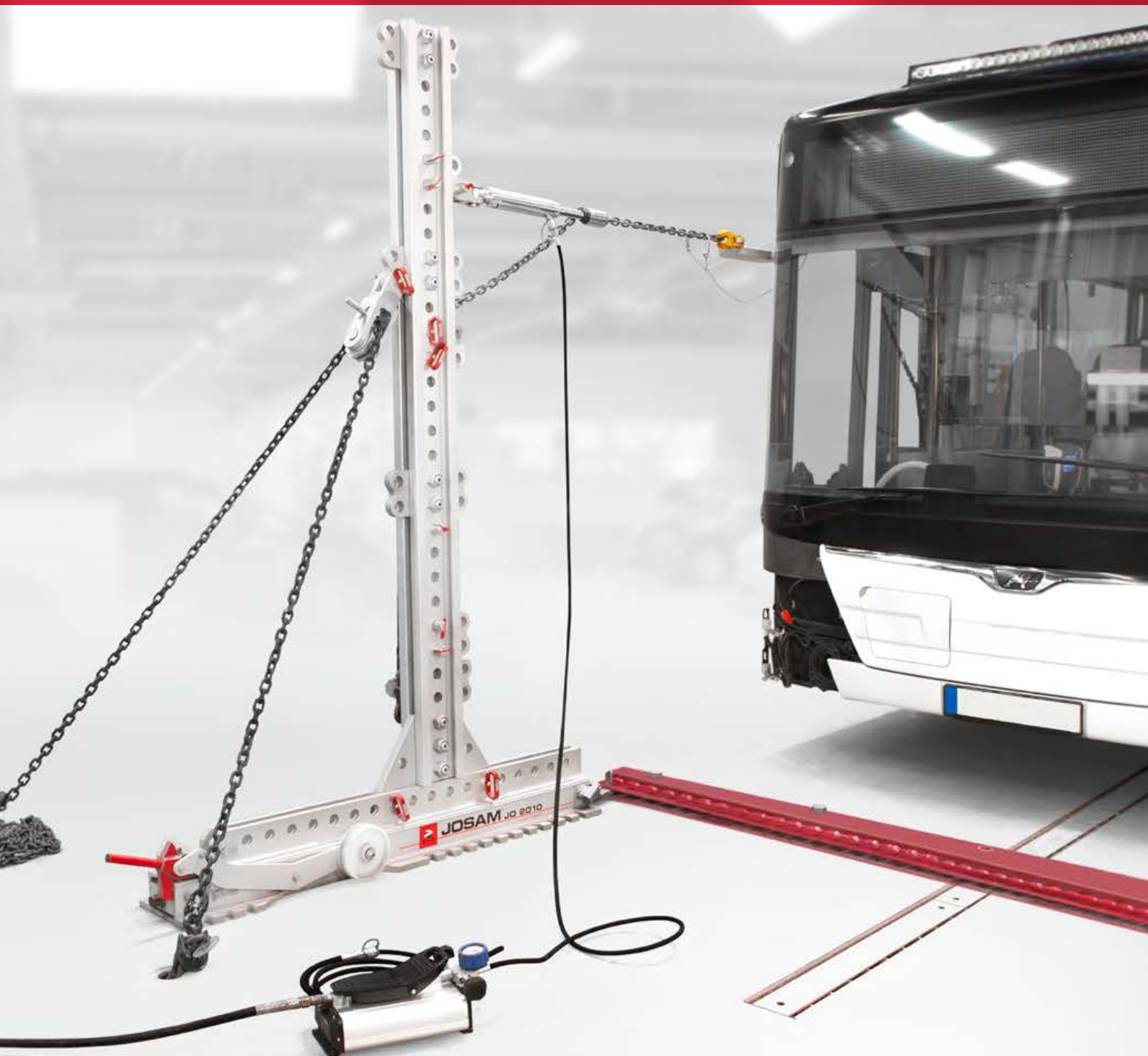


HIGH REACH STRAIGHTENING OF CABS AND BUSES

JOSAM CAB BENCH AND CAB TOWER



JOSAM®



JOSAM CAB BENCH AND CAB TOWER

EQUIPMENT FOR BETTER WORKSHOP PROFITABILITY

For nearly five decades, Josam has developed and refined equipment to help workshops all over the world to repair heavy vehicles as efficiently as possible.

