

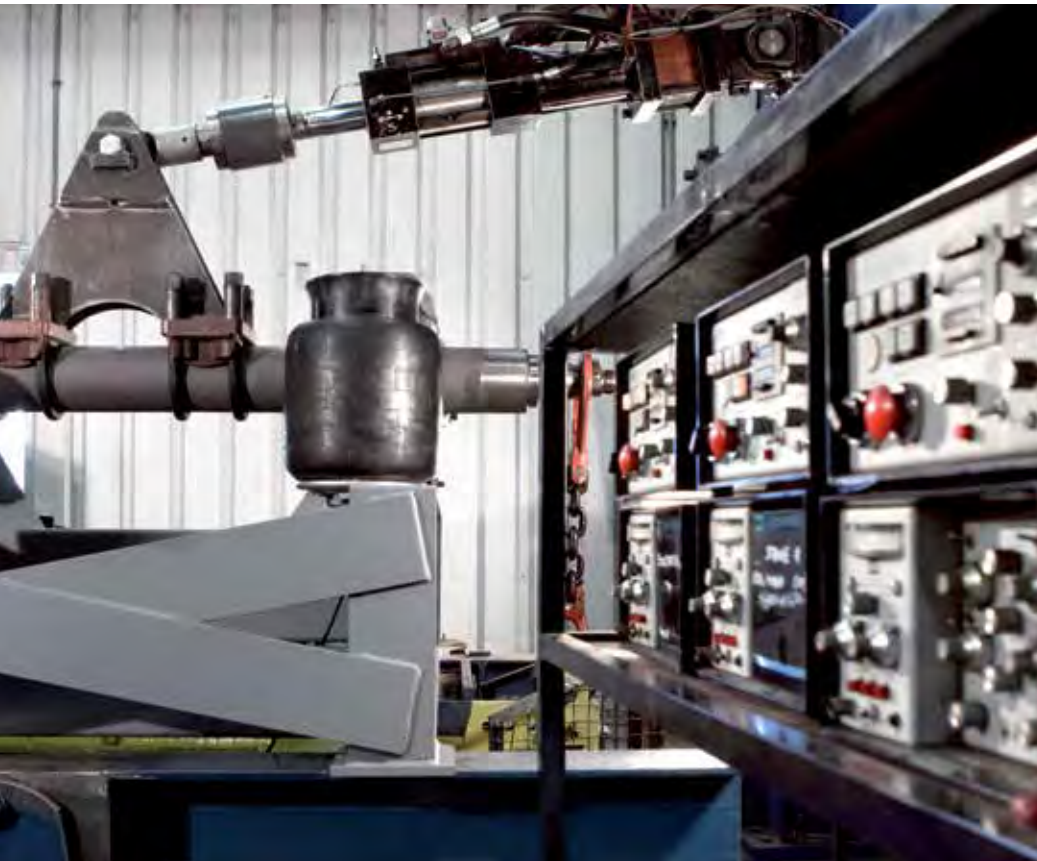
VDL Weweler



Strength through cooperation







Contents

4	VDL WEWELER
6	MBS® - MINI
8	MBS® - LITE
14	MBS® - HD
26	SCHMITZ CARGOBULL
28	MBS® - GF
30	MBS® - NA
32	BOLT-ON® AXLE LIFTS
38	MBS® - TRUCK & BUS
40	TRAILING ARMS
41	PARABOLIC SPRINGS
42	CONTROL VALVES
44	VDL GROEP



VDL Weweler Leading through technology

THE ESTABLISHMENT OF A WHOLESALE BUSINESS IN APELDOORN BY DIRK WEWELER IN 1924, LAID THE BASIS FOR WHAT VDL WEWELER IS TODAY. OVER THE LAST 88 YEARS VDL WEWELER HAS DEVELOPED INTO A LEADING INTERNATIONAL DESIGNER AND MANUFACTURER OF (AIR) SUSPENSION SOLUTIONS FOR TRAILERS, TRUCKS AND BUSES. THIS DEVELOPMENT WAS REINFORCED BY THE INCORPORATION INTO THE VDL GROEP IN 2001.

VDL Weweler produces, tests and sells air suspension systems, axle lift systems, parabolic springs and auxiliary axles for trucks and buses and is fortunate to work with the industry's leading O.E.M.

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 cooperation'.

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, simplistic, 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).

FUTURE

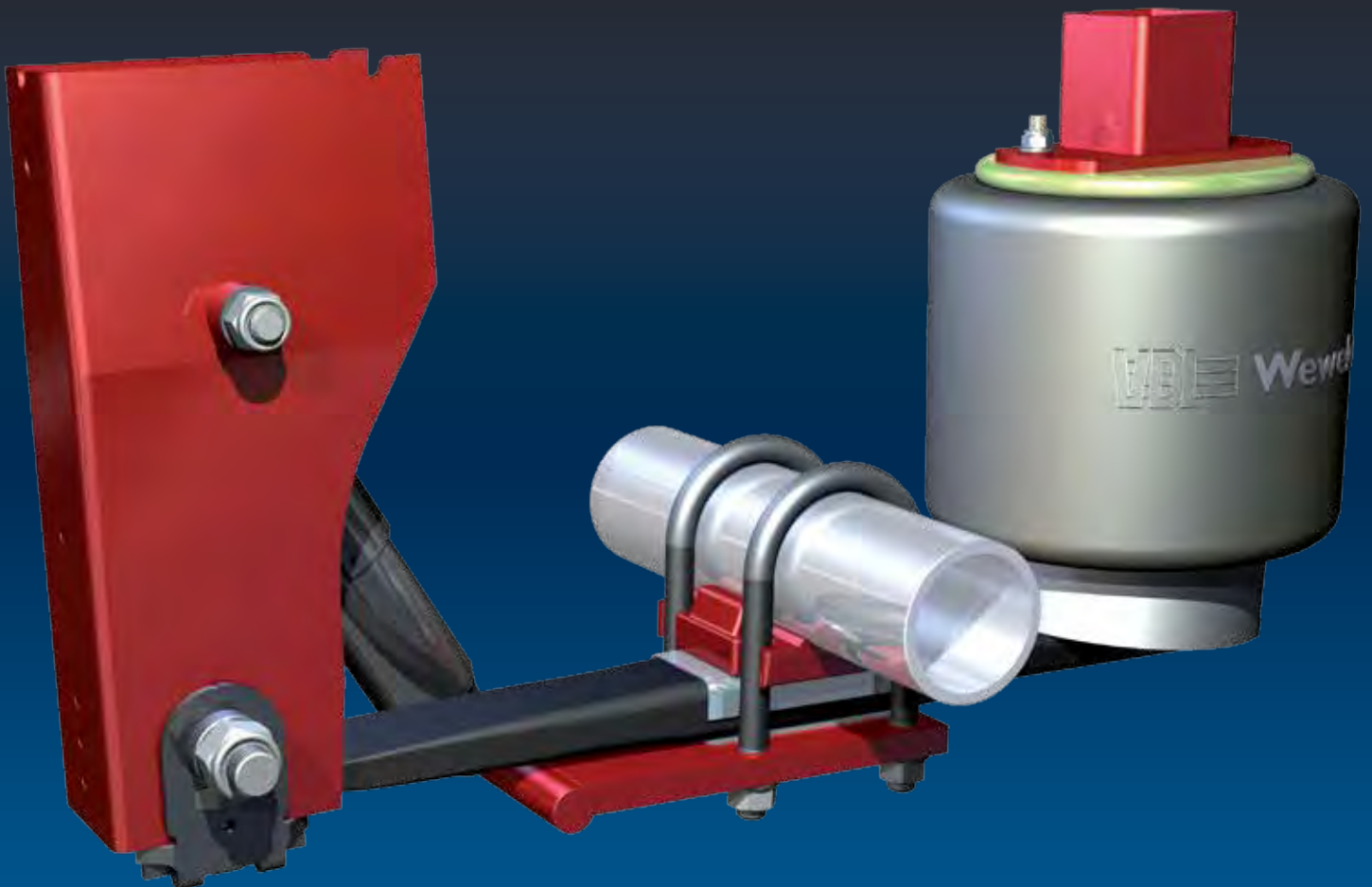
To further strengthen VDL Weweler's position in the market while still maintaining the status of technological expert, a brand new production facility is being build. This revolutionary facility will be the most advanced trailing arm production facility in the world. Unique one-off machinery, advanced robotics, state-of-the-art test facility, optimum logistics, a critical quality policy and world-class craftsmanship, will provide the new basis to ensure our customers receive the added-value they so desire and deserve.

On the 2nd of January 2013, the new production facility will start rolling. In October 2012, the first production line will be set up and ready to go.

FEATURES & BENEFITS

- MBS®-MINI is a new cost-efficient 5.5t. air suspension.
- Weight sensitivity has resulted in a system that is approximately 10kg lighter than similar solutions in the market.
- The air suspension which uses flexible high strength spring steel trailing arms is suitable for lightweight axles and offers a wide range of ride heights.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Furthermore the MBS®-MINI offers easy alignment with re-alignment free bushing and low & easy maintenance.

MBS-Mini 5.5T

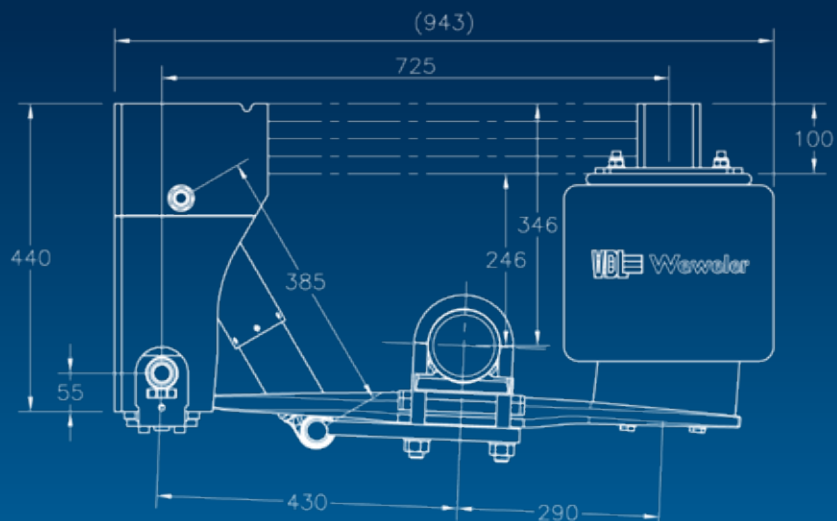
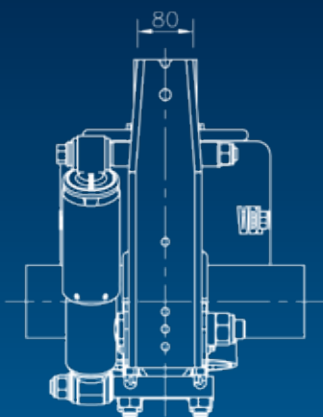
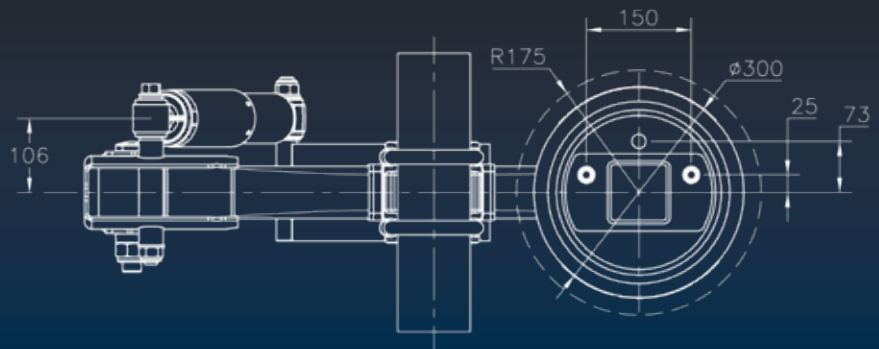


SPECIFICATIONS

- Maximum axle load: 5.5t.
- Single leaf trailing arm: 75x43mm
- Trailing arm dimensions:
 - L1 = 430mm
 - L2 = 290mm
- Suitable for Ø101.6mm drum & disc brake axles
- Ride height range:
 - Underslung: 245 - 410mm
 - Overslung: 430 - 580mm
- Air spring: Ø300mm
- Air spring offset options:
0mm / 30mm / 50mm
- System weight: ca. 95 - 105kg



