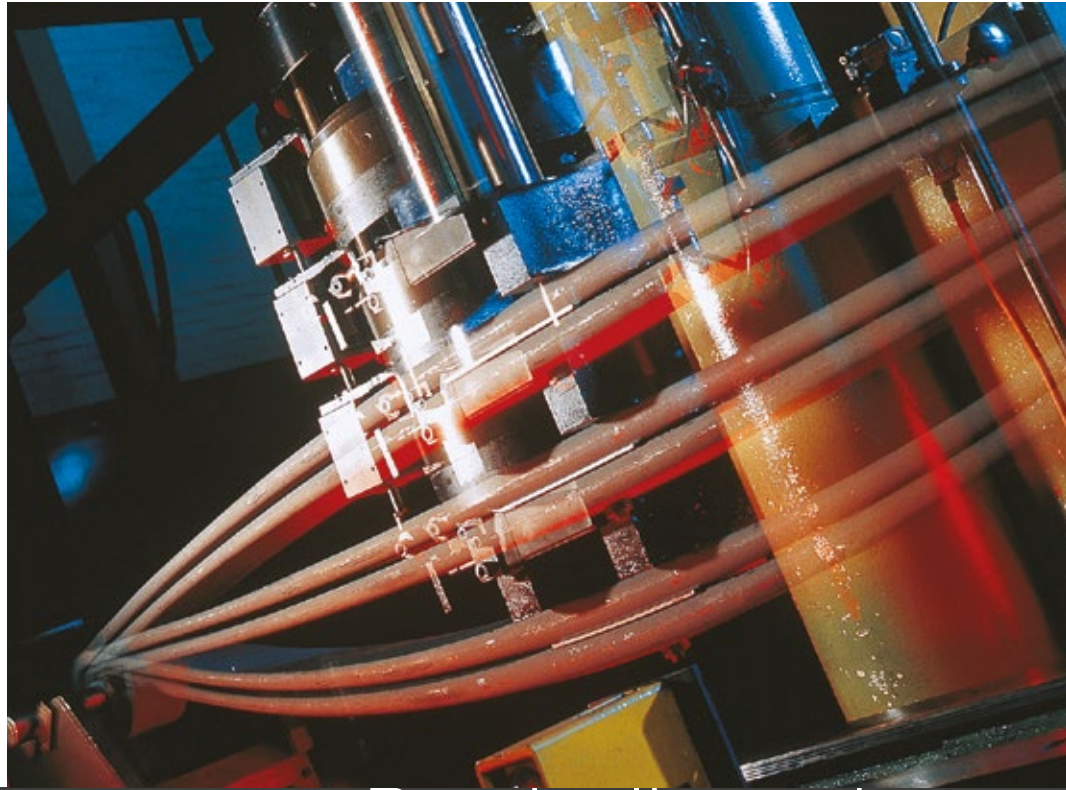
- Over 35 years of experience in designing, producing and testing of parabolic trailing arms for trailers.
- A highly automated production facility, in which robotics play a vital role, ensure high efficiency, flexibility and very reliable products.
- A major strong point is VDL Weweler's ability to be a design partner and to create tailor made trailing arms that meet the customer's specific needs perfectly.
- VDL Weweler parabolic trailing arms vary in length, thickness and width and depending on the application can take axle loads of 3t. up to 13t.