REPAIR ALL TYPES OF HEAVY VEHICLES

With Josam cab bench and Josam cab tower you can repair:

- Truck cabs and bodywork
- Buses
- Trailers and semi-trailers
- Agricultural and construction vehicles

SUSTAINABLE SOLUTIONS

- Unique and durable solutions for repairing vehicles instead of scrapping them
- Equipment entirely in aluminium for good ergonomics and easier handling
- The Josam Academy builds your coworkers' skills step by step

REACH HIGHER PROFITABILITY

Our systems for collision repair create a wide range of opportunities:

- Increased service offering to existing customers
- Opportunities to reach new customers
- A more efficient workshop
- Increased spare parts sales



JOSAM CAB BENCH

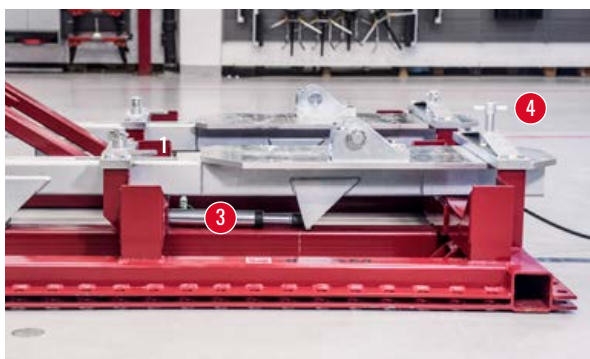
EASY REPAIR FOR A WIDE RANGE OF TRUCK BRANDS

Josam cab bench is the world's only combined fixture and directional platform. With its help you can restore the cab's floor to the dimensions it had when it was brand new.



RESTORING CABS STEP BY STEP

- 1 The movable attachment point allows the cab to be easily attached, even if it is damaged.
- 2 A pivot point in the front brackets enhances the possibilities to mount damaged cabs even further.



- 3 With the help of hydraulics, the cab's floor can be straightened. No chains needed.
- 4 When the pin falls down, the cab's floor has the dimensions it had when it first left the factory.

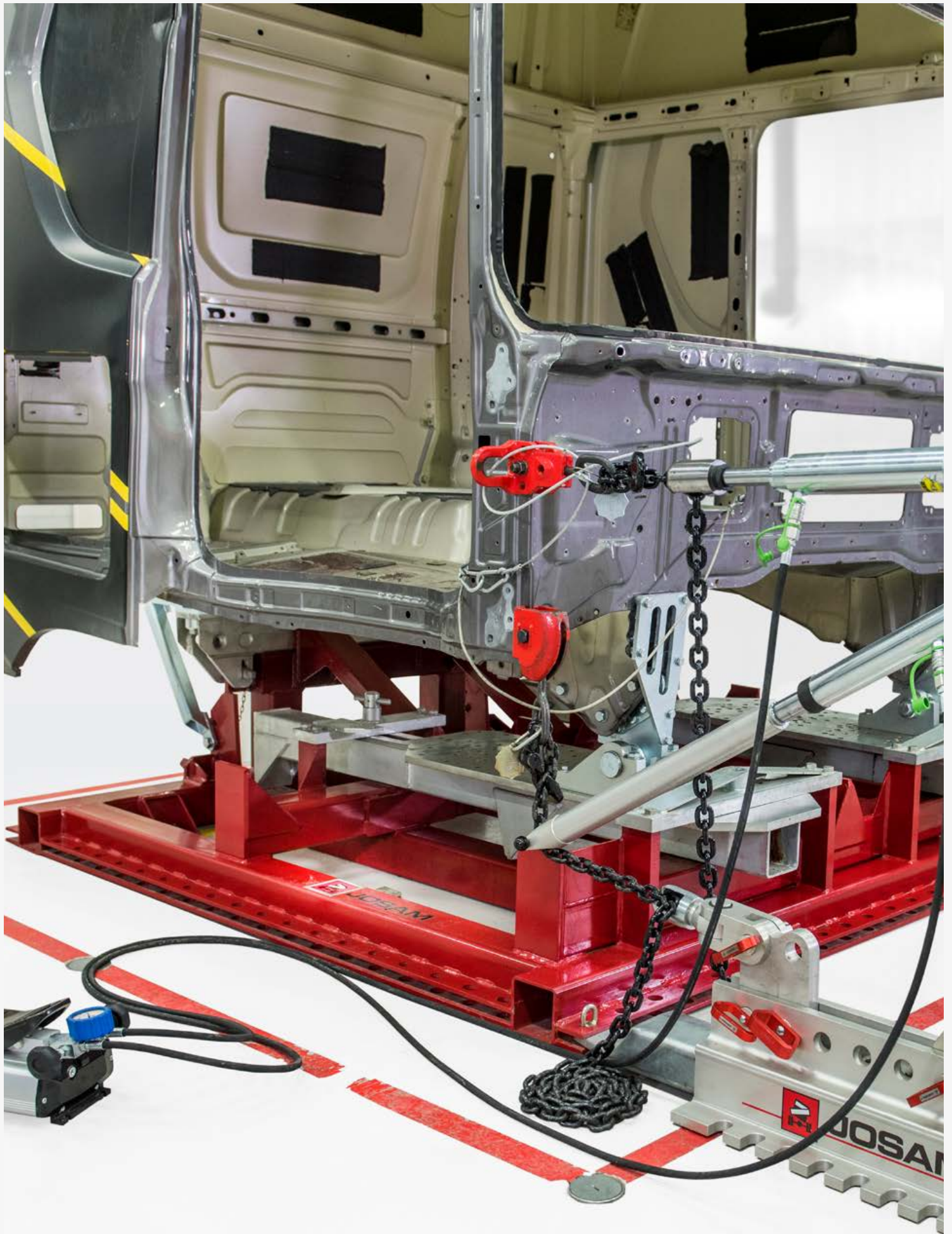


ANCHORING

Josam cab bench can be anchored to I-beams or floor anchorings.