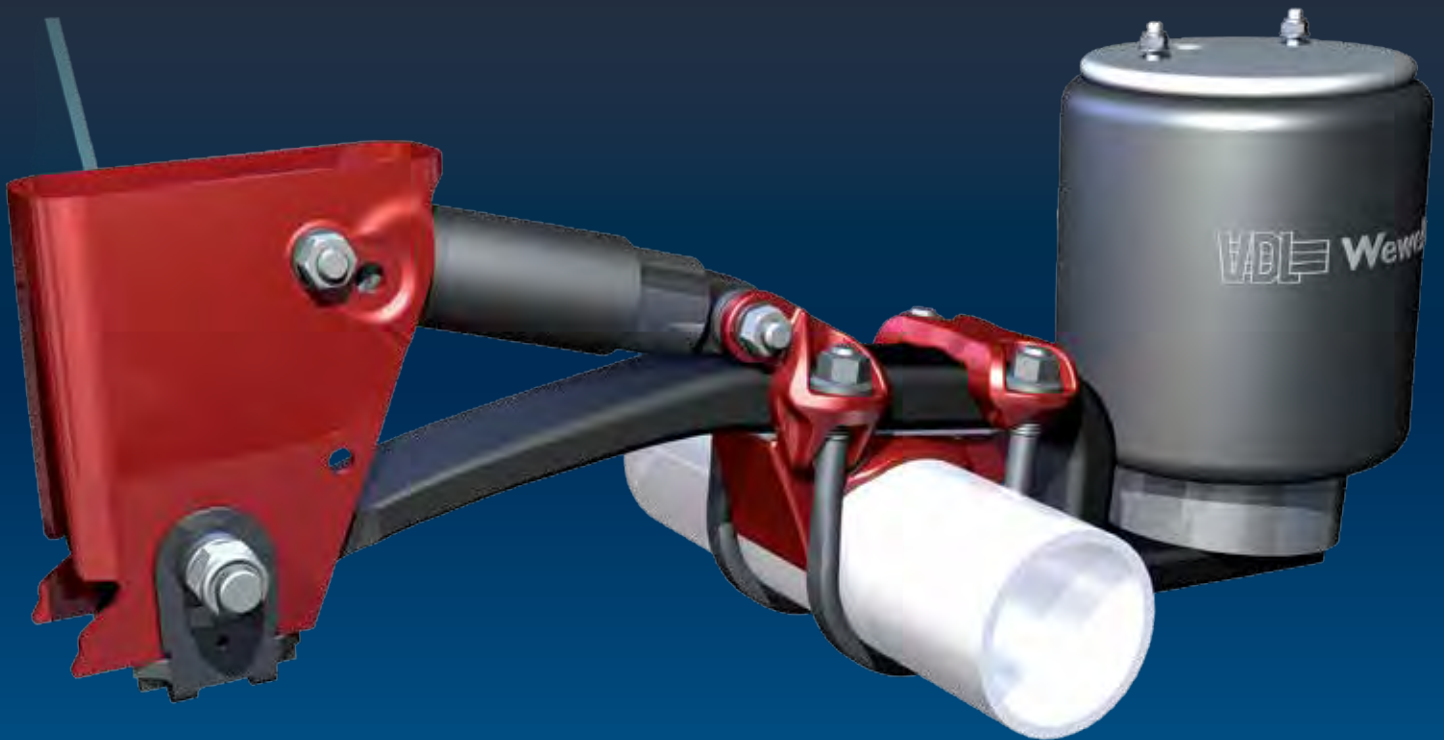
Mini air suspensions



FEATURES & BENEFITS

- MBS®-Lite S is a new compact designed light weight standard range suitable for 9/10t. thin wall Ø146mm axles and suitable for a wide range of trailers operating on highway conditions.
- The new range makes use of an axle seat that only requires welding on one side.
- Full ride height range can be achieved by using only two shock absorbers and two hanger brackets.
- Weight optimization is achieved by 3D rolling of the flexible high strength spring steel trailing arms and the use of new open hanger brackets with integrated casted bracings.
- The tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width.
- Compact design is achieved by using centre mounted shock absorbers.
- 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-Lite S

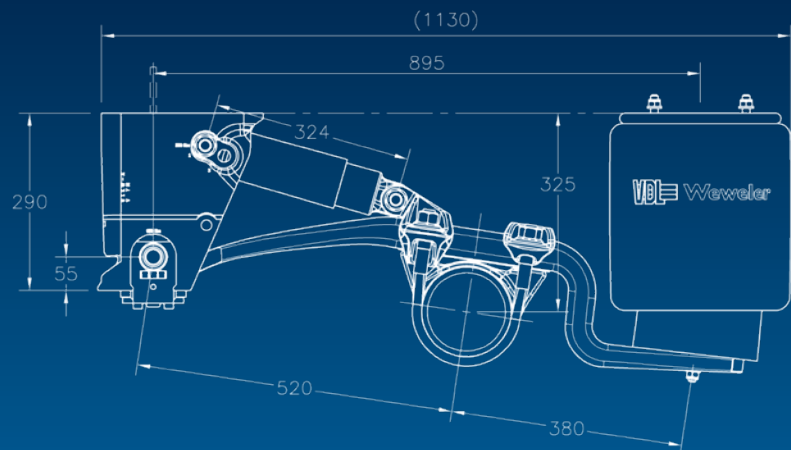
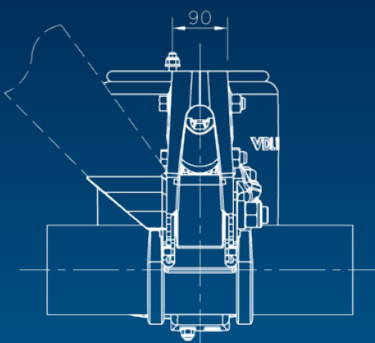
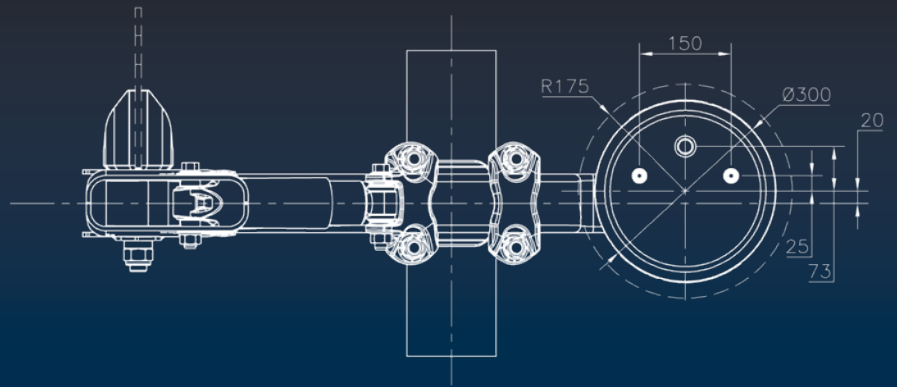


SPECIFICATIONS

- Maximum axle load: 9/10t.
- Single leaf trailing arm: 95 x 49mm
- Trailing arm dimensions:
 - L1 = 520mm
 - L2 = 380mm
- Suitable for Ø146mm drum & disc brake axles
- Ride height range: 240 - 540mm
- Air spring options:
Ø300mm and Ø335mm
- Air spring offset options:
20mm / 50mm
- System weight: ca. 135 - 155kg
- Optional Bolt-On® axle lift
- Optional Bolt-On® hanger bracket



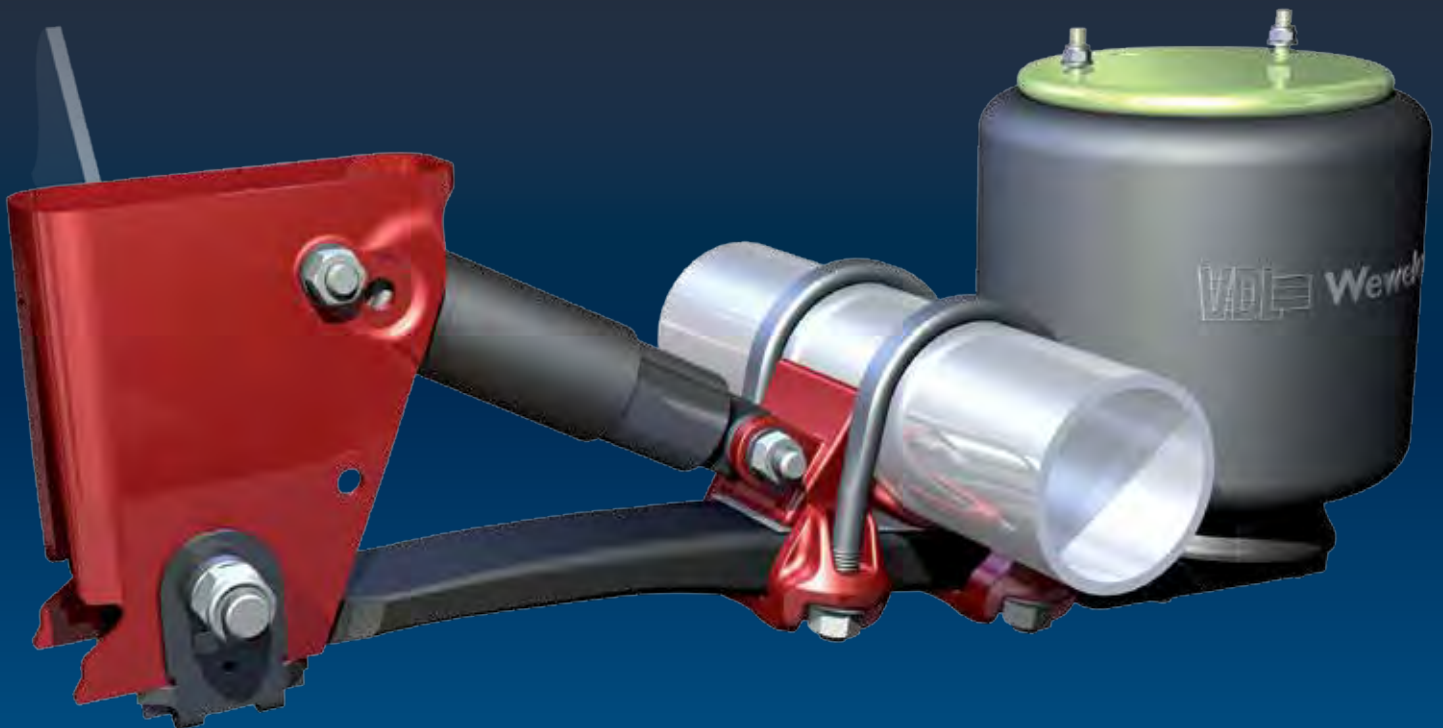
Modular Bolt-On solutions



FEATURES & BENEFITS

- MBS®-Lite M is a specific model within the MBS®-Lite range, designed for long stroke 'Mega' or 'Huckepack' applications.
- This new and lighter 9/10t. mega solution uses a large airbag, which allows for a multi ride height suspension.
- Weight optimization is achieved by 3D rolling of the flexible high strength spring steel trailing arms and the use of new open hanger brackets with integrated casted bracings.
- The tapered design of the new 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®-Lite Mega can optionally be fitted with a Splitter®.

MBS-Lite M

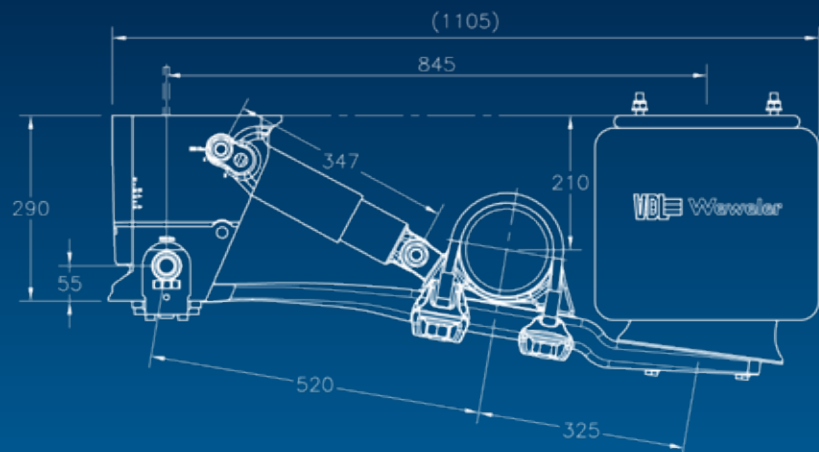
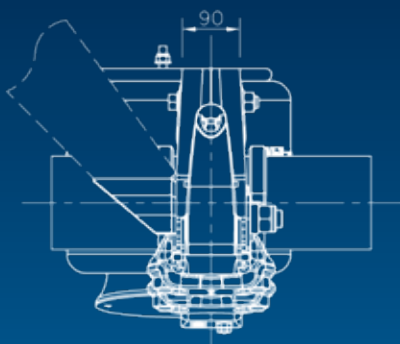
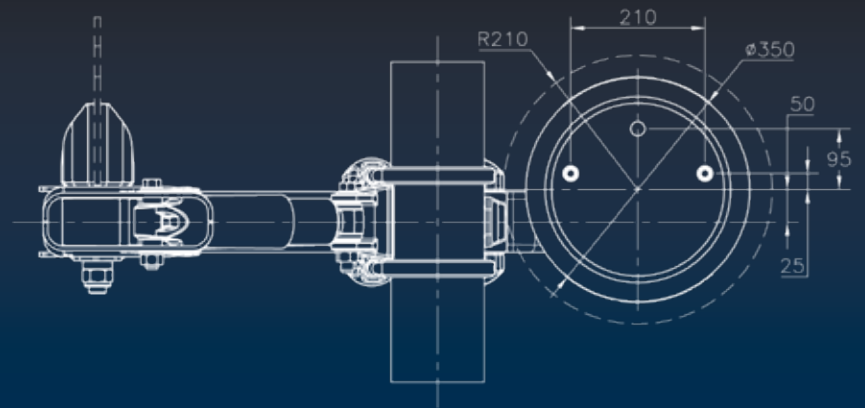


SPECIFICATIONS

- Maximum axle load: 9/10t.
- Single leaf trailing arm: 95 x 49mm
- Trailing arm dimensions:
 - L1 = 520mm
 - L2 = 325mm
- Suitable for $\varnothing 146\text{mm}$ drum (and disc) brake axles
- Ride height range: 180 - 340mm
- Air spring options:
 - $\varnothing 300\text{mm}$, $\varnothing 335\text{mm}$ and $\varnothing 350\text{mm}$
- Air spring offset options:
 - 20mm / 50mm ($\varnothing 300\text{mm}$ & $\varnothing 335\text{mm}$ air spring)
 - 50mm / 90mm ($\varnothing 350\text{mm}$ air spring)
- System weight: ca. 135 - 170kg
- Optional axle lift
- Optional Bolt-On® Splitter®
- Optional Bolt-On® hanger bracket



Modular Bolt-On solutions



FEATURES & BENEFITS

- MBS®-Lite T is a model within the MBS®-Lite range, specifically design for 'Tipper' and 'Container' trailers.
- The new range makes use of an axle seat that only requires welding on one side.
- Weight optimization is achieved by 3D rolling of the flexible high strength spring steel trailing arms and the use of new open hanger brackets with integrated casted bracings.
- The tapered design of the new 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.