Trailing arms

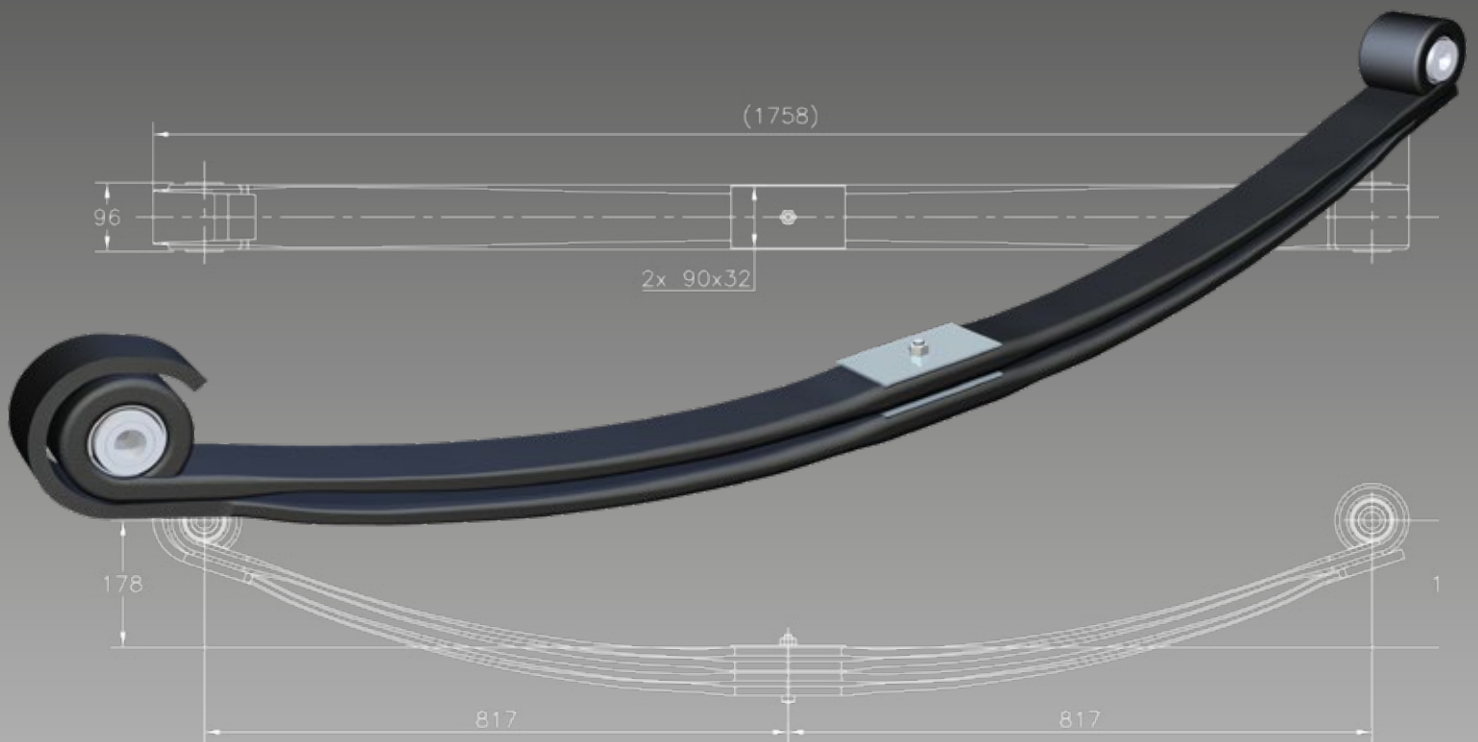


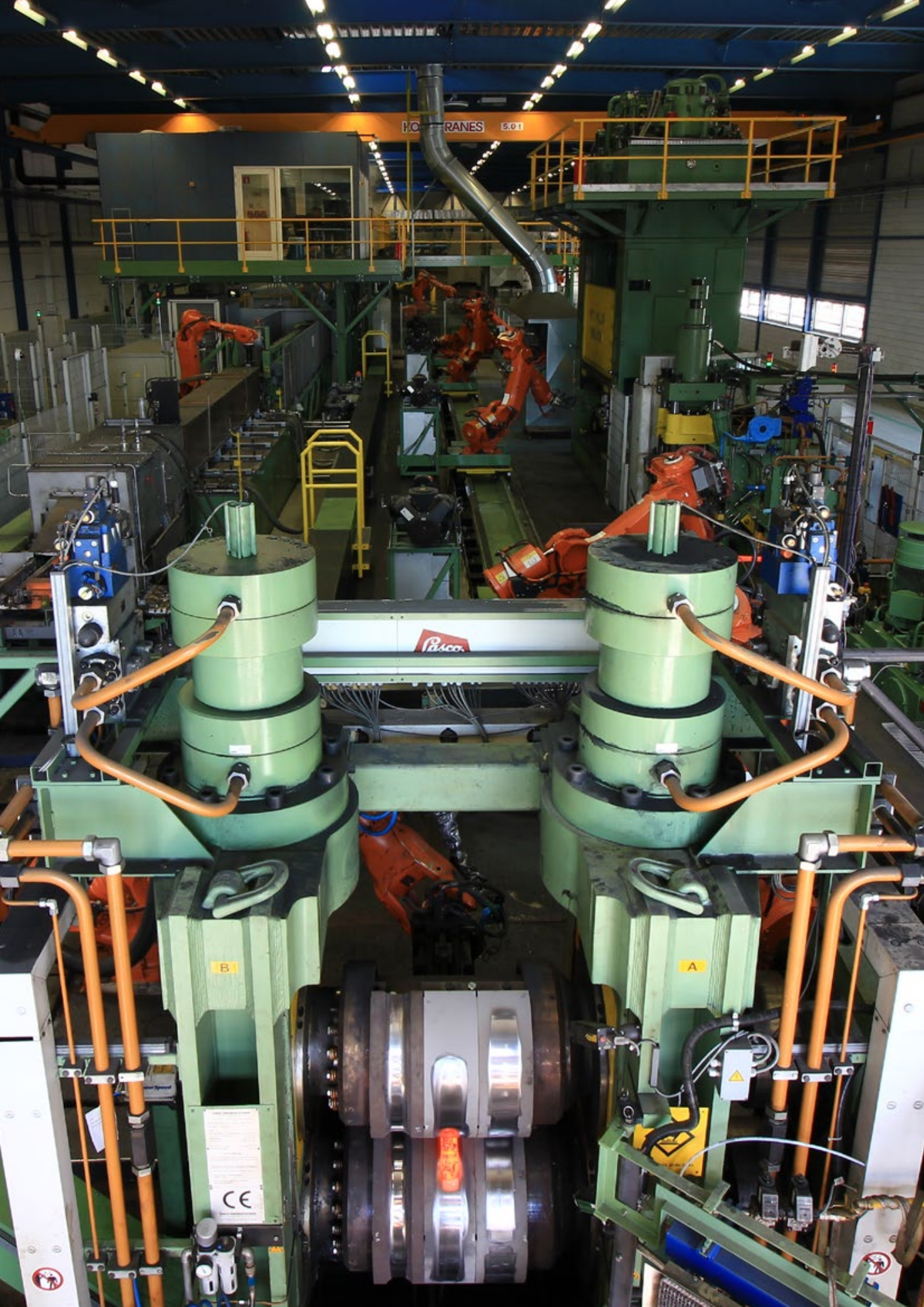
FEATURES & BENEFITS

- Over 90 years of experience in designing, producing and testing of parabolic springs for trucks and busses.
- A highly automated production facility, in which robotics play a vital role, ensure high efficiency, flexibility and very reliable products.
- A major strong point is VDL Weweler's ability to be a design partner and to create tailor made parabolic springs that meet the customer's specific needs perfectly.



Parabolic springs





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