ADAPTER SETS ARE AVAILABLE FOR 100 DIFFERENT CAB MODELS MANUFACTURED BY:

Mercedes • Renault • Iveco • MAN • Scania • Volvo • DAF



When it comes to cab straightening,
no challenges are too big for Josam cab
bench and Josam cab tower.

JOSAM CAB TOWER

EFFICIENT HIGH-REACH BODYWORK REPAIR

Extend your chassis repair bay with high-reach capabilities to repair cabs and bodywork. A whole set of unique features provides accuracy as well as a safe and efficient workflow. To further increase your repair capabilities, using multiple towers is recommended.



CT SERIES

UNLIMITED POSSIBILITIES

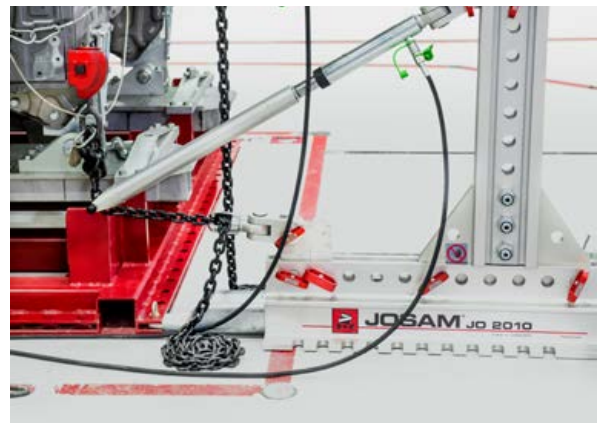
The CT series is our solution for unlimited bodywork straightening operations. It allows you to pull in all directions and is enhanced with pushing and holding functionality. Installation is possible in most workshops as the tower is fixed using floor anchorings.

MORE UNIQUE BENEFITS TO MAKE YOUR WORKING DAY EASIER



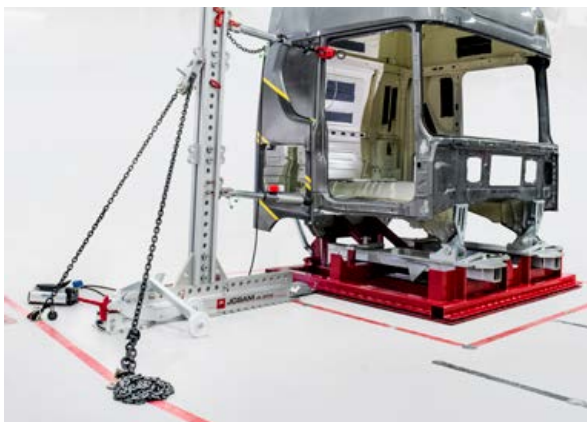
360° ANCHORING

Safe anchoring of the pulling tower is possible thanks to a pattern of floor anchorings in the workshop.



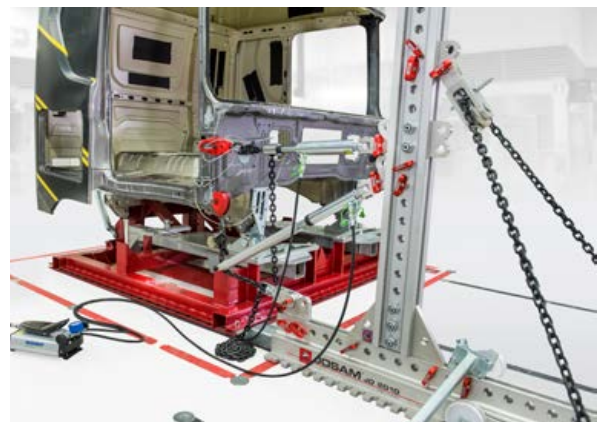
NOSE BRACKET

The nose bracket allows the trolley to be locked directly to the cab bench or a moveable anchoring beam.



PULL, PUSH AND HOLD

In addition to the single pull operation, the design of the cab tower makes multiple pulls or combined pull/push/hold operations possible.



VECTOR PULLING

The firm anchoring of the CT series tower also enables vector pulling in all directions – all to make the repair of the vehicle faster and easier.

JO SERIES

PERFECT ADD-ON FOR FRAME PRESS

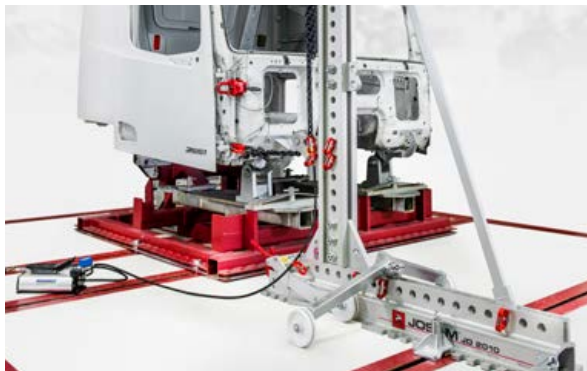
The solution for normal bodywork straightening operations allowing pulling and holding functionality. With a simple twist, the cab tower is fastened into the I-beams in the workshop floor.