MBS-Lite T

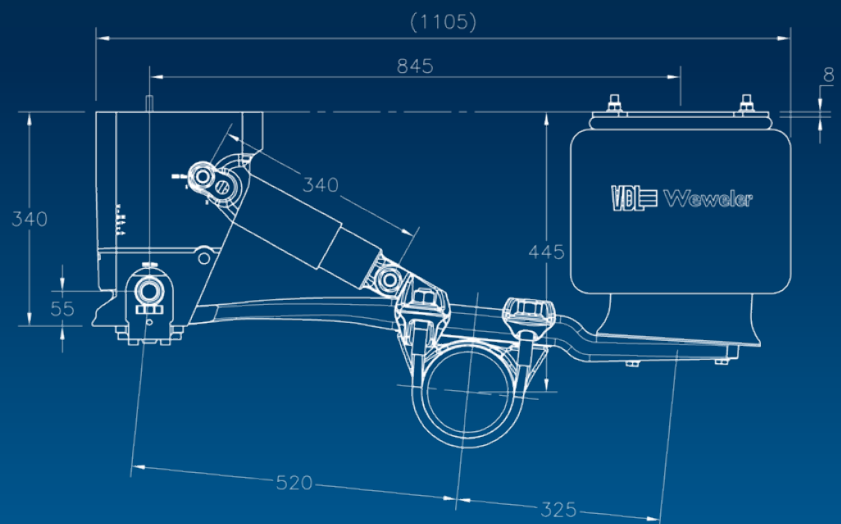
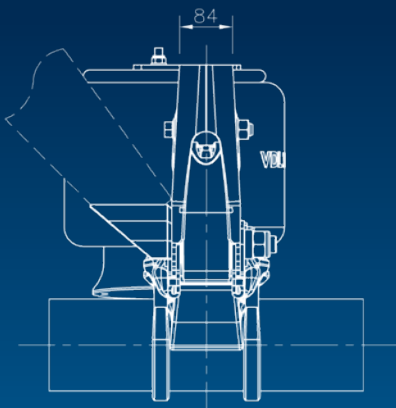
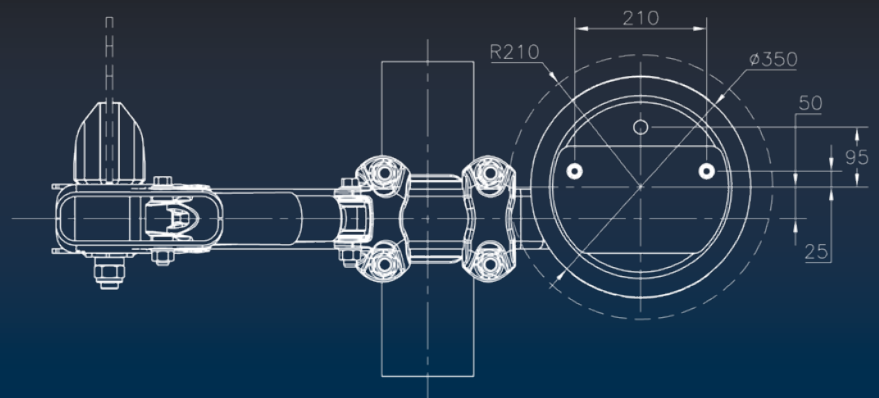


SPECIFICATIONS

- Maximum axle load: 9/10t.
- Single leaf trailing arm: 95 x 49mm
- Trailing arm dimensions:
 - L1 = 520mm
 - L2 = 325mm
- Suitable for $\varnothing 146$ mm drum and disc brake axles
- Ride height range: 390 - 565mm
- Air spring options: $\varnothing 300$ mm, $\varnothing 335$ mm and $\varnothing 350$ mm
- Air spring offset options:
 - 20mm / 50mm ($\varnothing 300$ mm & $\varnothing 335$ mm air spring)
 - 50mm / 90mm ($\varnothing 350$ mm air spring)
- System weight: ca. 140 - 160kg
- Optional Bolt-On[®] axle lift
- Optional Bolt-On[®] hanger bracket



Modular Bolt-On solutions



FEATURES & BENEFITS

- MBS®-HD 9t. is a well proven, robust single leaf air suspension range, that can best be described as an allround 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 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, a higher overload threshold and low & easy maintenance.

MBS-HD 9T

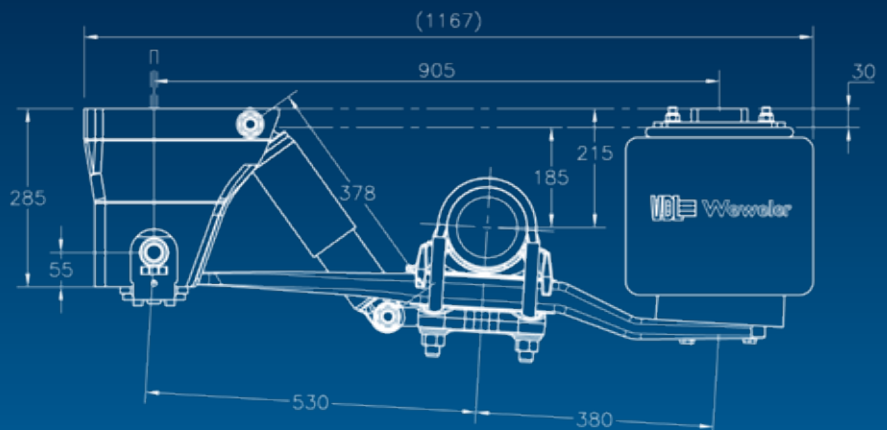
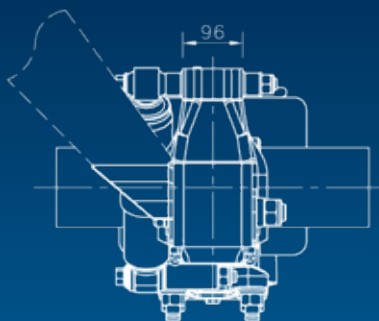
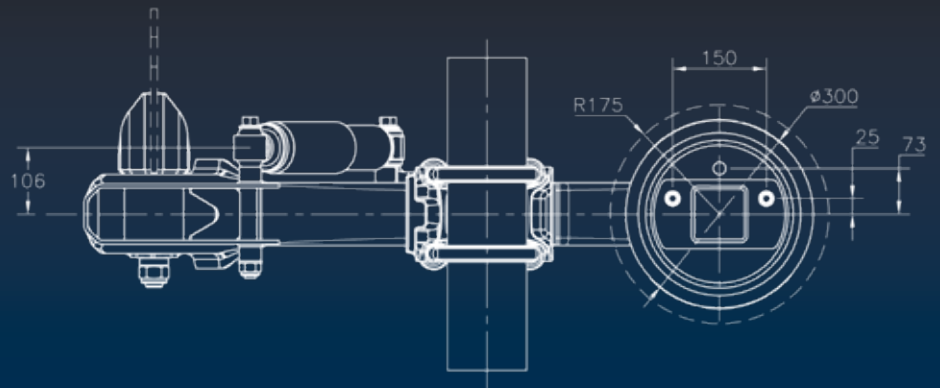


SPECIFICATIONS

- Maximum axle load: 9t.
- Single leaf trailing arm: 100 x 48mm
- Trailing arm dimensions:
 - L1 = 530mm
 - L2 = 380mm
- Suitable for Ø127mm, Ø146mm, □120mm and □150mm drum and disc brake axles
- Ride height range:
 - Underslung: 190 - 340mm
 - Overslung: 325 - 525mm
- Air spring options:
 - Ø300mm and Ø350mm
- Air spring offset options:
 - 20mm / 65mm (Ø300mm air spring)
 - 50mm (Ø350mm air spring)
- System weight: ca. 150 - 175kg
- Optional Bolt-On® axle lift



Heavy duty air suspensions



FEATURES & BENEFITS

- MBS®-HD 10t. is a new weight conscious 10t. single leaf air suspension range suitable for most trailer types and suitable for the more demanding road conditions worldwide.
- This new 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 MBS®-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 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 and low & easy maintenance.
- For demanding conditions optional double bounded Steel-Rubber-Steel high density rubber bushings can be fitted.

MBS-HD 10T

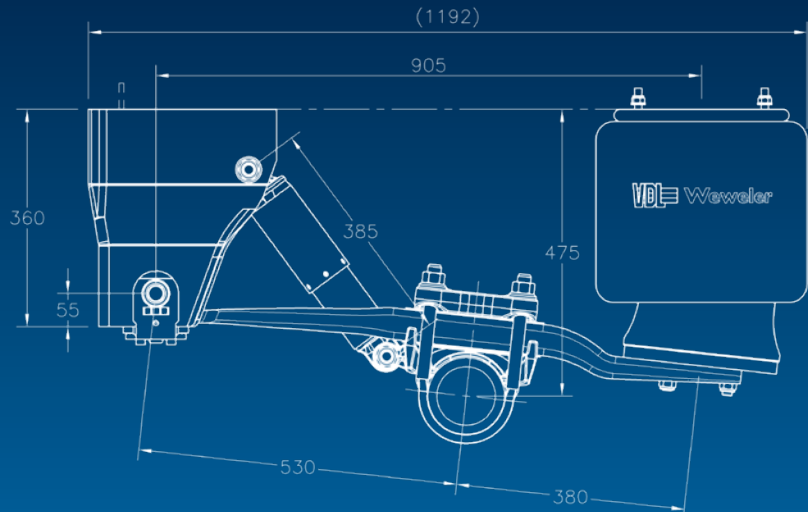
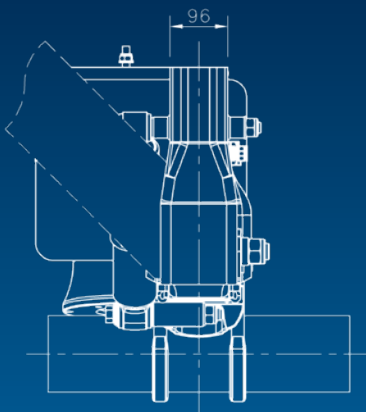
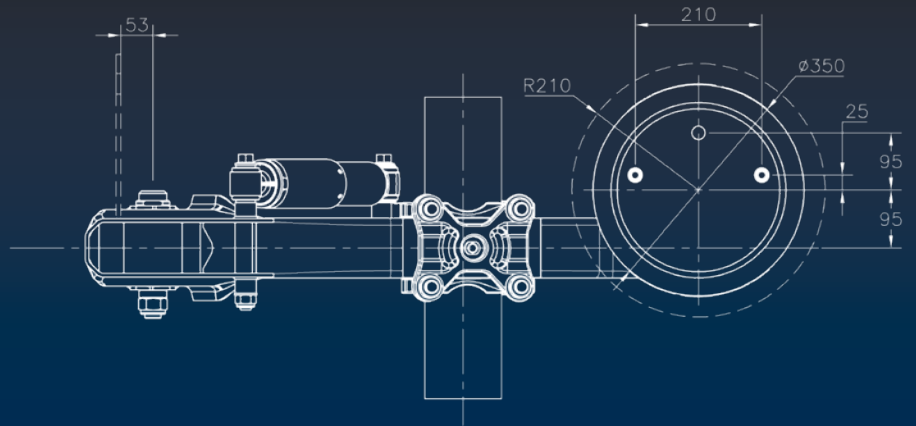


SPECIFICATIONS

- Maximum axle load: 10t.
- Single leaf trailing arm: 100 x 52mm
- Trailing arm dimensions:
 - L1 = 530mm
 - L2 = 380mm
- Suitable for $\varnothing 127\text{mm}$, $\varnothing 146\text{mm}$, $\square 120\text{mm}$ and $\square 150\text{mm}$ drum and disc brake axles
- Ride height range:
 - Underslung: 255 - 355mm
 - Overslung: 385 - 575mm
- Air spring: $\varnothing 350\text{mm}$
- Air spring offset options: 30mm / 50mm / 95mm
- System weight: ca. 175 - 200kg
- Optional Bolt-On[®] axle lift



Heavy duty air suspensions



FEATURES & BENEFITS

- MBS®-HD 11t. is a well proven, extremely robust double leaf air suspension range with an immaculate track record.
- With more than 30 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 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 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

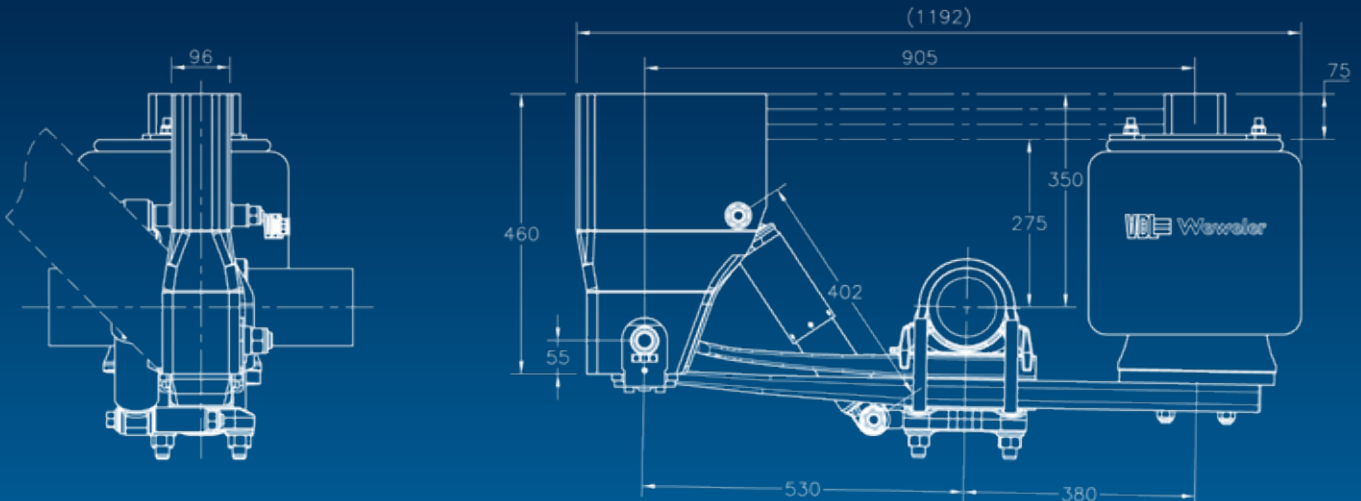
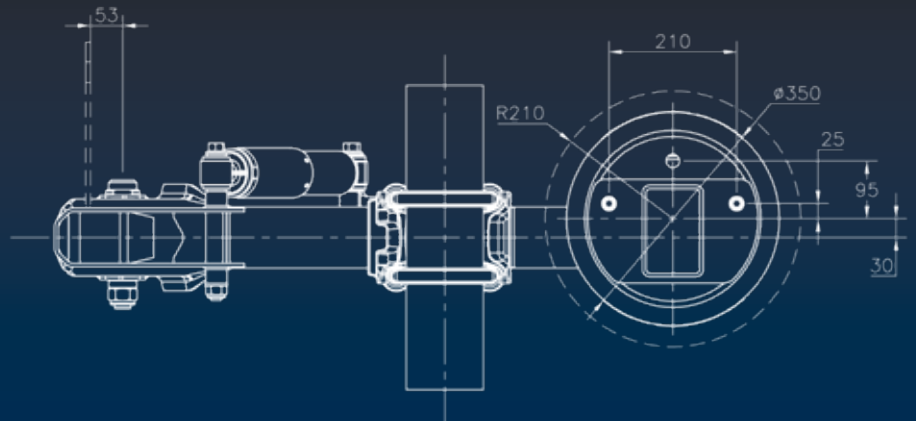


SPECIFICATIONS

- Maximum axle load: 11t.
- Twin leaf trailing arm:
100 x 35mm + 100 x 45mm
- Trailing arm dimensions:
 - L1 = 530mm
 - L2 = 325mm / 380mm
- Suitable for Ø127mm, Ø146mm, □120mm and □150mm drum and disc brake axles
- Ride height range:
 - Underslung: 195 - 340mm
 - Overslung: 375 - 575mm
- Air spring: Ø350mm
- Air spring offset options:
30mm / 50mm / 95mm
- System weight: ca. 210 - 260kg
- Optional Bolt-On® axle lift



Heavy duty air suspensions



FEATURES & BENEFITS

- MBS®-HD 12t. is a new weight conscious 12t. single leaf air suspension range suitable for most trailer types and suitable for demanding road conditions worldwide.
- This new 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 MBS®-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 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 and low & easy maintenance.
- For demanding conditions optional double bounded Steel-Rubber-Steel high density rubber bushings can be fitted.

MBS-HD 12T

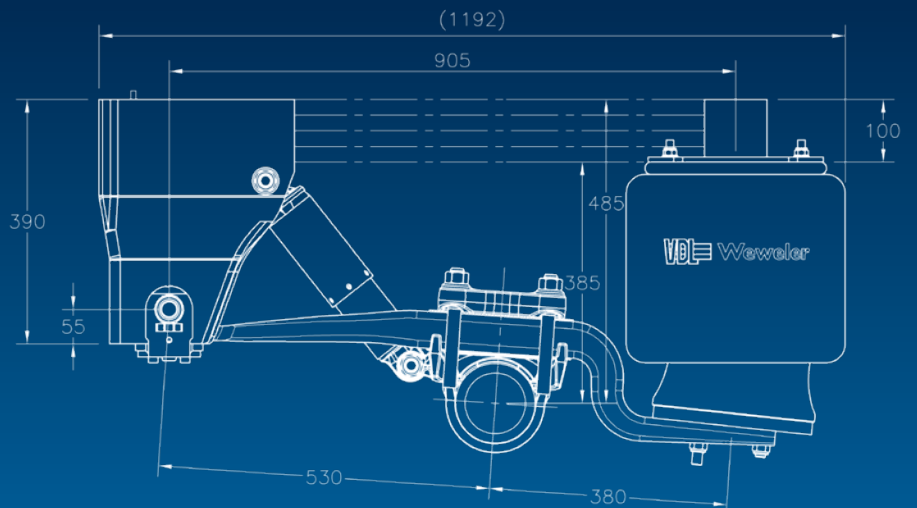
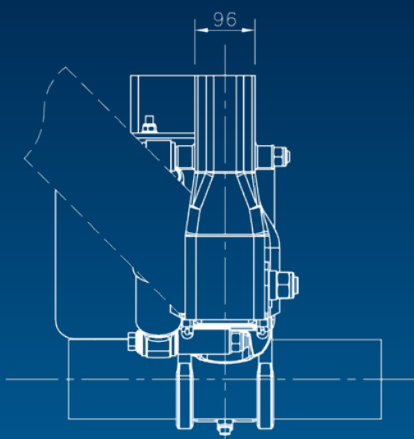
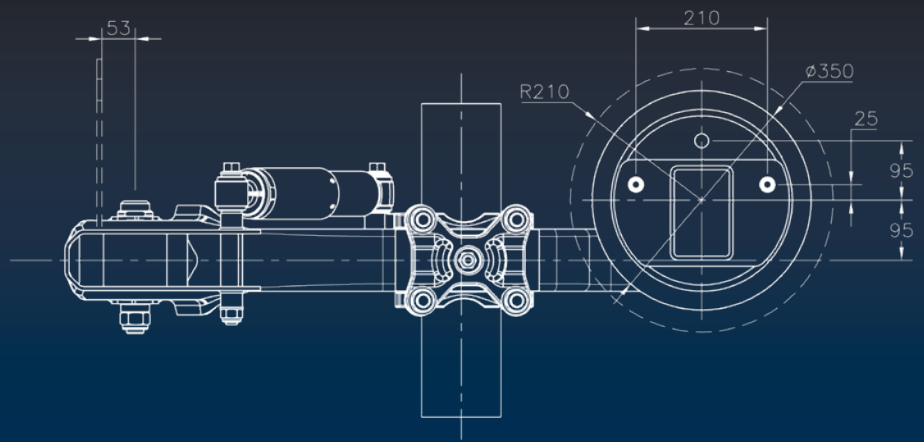


SPECIFICATIONS

- Maximum axle load: 12t.
- Single leaf trailing arm: 100 x 59mm
- Trailing arm dimensions:
 - L1 = 530mm
 - L2 = 380mm
- Suitable for Ø127mm, Ø146mm, □120mm and □150mm drum and disc brake axles
- Ride height range:
 - Underslung: 200 - 370mm
 - Overslung: 385 - 575mm
- Air spring: Ø350mm
- Air spring offset options: 30mm / 50mm / 95mm
- System weight: ca. 185 - 210kg
- Optional Bolt-On® axle lift



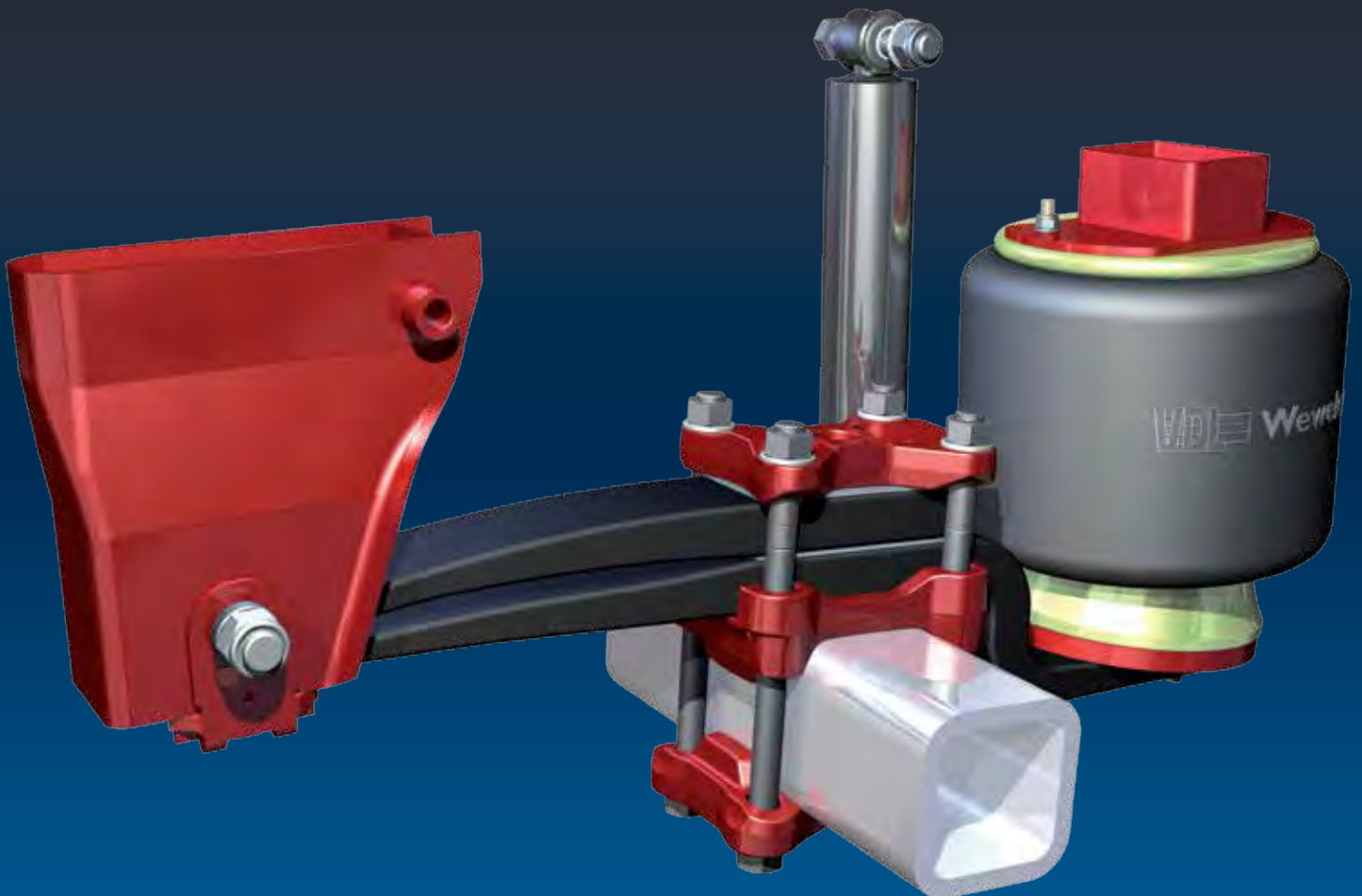
Heavy duty air suspensions



FEATURES & BENEFITS

- MBS®-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 30 years of experience across the world, is being used in the harshest off-road environments imaginable.
- 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 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 in the axle clamping, a very high overload threshold and very little maintenance.
- Optional rear-mounted shock absorbers can be fitted.

MBS-HD 13T

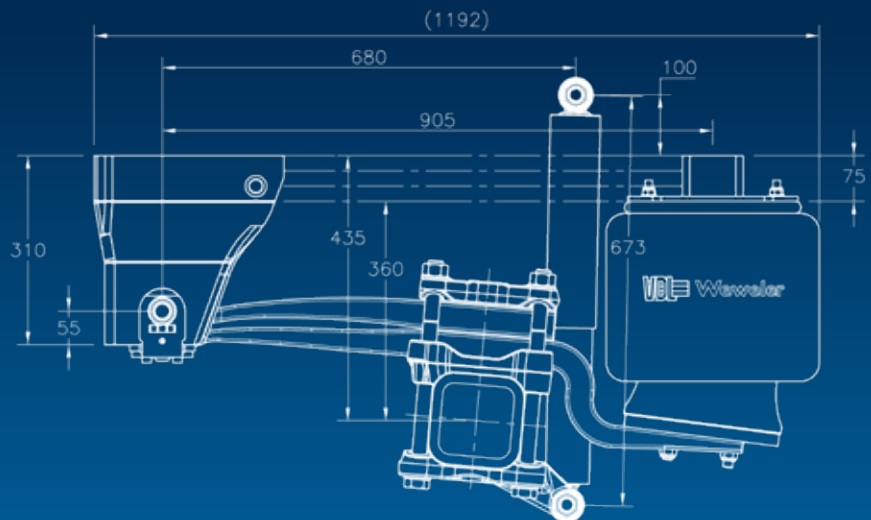
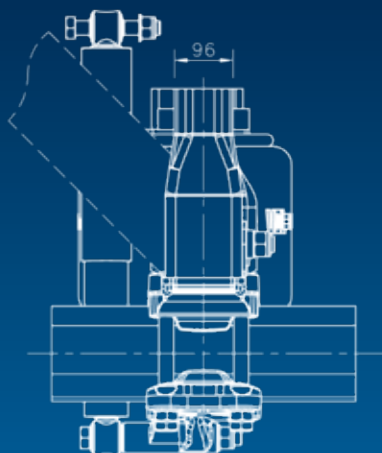
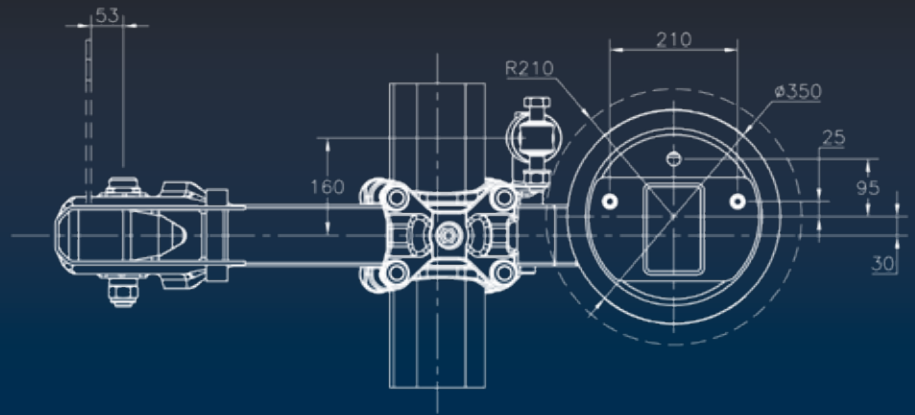


SPECIFICATIONS

- Maximum axle load: 13t.
- Twin leaf trailing arm:
100 x 45mm + 100 x 45mm
- Trailing arm dimensions:
 - L1 = 530mm
 - L2 = 325mm / 380mm
- Suitable for $\varnothing 127\text{mm}$, $\varnothing 146\text{mm}$, $\square 120\text{mm}$ and $\square 150\text{mm}$ drum and disc brake axles
- Ride height range:
 - Underslung: 210 - 330mm
 - Overslung: 390 - 560mm
- Air spring: $\varnothing 350\text{mm}$
- Air spring offset options:
30mm / 50mm / 95mm
- System weight: ca. 220 - 265kg
- Optional Bolt-On[®] axle lift



Heavy duty air suspensions



FEATURES & BENEFITS

- MBS®-HD M is a specific, well proven, robust 9/10t. single leaf air suspension range within the MBS®-HD family.
- This suspension range is predominantly used as a mega air suspension 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 range is also suitable for special 10t. applications like for example tanker trailers.
- 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 shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter of the suspension system.
- Used in an overslung configuration, these air suspension systems are called MBS®-HD T and 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 M