MORE UNIQUE BENEFITS TO MAKE YOUR WORKING DAY EASIER



QUICK ANCHORING

As the base of the pulling tower is the same as used in the JOSAM frame press, the I-beam anchoring holders will also fix the cab tower quickly and safely in position.



PULL AND HOLD

In addition to the single pull operation the design of the cab tower makes multiple pulls or combined pull and hold operations possible.



VECTOR PULLING

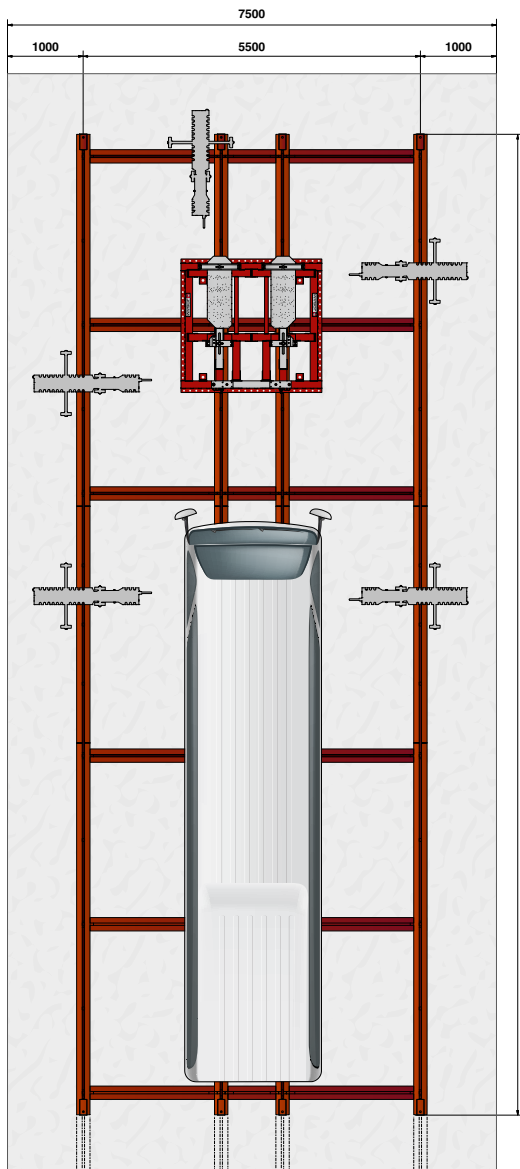
The means of anchoring the JO series tower allows for upwards vector pulling – providing the tools needed to repair most damages effectively.

WORKSHOP DESIGN

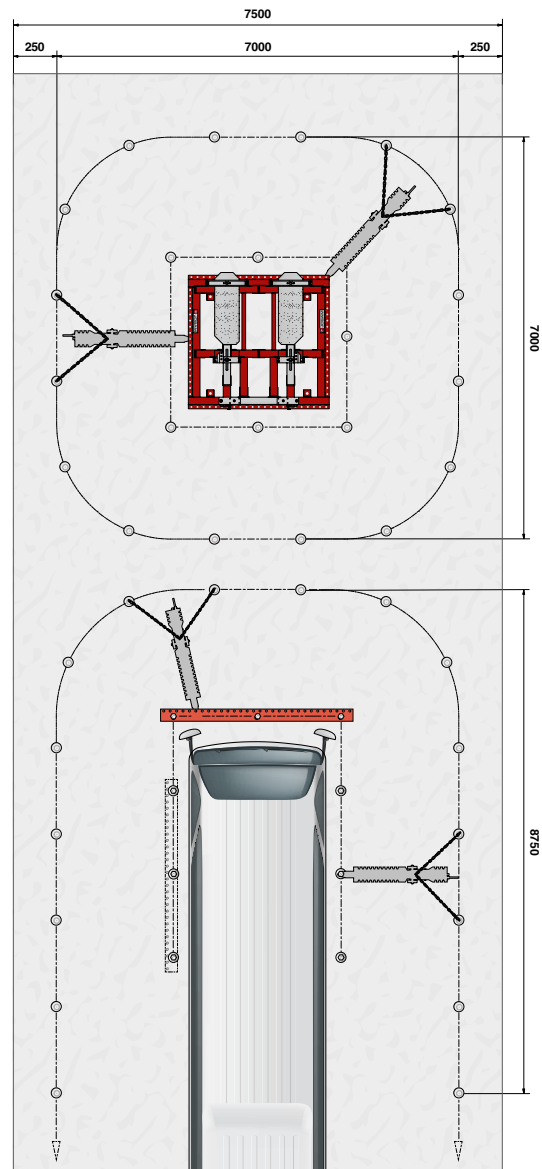
FOR EFFICIENT AND SAFE OPERATION

Independent of the solution you choose – I-beams or floor anchorings – enough space around the vehicle is vital. We recommend a 7.5 metre wide work bay*, to be able to move the equipment around and allow for a safe work environment. Since all anchoring points are flush mounted in the floor, the straightening area can also be used for general repair work.