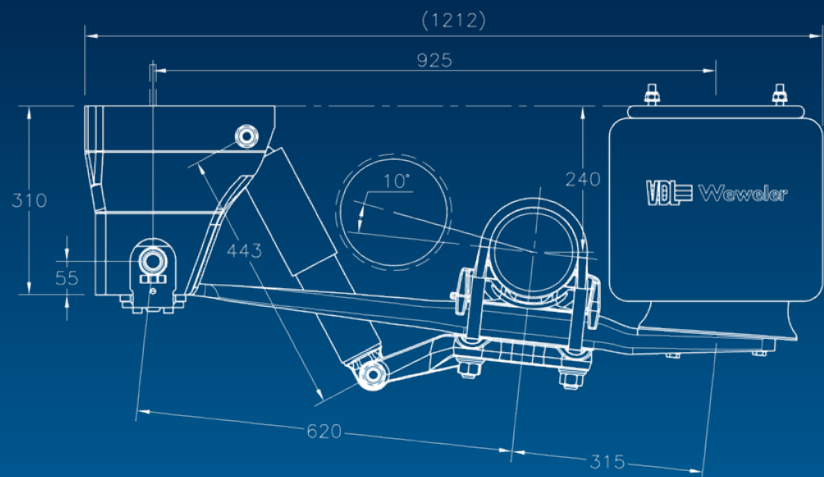
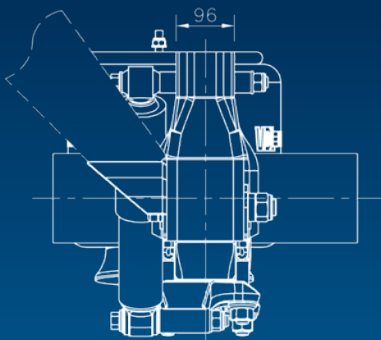
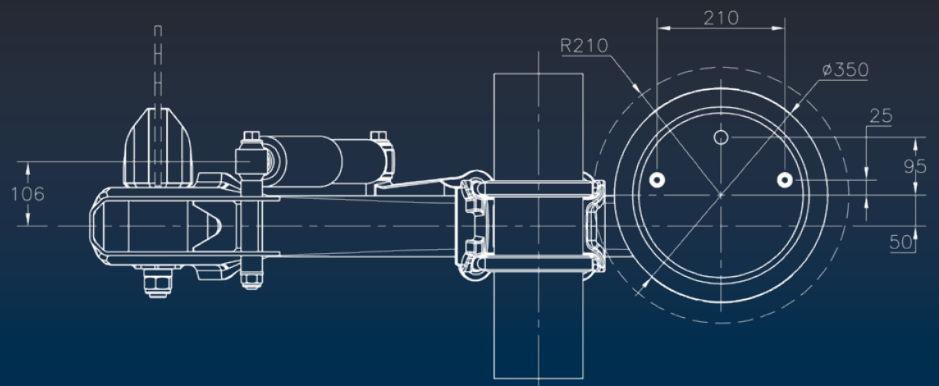


SPECIFICATIONS

- Maximum axle load: 9/10t.
- Single leaf trailing arm 100 x 54mm
- Trailing arm dimensions:
 - L1 = 565mm / 620mm
 - L2 = 315mm
- Suitable for Ø127mm, Ø146mm, □120mm and □150mm drum and disc brake axles
- Ride height range MBS®-HD M: 190 - 340mm
- Ride height range MBS®-HD T: 425 - 550mm
- Air spring: Ø350mm
- Air spring offset options: 50mm / 90mm
- System weight MBS®-HD M: ca. 175 - 195kg
- System weight MBS®-HD T: ca. 175 - 200kg
- Optional axle lift



Heavy duty air suspensions



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, 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 there chassis and offer them a way to optimize production time.
- The customer specific double-stepped spring steel trailing arms allow for an extreme ride height range whilst still using an overslung configuration.
- Compact design is achieved by using centre 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

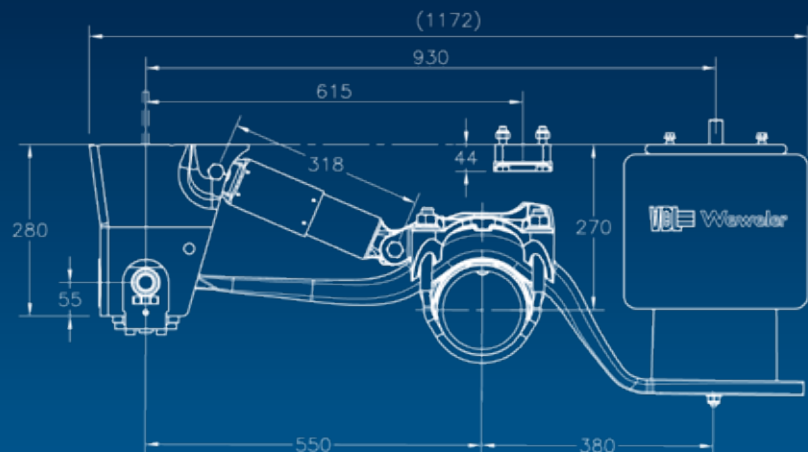
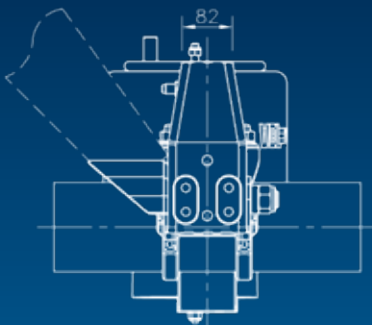
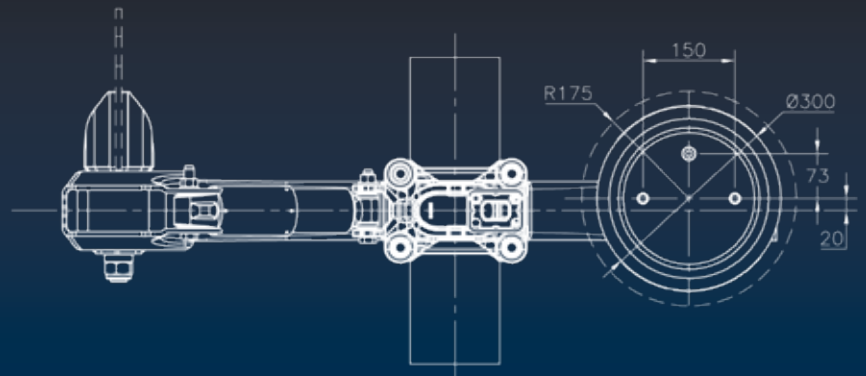


SPECIFICATIONS

- Maximum axle load: 9t.
- Tailor made air suspension range for Schmitz Cargobull
- Suitable for Ø146mm drum and disc brake axles
- Multi Ride Height system range: 190 - 540mm (including Mega & Tipper)
- Air spring options: Ø300mm and Ø350mm
- Air spring offset options:
 - 20mm (Ø300mm air spring)
 - 50mm / 90mm (Ø350mm air spring)
- System weight: ca. 135 - 190kg
- Optional Bolt-On® axle lift
- Optional Bolt-On® Splitter®



SCB Air suspensions



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 exclusively 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.
- Using just one type of shock absorber, hanger bracket, trailing arm, two air springs and two different tail-ends, MBS accommodates a comprehensive ride height range of 210 - 420mm.
- 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 tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width.
- Compact design is achieved by using centre mounted shock absorbers.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter.
- With a minimum system weight of just 128kg, the MBS air suspension is one of the lightest trailing arm suspensions on the market today.

MBS-GF

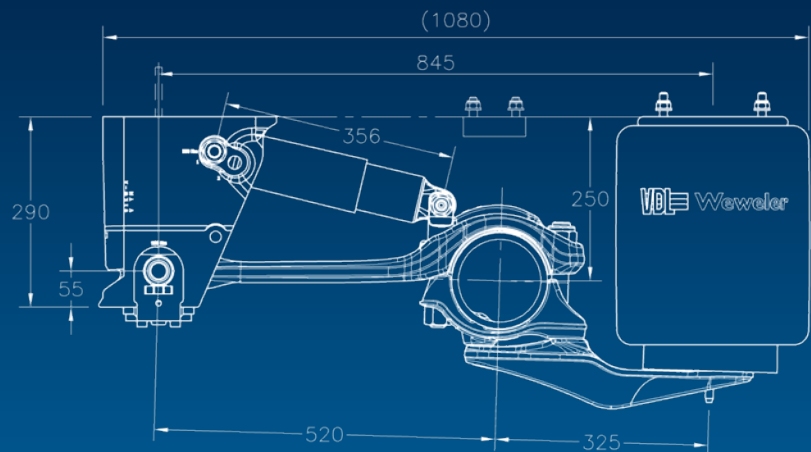
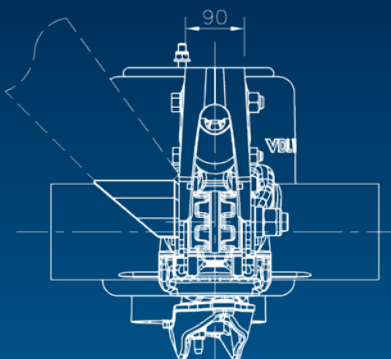
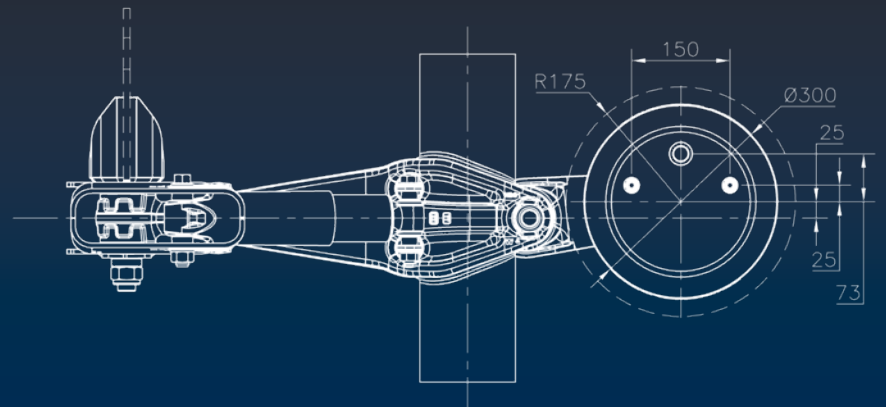


SPECIFICATIONS

- Maximum axle load: 9t.
- Forged trailing arm
- System dimensions:
 - L1 = 520mm
 - L2 = 325mm
- Suitable for unique Ø146 drum and disc brake grooved axles
- Ride height range:
 - MBS-100 Range: 210 - 450mm
 - MBS-200 Range: 310 - 460mm
- Air springs: Ø300mm and Ø335mm
- Air spring offset options:
 - 0mm / 25mm / 50mm / 65mm / 90mm
- System weight: ca. 128 - 150kg
- Optional Bolt-On® axle lift
- Optional Bolt-On® Splitter®
- Optional Bolt-On® hanger bracket



Modular Bolt-On solutions



FEATURES & BENEFITS

- The MBS®-NA is a revolutionary light weight air suspension range, that is specifically designed for North America.
- Sold in North America exclusively through AXN, under the name M.A.R.S. (Modular Air Ride Suspension), this multi-purpose air suspension range is suitable for 9t. 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.
- The tapered design of the new hanger brackets offers great compatibility and allows for a more optimum frame width.
- Compact design is achieved by using centre mounted shock absorbers.
- The shock absorbers are equipped with high temperature Viton® seals and designed to be the stroke limiter.
- With a system weight of approximately 100kg, 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

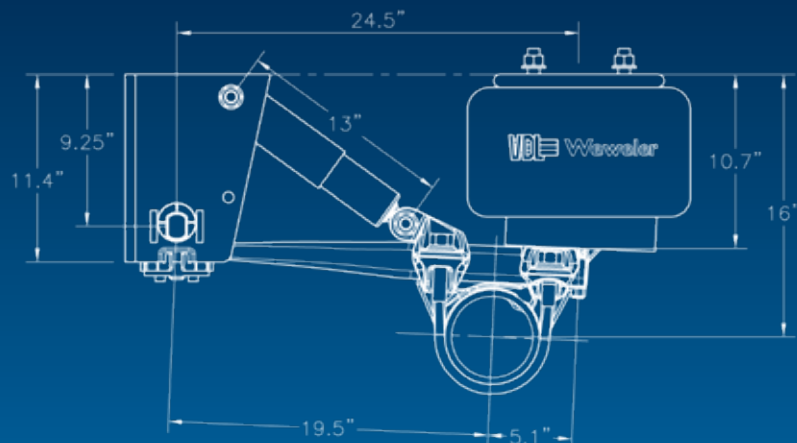
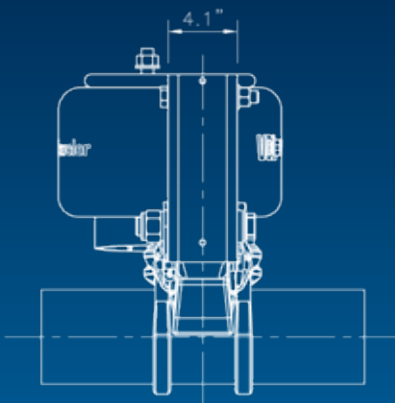
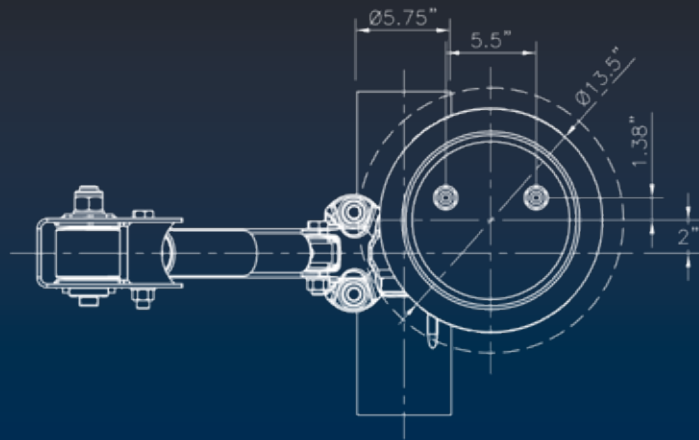


SPECIFICATIONS

- Maximum axle load: 9/10t. (23K)
- Single leaf trailing arm: 75 x 56mm
- System dimensions:
 - L1 = 495mm (19.5")
 - L2 = 130mm (5.1")
- Suitable for unique $\text{Ø}146\text{mm}$ ($\text{Ø}5.75\text{"}$) drum and disc brake grooved axles
- Ride height range:
345mm (13.5") - 410mm (16")
- Air spring: $\text{Ø}345\text{mm}$ ($\text{Ø}13.5\text{"}$)
- Air spring offset: 50mm (2")
- System weight:
ca. 100 - 130kg (220 - 285lbs)
- Optional Bolt-On[®] axle lift



Modular Bolt-On solutions

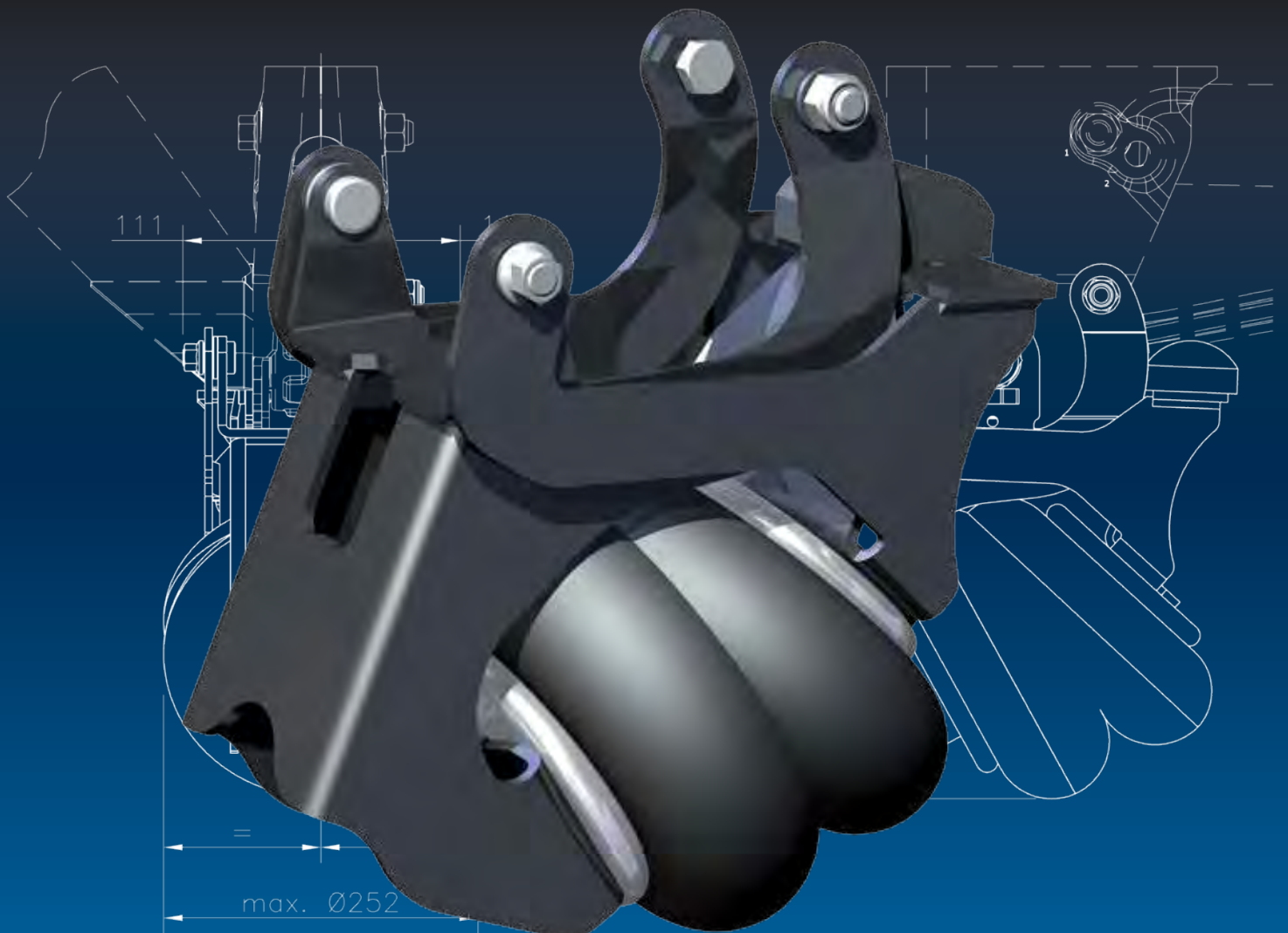


SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-484 is developed for VDL Weweler MBS® drum and disc brake systems:
 - MBS-100 range
 - MBS-200 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.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-484

VDL Weweler

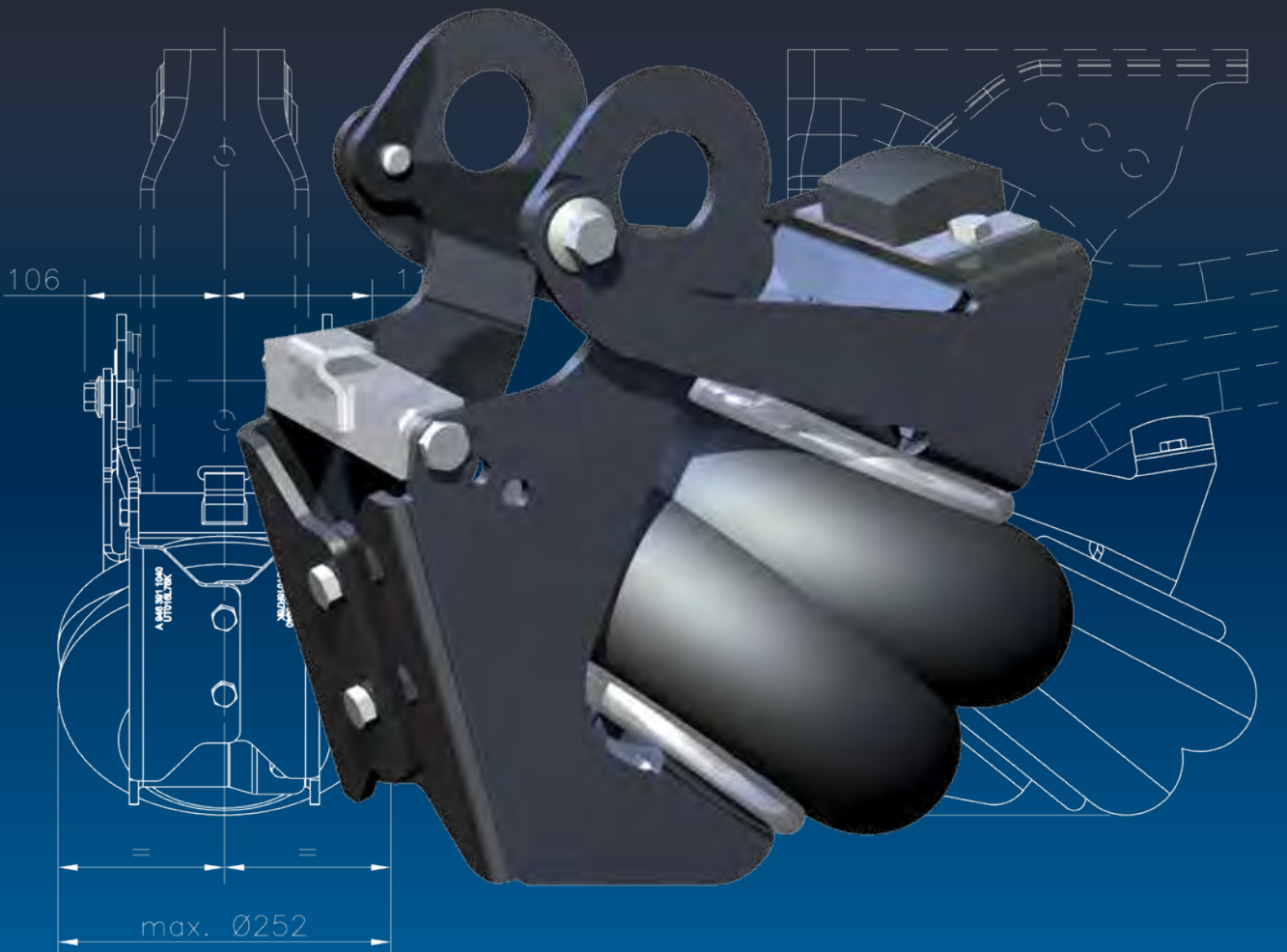


SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-463 is developed for Daimler DCA air suspensions.
- Sold exclusively through Daimler.
- Light weight 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.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-463

Daimler DCA



SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-459 is developed for BPW SL drum and disc brake systems:
 - SLM
 - SLO
- The axle lift can be used with single and double leaf springs and 9t. and 12t. axles.
- Light weight solution with improved ground clearance.
- Easy to fit, with no special need for specific tools or equipment.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-459

BPW SL



SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-476 is developed for BPW Airlight II drum and disc brake systems:
 - ALU
 - ALM
 - ALO
 - ALMT
- The AL-476 can be used with the welded and bolted bracing.
- Light weight 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.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-476

BPW ALII

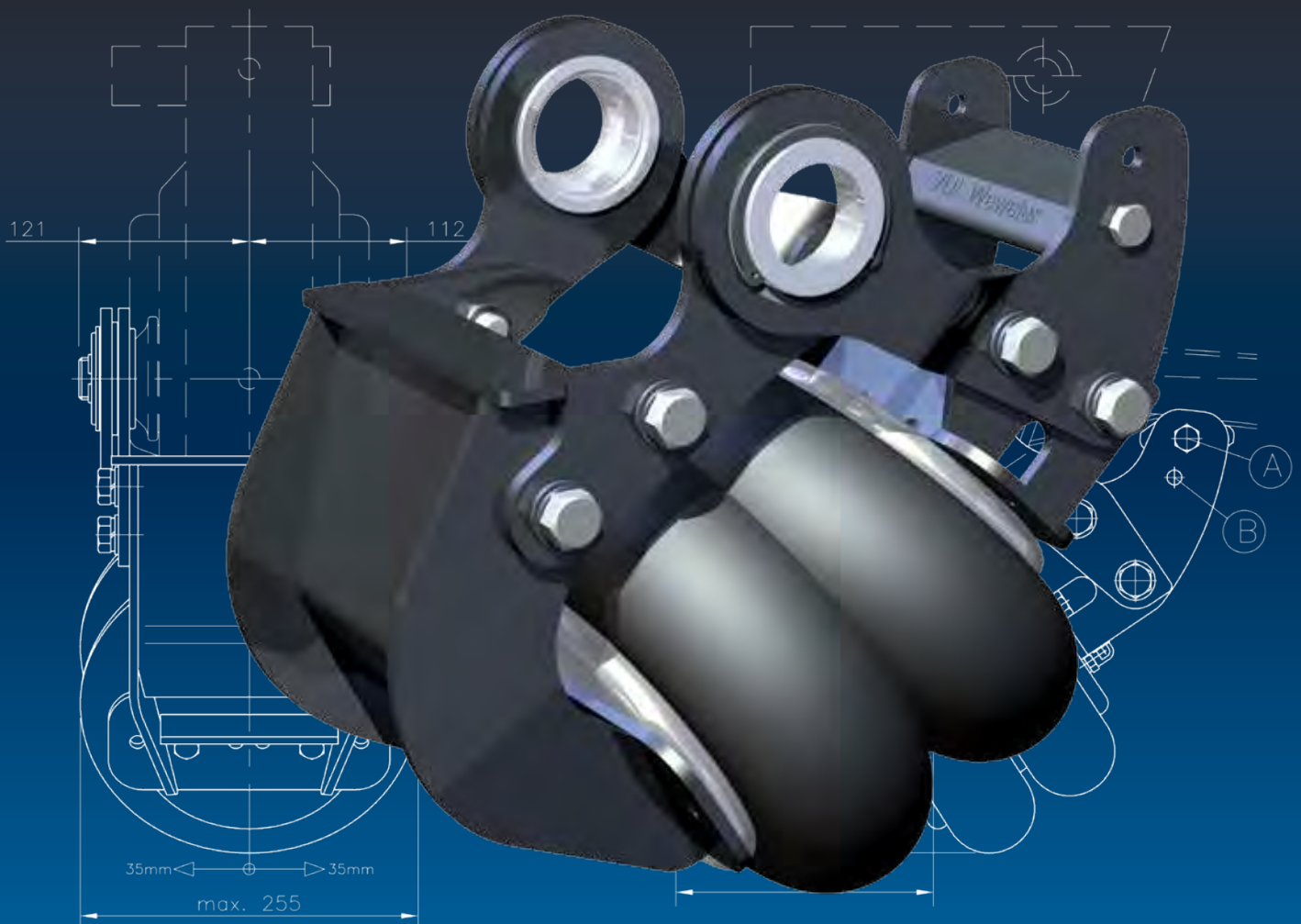


SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-460-II is developed for SAF Modul drum and disc brake systems:
 - Air suspension serie M
 - Air suspension serie EO
- Light weight 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.
- Also suitable for twin tire axles due to the air spring offset possibility in the axle lift.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-460-II