JO SERIES FOR I-BEAM FLOOR



CT SERIES FOR FLOOR ANCHORINGS



* Solutions for smaller workshop areas are also available. Contact your local Josam distributor to plan your workshop layout.

WE STAND BY YOUR SIDE

FROM INSTALLATION AND EDUCATION TO PROFITABLE BUSINESS

INSTALLATION AT YOUR WORKSHOP

Of course, we make sure that your equipment is delivered and is installed on site as agreed. This obviously includes the adjustments required in your workshop to ensure an efficient workflow around the equipment.

SUPPORT TO KEEP YOUR BUSINESS RUNNING

In addition to our 2-year warranty on all equipment, we or our distributors are never far away. If you have questions or need help regarding our equipment, it is our ambition to assist you in the best possible way.

THE JOSAM ACADEMY – WORLDWIDE TRAINING PROGRAMS

We at Josam are proud of our unique educational program which helps you and your coworkers to get the best out of your investment. We know that the product is never better than the support and training provided.





The Josam Academy helps you and your coworkers to get the best out of your investment.

PEOPLE PLANET PROFIT

We love the fact that our products contribute to a more sustainable planet and we hope you will join us. But we don't just do it to be nice. For us – and for you – Josam cab bench and Josam cab tower also means sustainable and long-term profitability.



REPRESENTATIVE:

MANUFACTURER:



Car-O-Liner Group AB • Box 419 • SE-701 48 Örebro • Sweden
Tel: +46 19 30 40 00 • E-mail: info@josam.se
Internet: www.josam.se

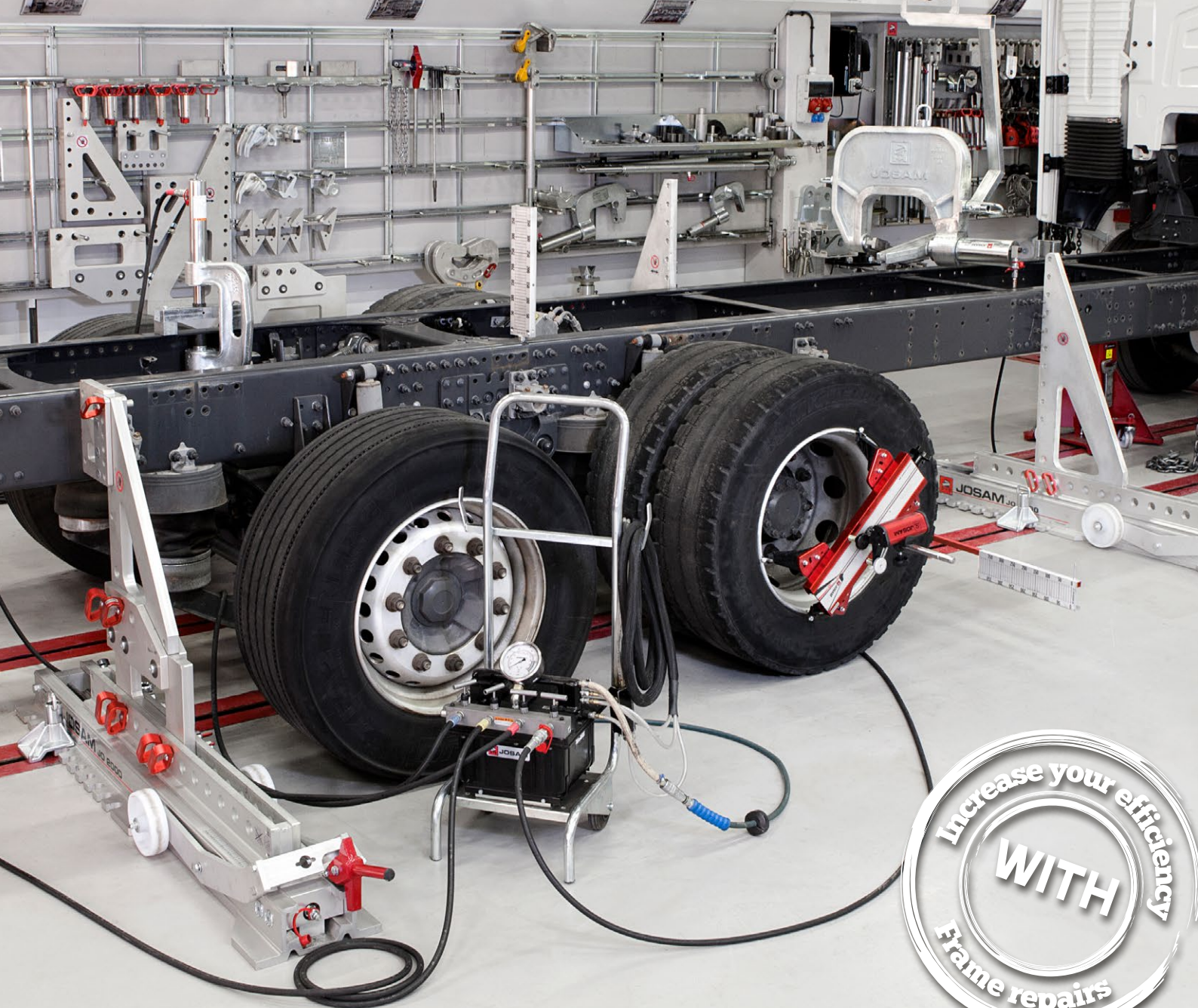
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JOSAM frame press