SAF Modul

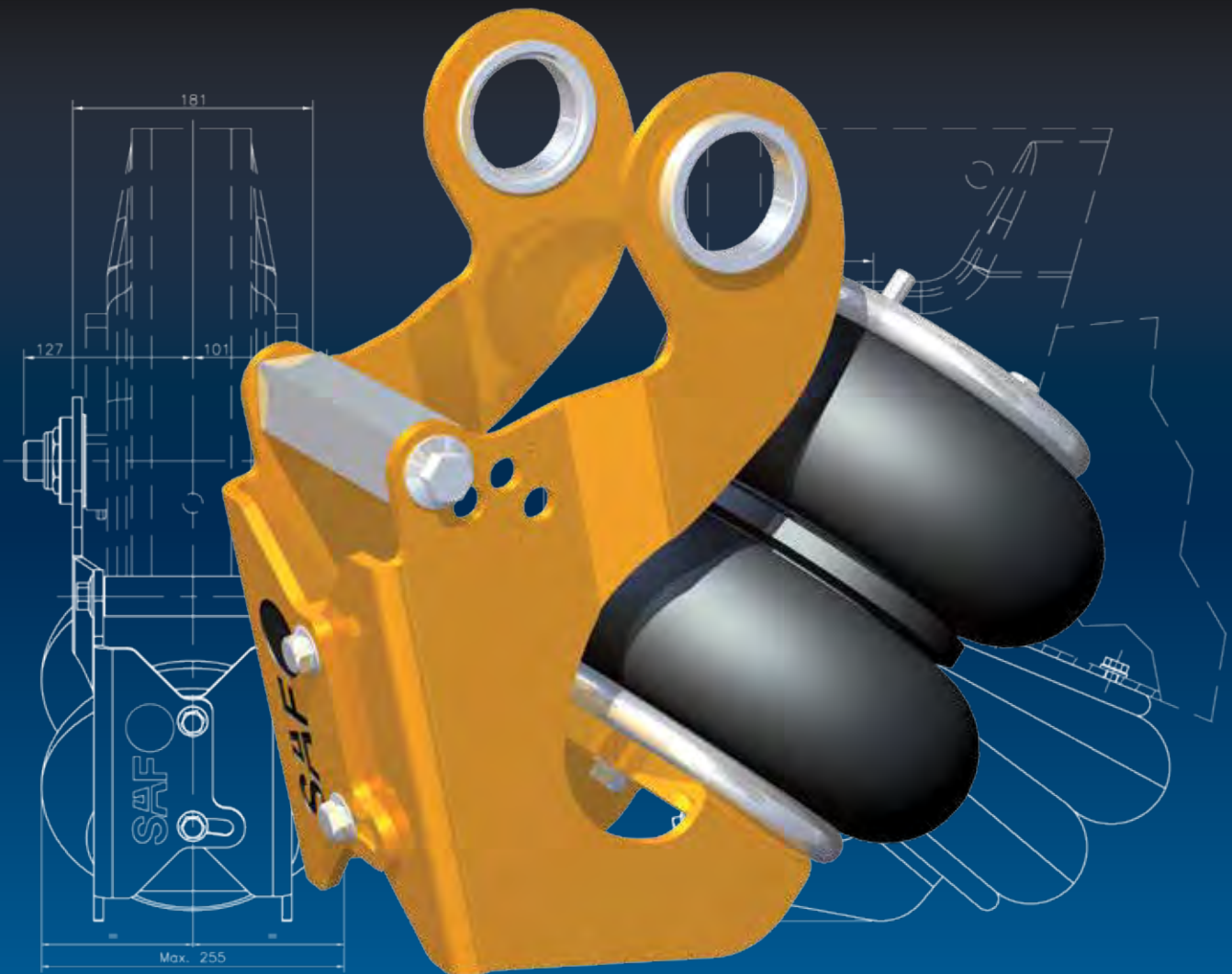


SPECIFICATIONS & BENEFITS

- The Bolt-On® axle lift AL-489 is developed for SAF Intradisc Plus and Intradrum air suspensions:
 - IU Serie
 - IO Serie
- Sold exclusively through SAF-Holland.
- Light weight 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.
- Developed according to FMEA criteria.
- All axle lifts parts are end-coated and all exceed the standard 500-hour salt spray test.
- Reduced tire wear, fuel consumption and maintenance cost.

AL-489

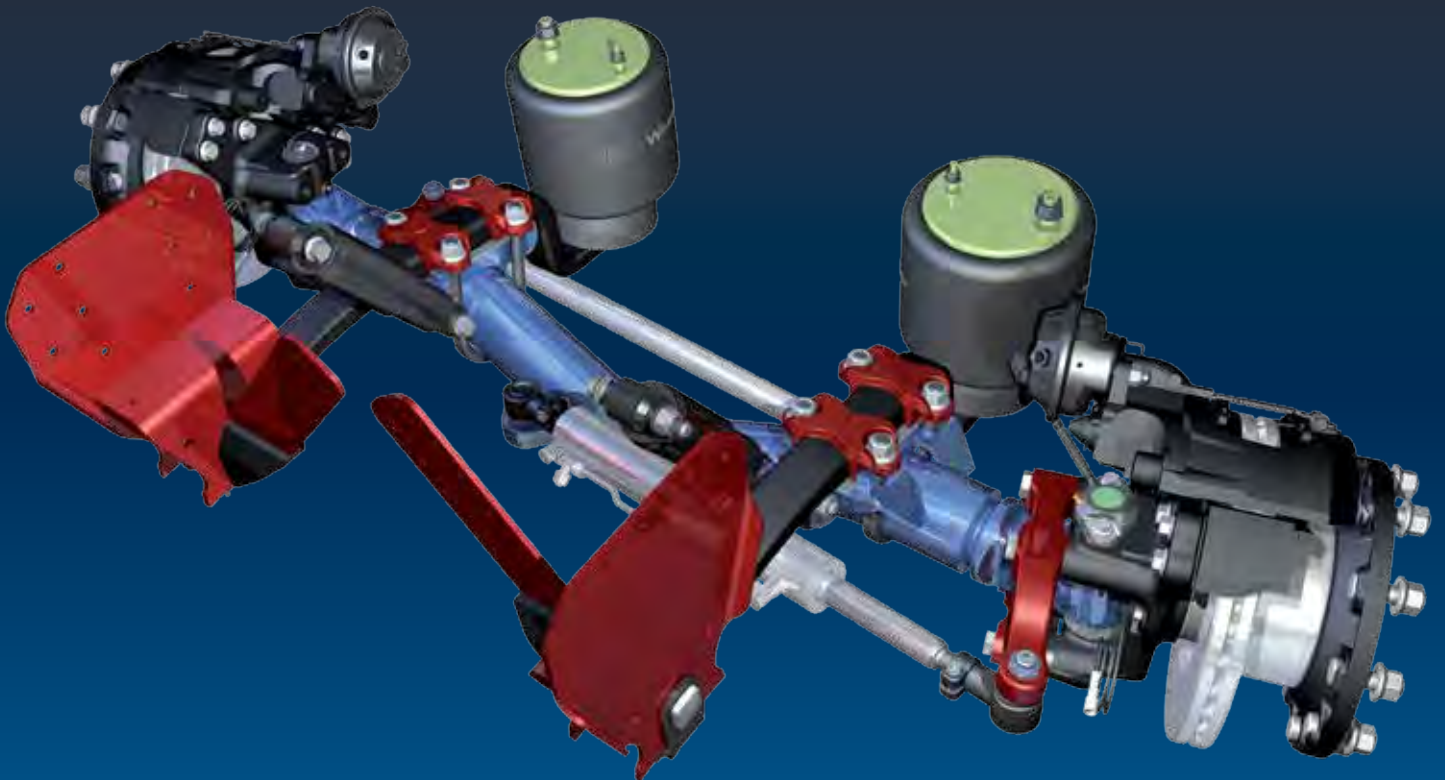
SAF Intra



SPECIFICATIONS & BENEFITS

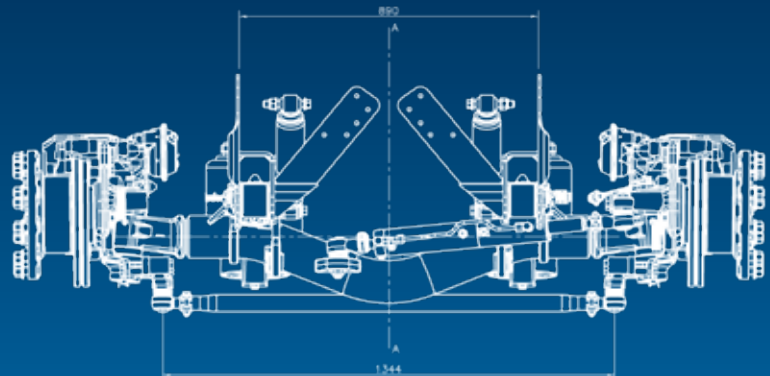
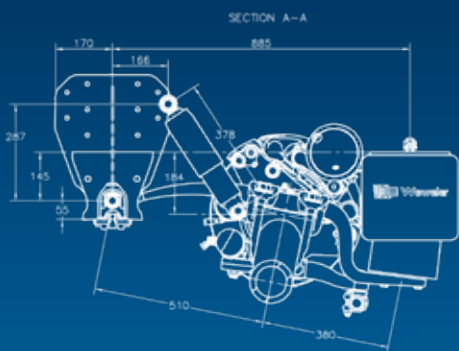
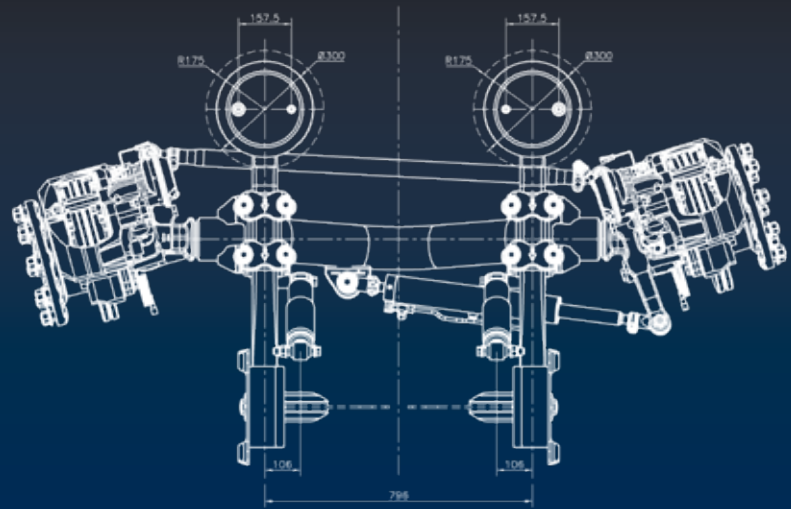
- With the MBS®-T&B, VDL Weweler offers O.E. truck and bus manufacturers a unique, modular, light weight and complete auxiliary axle solution.
- The pusher or tag axles are tailor-made and in complete line with the manufacturers vehicle specifications and wheel ends.
- The cold formed, one piece axle beams can be shaped in a 3 or 4 way bend configuration, always ensuring maximum vertical axle travel and in case of a pusher axle, acceptance of any drive line. Even when the driveline is positioned on an offset.
- All axles come equipped with a purpose designed air suspension system that is fitted with flexible spring steel trailing arms that work as u-stabilizer, eliminating the need for anti-roll bars or panhard rods.
- The air suspension has a minimum amount of pivot points and can be equipped with an integrated lifting system, which due to its compact design and function ensures enough ground clearance and saves fuel.
- The steered axles can be equipped with both hydraulic or electronic steering, that can come with a integrated sensor and hydraulic cylinder already pre-assembled.
- Suitable for axle loads varying from 4.5t. up to 12t.
- Furthermore, all parts are end coated.