Frame repair systems
for heavy vehicles

JOSAM frame press JOSAM frame press JOSAM frame press



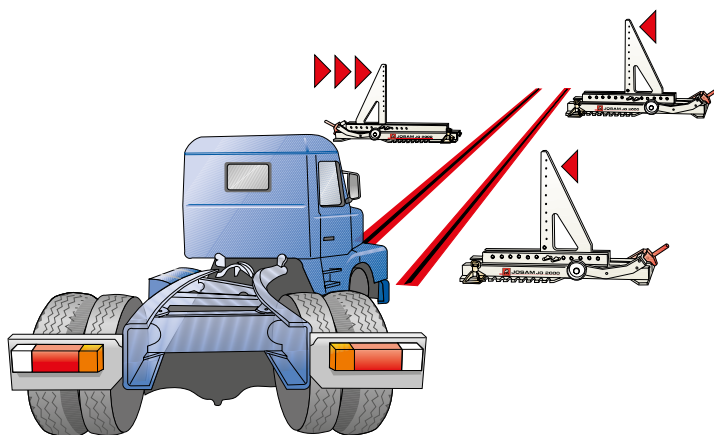


JOSAM frame press

JOSAM frame press with trolley JO 2000, which can both press and pull.

JOSAM frame repair systems for floor beams in lightweight aluminium alloy

JOSAM frame press for chassis repair – number one in Europe – are used all around the world. Our market leading position is based on high technology and quality resulting from our research and development work which ensures that it fulfills the demands which are placed on frame repair of heavy vehicles. JOSAM's frame repair system is complemented with special accessory equipment and a thorough basic training program.

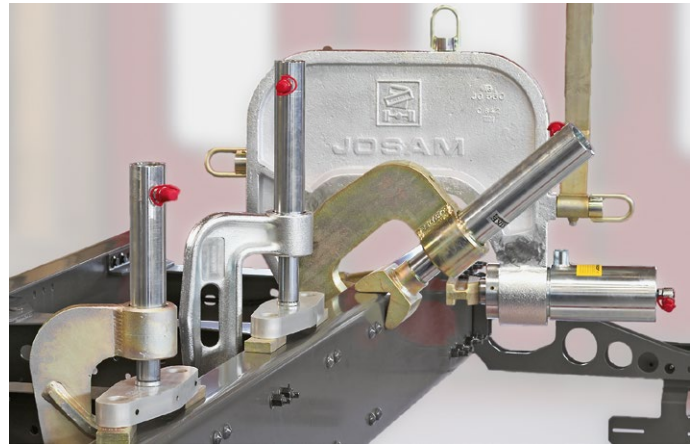


A wide range of equipment and accessories for heavy vehicle frame straightening



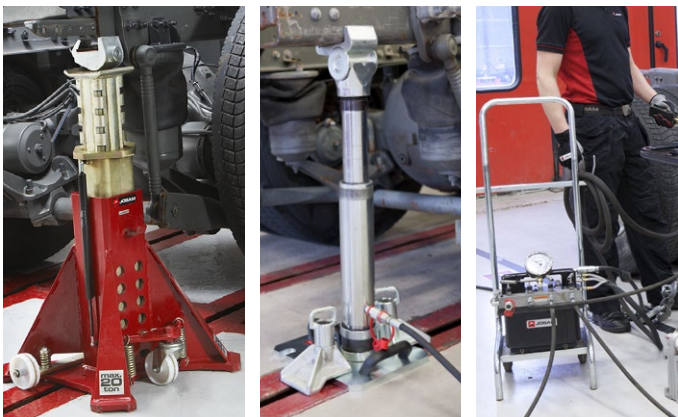
JOSAM straightening trolleys

JOSAM press/pull trolleys with 20 tons press capacity. The equipment is designed to be as lightweight as possible, which is why it is constructed entirely of aluminium alloy. This also makes it very strong and durable. The trolleys are mounted on wheels, making them easy to handle by just one mechanic. The counterstay trolley is a simpler model without a built-in cylinder press.



JOSAM c-clamps

These are used for straightening and riveting of truck frames etc. The models range from 10 to 40 tons. The hydraulic clamps are adapted to easily access local deformities and straighten them. The larger clamps have a riveting capacity and also come with lifting device for use on a traverse crane, for example.