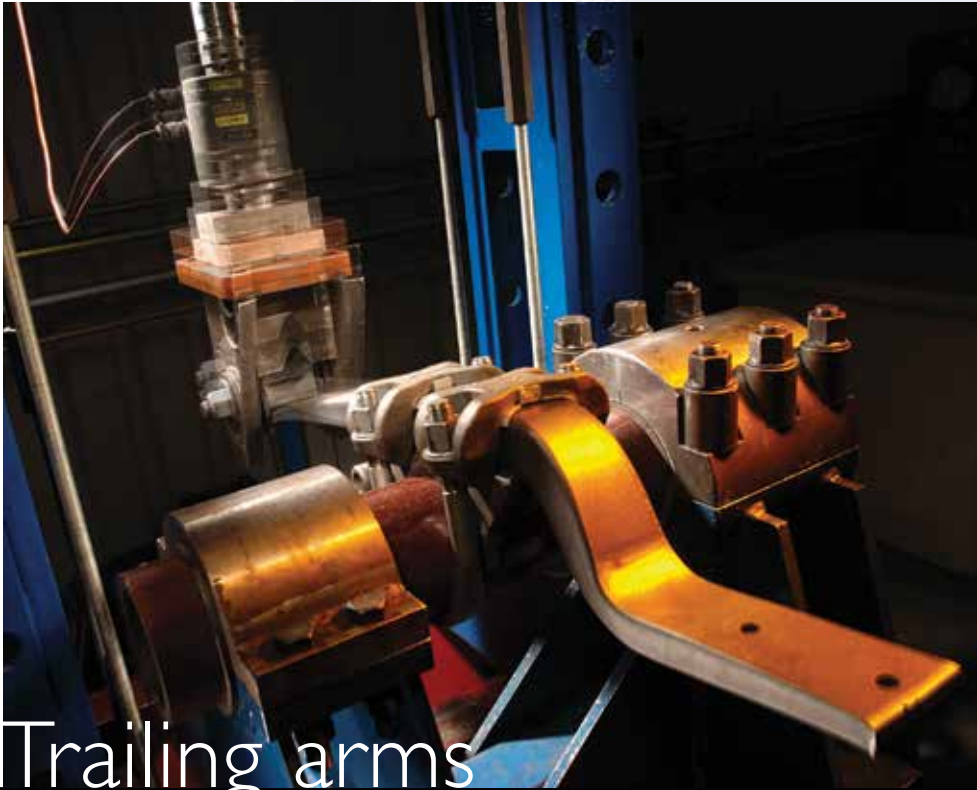
MBS-T&B





Truck & Bus systems

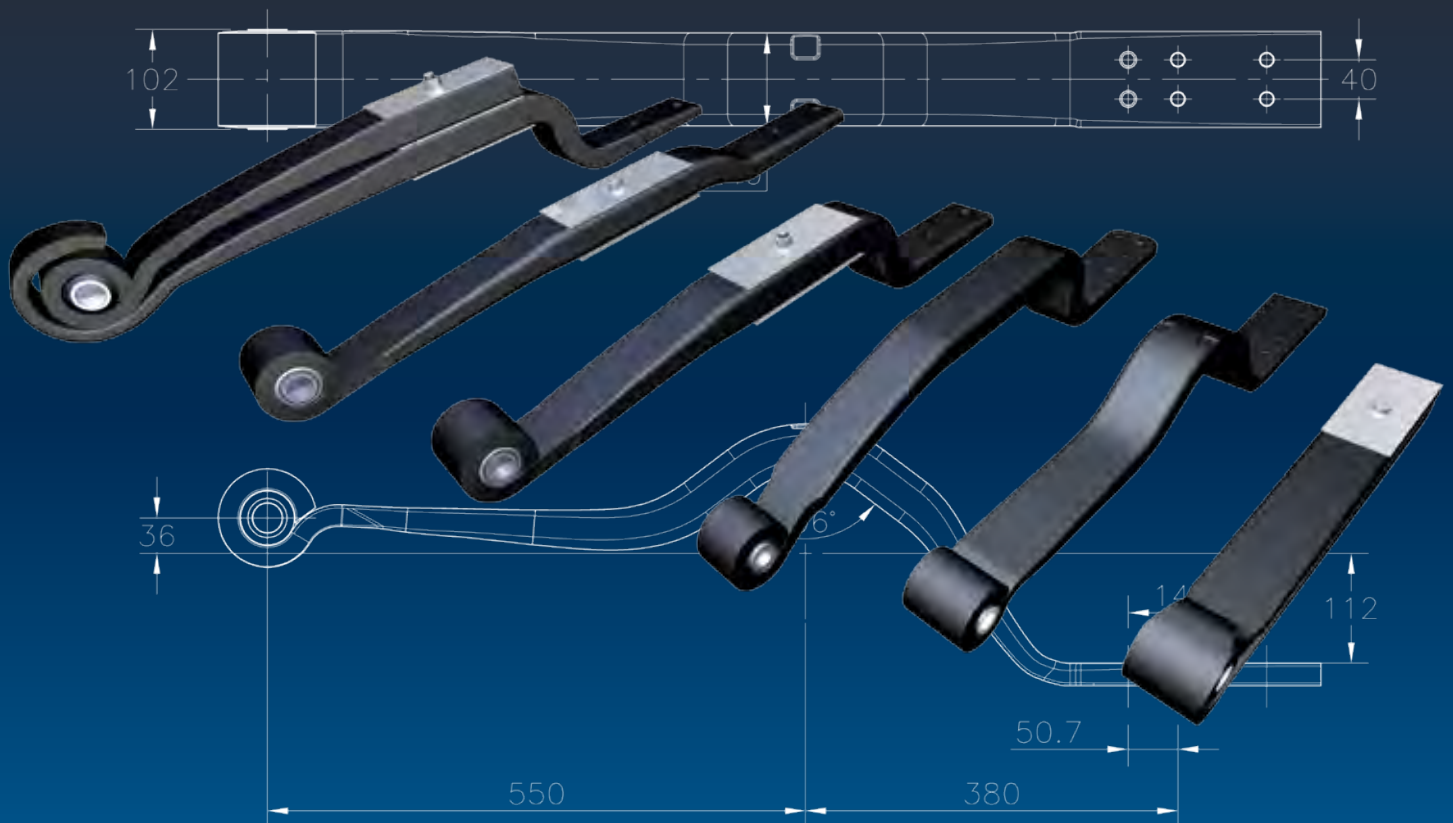




Trailing arms

SPECIFICATIONS & BENEFITS

- Over 30 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 5.5t. up to 13t.

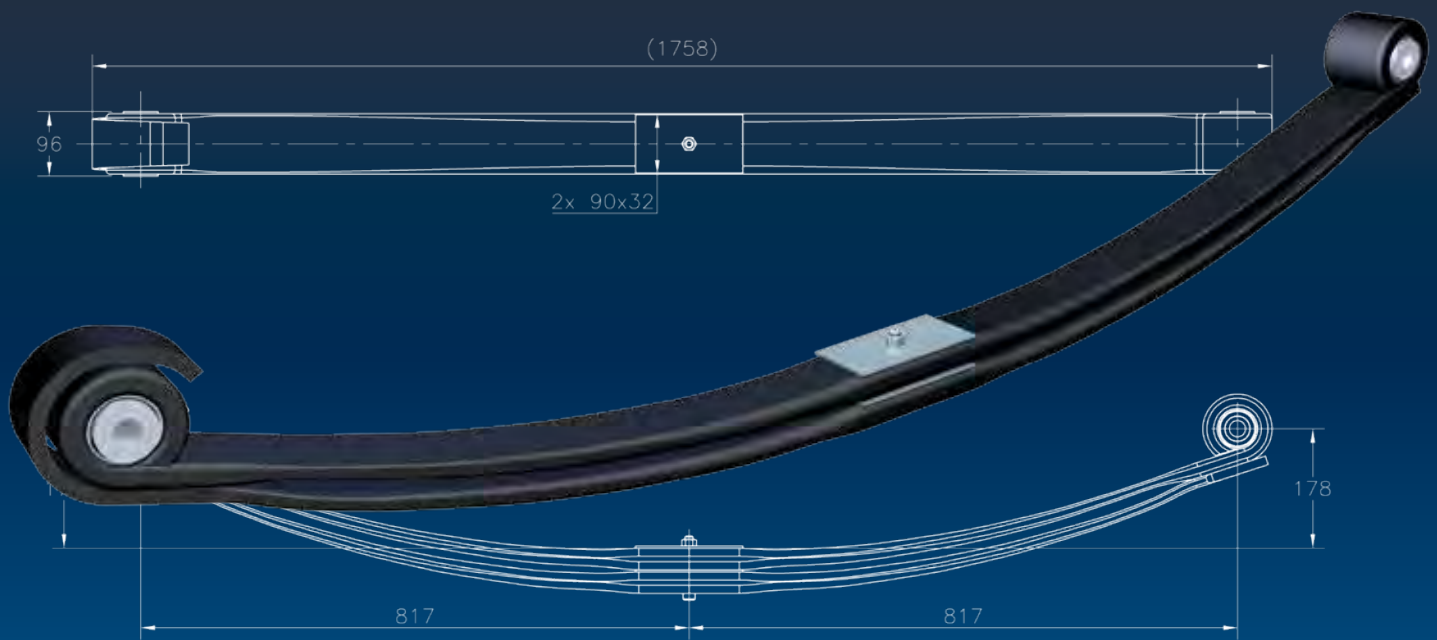


SPECIFICATIONS & BENEFITS

- Over 85 years of experience in designing, producing and testing of parabolic springs for trucks and buses.
- 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



SPECIFICATIONS & BENEFITS

- VDL Weweler supply a large range of control valves for axle lifts & air suspensions.
- MCS-1 airsuspension control:
 - Ride height control
 - Manual raise-lower operation
 - Adjustable height limitation
 - Quick automatic levelling, in loading bay, of any level
 - Previously selected by means of raise-lower operation
 - Automatic return to ride position when the vehicle starts to move

WAL RANGE OF AXLE LIFT CONTROL VALVES

- WAL 1 semi-automatic:
 - Automatic drop of the lift axle when a predetermined load on the non liftable axles is reached (settings according to customer request)
 - Manual raise of the lift axle
 - Push-in fittings 8mm and filters as standard equipment
 - Optional 10mm push-in

- Easy to mount
- Corrosion protected
- Operating temperature range:
from -35°C to +80°C

- WAL 2 fully-automatic:
 - Automatic drop and raise of the lift axle depending on a predetermined axle load (settings according to customer request)
 - Manual deactivation of the lift axle system by means of a separate 3/2 way push-pull valve
 - Possibility to use two valves to get the automatic and sequential operation of two lift axles
 - Push-in fittings (8mm) and filters as standard equipment

Control valves



- Optional 10mm push-in
 - Easy to mount
 - Corrosion protected
 - Operating temperature range:
from -35°C to +80°C
- WAL 3 fully-automatic:
 - Automatic drop and raise of the lift
similar to WAL 2
 - Temporary manual lifting of the lift
axle when the vehicle is loaded, on
electric command from the vehicle cab
- VEB range of axle lift control valves:
 - For vehicles equipped with EBS
 - Suitable for single or double circuit
air suspension systems
 - Functions are similar to the WAL range





SINCE 2001 VDL WEWELER IS PART OF THE VDL GROEP. THE VDL GROEP IS AN INTERNATIONAL INDUSTRIAL COMPANY FOCUSED ON THE DEVELOPMENT, PRODUCTION AND SALE OF SEMI-FINISHED PRODUCTS, BUSES & COACHES AND OTHER FINISHED PRODUCTS. IT IS A CONGLOMERATE OF FLEXIBLE, INDEPENDENT COMPANIES, EACH WITH ITS OWN SPECIALTY. THE STRENGTH OF THE VDL GROEP LIES IN THE MUTUAL COOPERATION BETWEEN THE COMPANIES. SINCE ITS FOUNDING IN 1953, THIS FAMILY OWNED COMPANY HAS GROWN TO INCLUDE 81 OPERATING COMPANIES, SPREAD OVER 18 COUNTRIES, WITH APPROXIMATELY 7,600 EMPLOYEES.

STRENGTH THROUGH COOPERATION

The VDL Groep develops, produces and sells high quality products, around 70% of which are destined for export. Each VDL company has its own product/market combinations, both at national and international level. The products ultimately find their way into different markets, including semiconductors, automotive, medical, agriculture, infrastructure, solar power, energy and food. VDL is committed to controlled growth, emphasizing the innovation, improvement and expansion of both the production methods and product range.

The strength of Groep

VDL Groep		
VDL Nederland	VDL Holding Belgium	
Subcontracting	Buses & Coaches	Finished products
Metalworking	Chassis & chassis modules	Suspension systems for the automotive industry
Mechatronic systems and system supply	Coaches	Production automation systems
Plastics processing	Public transport buses	Container handling equipment
Surface treatment	High-quality public transport systems	Heating, cooling and air-technical systems
	Mini & midi buses	Systems for oil, gas and petrochemical industry
	Special projects	Cigar-making and packaging machines
	Second-hand buses	Systems for the agricultural sector
	Parts and services	Systems for the industrial sector
		Sunbeds and car roof boxes

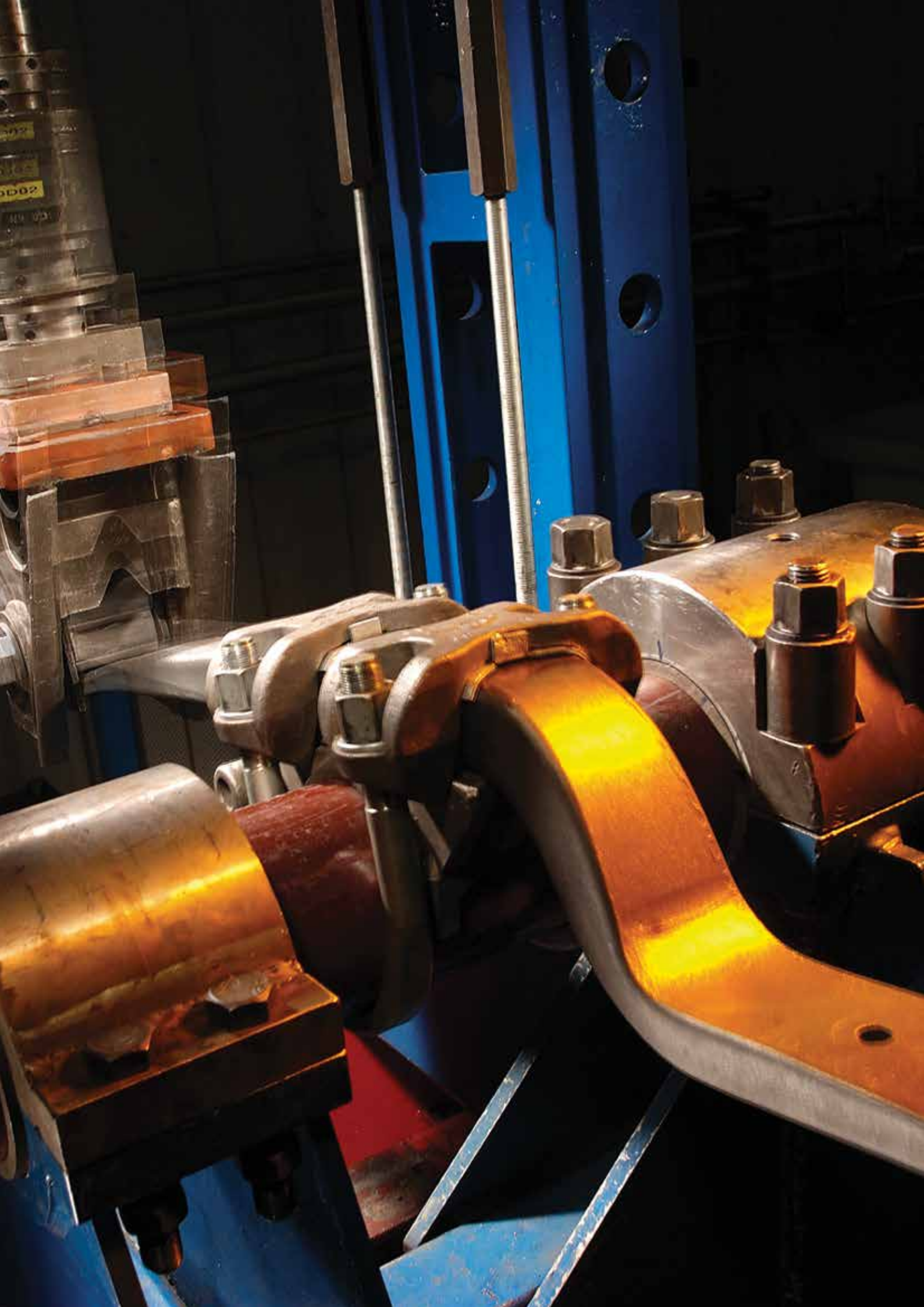
STRUCTURE AIMED AT DECISIVENESS

The headquarters is located in Eindhoven, the Netherlands. VDL Nederland and VDL Holding Belgium provide administrative and organizational support for the operating companies in the areas of financial affairs, ICT, social affairs, environment and safety, insurance and communications. Supported by a financially strong organisation, the VDL subsidiaries can concentrate fully on market developments and their own core activities. The short lines of communication between operating companies make it possible to serve its customers as a full-service partner in developing and producing. Together the companies form a strong team.

ADVANCED TECHNOLOGY AND DEDICATED EMPLOYEES

VDL Groep stimulates innovation of products and production methods, with a focus on cost and quality management as well as sustainability. Therefore it invests in state-of-the-art machinery, good facilities and optimum logistics, a critical policy and world class craftsmanship. To stay competitive, motivated and flexible employees are essential. Dedicated employees are the heart of the VDL Groep. Finally, continuous effort is put into improving the no-nonsense culture, in which informal, personal and open communication prevails.





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