JOSAM vertical presses and pumps

For vertical straightening, our vertical presses are used. The equipment is operated with JOSAM hydraulic pumps. They are all equipped with wheels or handles in order to make them easier to move.

Vertical presses have a press force of 20 tons and a lift height ranging from 555-1310 mm (approx. 22-51 inches).



JOSAM chain attachment/anchoring

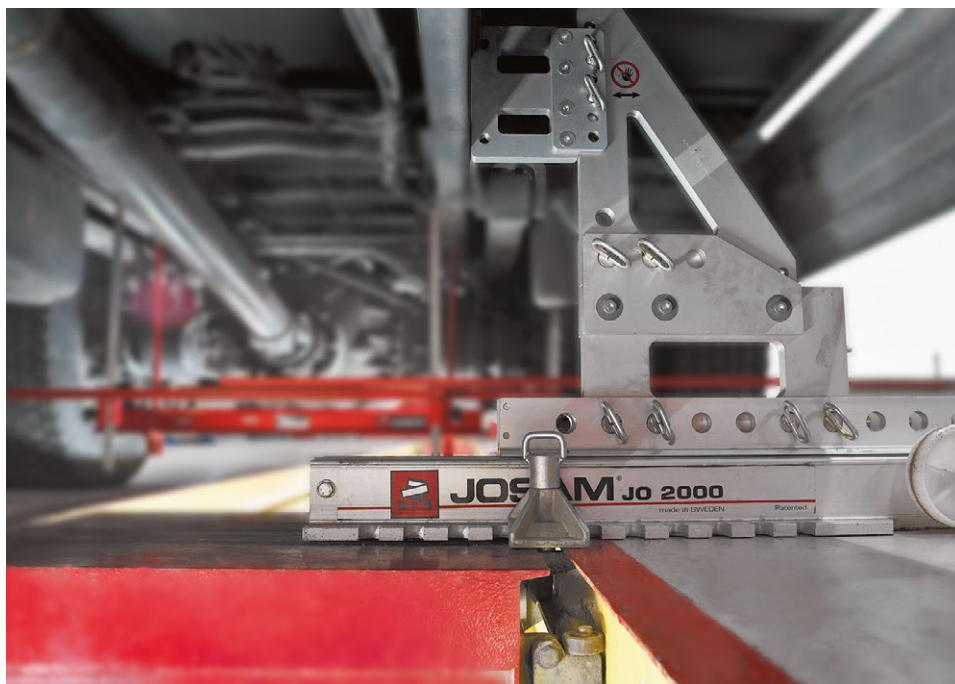
For certain types of straightening, usually vertical bends and twists, the JOSAM vertical press and chain attachments with anchoring equipment, chains and hooks should be used. The frame hooks are manufactured of aluminium alloy and are available in a number of models.

Required installations in your workshop floor

JOSAM straightening pit

The JOSAM service pit is used for frame straightening as well as wheel and axle alignment. It is the perfect work place for straightening heavy and light trucks, trailers and buses.

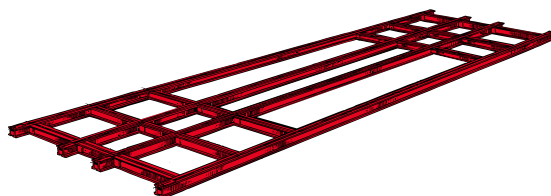
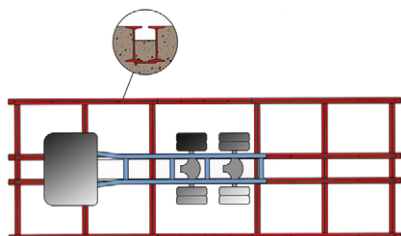
The girders on the edges of the pit form a track allowing a moveable pit trolley to function as an anchor for our press trolleys. The pit trolley also functions as a base support for JOSAM vertical presses, anchorage equipment and the hydraulic lift cylinders.



JOSAM floor beams

The JOSAM frame straightening system is based on the use of I-beams cast flush with the workshop floor. Straightening work is to be done without ramps and the workshop can be used for other purposes. JOSAM straightening trolleys, floor attachment etc. are anchored to these floor beams.

Furthermore, Josam's cab and bus straightening equipment can also be anchored securely into these floor racks.



Representative:

Manufacturer:

CAR-O-LINER®  **JOSAM®**

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E-mail: info@josam.se • Internet: www.josam.se

IT'S ALL ABOUT
PROFITABILITY

QUICK, ACCURATE AND REPEATABLE WHEEL ALIGNMENT



SIMPLE AND UNCOMPLICATED

3 axle vehicle	4 min
4 axle vehicle	5 min
Truck and trailer	9 min



LET'S MAKE A GOOD DEAL





Optimal conditions for
working with preventive
wheel alignment

It's never been
easier to perform
wheel alignment

~2/3 OF EUROPEAN TRUCKS & TRAILERS ARE OUT OF ALIGNMENT

This is leading to high costs for tire wear and fuel consumption

There is money to be earned and money to be saved



A mechanic in a red jumpsuit is inspecting the engine of a car. He is holding a flashlight and looking up at the engine components. The background is dark and industrial.

ADDITIONAL BENEFITS

Increased value for the service contract

Better driving comfort

Safer vehicle

RETURN ON INVESTMENT

FOR THE FLEET OWNER



**3 % fuel
savings**

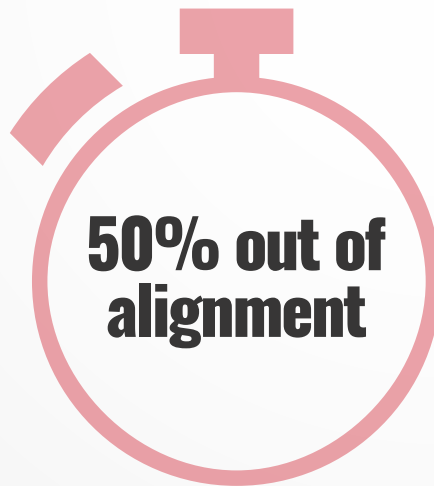
**50 trucks
in the fleet**

**Premature
tire change**

**167.000
Euro
savings**

You will find further information and a detailed example in the folder "Save fuel and tires" or on Josam.se

RETURN ON INVESTMENT *OF EQUIPMENT*



Your Josam representative will help you with calculation for your investment

SUCCESS STORIES





"JOSAM i-track is superior in terms of diagnostic and a must when measuring buses and coaches."

Lasse Pedersen, Technician
Wist Last & Buss AB, Sweden

"We have saved both tires and fuel and driving comfort has increased on the vehicles. The short measuring time, despite several steerable axles, is crucial."

Magnus Vredin, Haulage contractor
Bjännsjö Kranbilar AB, Sweden

"High level of service creates more secure and safer customers. We know that it is developing the business. We work extensively with education and to help our customers if they have questions that appear. With JOSAM i-track, we have achieved a rapid development. Measuring times have been reduced significantly, the technology is getting more commercial."

...

"In our markets, the environmental issue is very important. Wheel alignment reduces both tire dust and fuel consumption."

Peter Kosteljik, Sales Manager
Nederman, Belgium, Netherlands, Luxembourg

"We have been working with wheel alignment for more than 30 years. Pesci was a pioneer and has been involved in developing the Italian market. Our goal has been to support our customers, we have identified a number of measures that were crucial to our success. This is about our workshop that works as a training centre, our technicians that support our customers' technicians, an open "Hot Line phone". In Italy, we have also built up a network of specialists. There are 36 companies that meet regularly and help each other to develop their business."

Stefano Quarena, Sales & Marketing Manager
Pesci Attrezzature Srl, Italy

"Since the equipment is very simple, fast to use and the results of the measurements are very precise, we now perform more alignments than ever before. This has resulted in very positive feedback from our customers, as they benefit from decreasing costs in tire and fuel consumption within their fleet. In addition, the overall driving comfort is improved, which is greatly appreciated by the drivers."

Frank Jessen, Manager
Iveco Nord Nutzfahrzeuge GmbH, Germany



MERCEDES-BENZ WHEEL ALIGNMENT

CAMERA TECHNOLOGY FOR YOUR WORKSHOP

Powered by



JOSAM®



INVEST IN MODERN TECHNOLOGY TO GROW YOUR BUSINESS

- Homologated by Mercedes-Benz for trucks, buses and light commercial vehicles.
- Measurement values integrated into Mercedes-Benz warranty claim sheet.
- Guided measurement procedures according to Mercedes-Benz principles and specifications.

INCREASE YOUR TURNOVER

A quicker and modern way will enable you to diagnose a vehicle in matter of minutes. This will increase your turnover as many vehicles are subject to being adjusted.

Diagnosis could also create spin-off activities such as sales of suspension related spare parts (bushings, tie rods, ball joints, bearings etc.).





MEASURE EVERY VEHICLE FROM V-CLASS TO BUS AND HEAVY DUTY VEHICLES

THE MERCEDES-BENZ Wheel Alignment System with all its different adapters and additions is able to measure every possible commercial vehicle on the market, including the V-Class with Sprinter and Vito.

THE UNIVERSAL WHEEL ADAPTER fits all rim sizes from 14" to 26" with extensions. In combination with the compact frame gauges the system is suitable for measuring everything from light commercial vehicles to the heaviest trucks and buses. As the frame gauges can be altered in width, they can be adapted from narrow to wide bodies.

MEASURING TRAILERS is also easy, as the frame gauges are hung on the chassis using the centerline as reference.









[DIAGNOSIS]

A SYSTEM IN A CLASS OF ITS OWN

- By putting sensors on the wheels and measuring both forward and backwards, you will be able to measure all possible vehicle combinations that come into the workshop.
- The system is designed to measure and adjust multiple steered vehicles in a simple and accurate way.
- Thanks to its portability the system can be used at every location in the workshop and at the customer's site. This will optimize the flow in your workshop and therefore also your productivity.
- The camera technology enables the system to diagnose frame damages and create report sheets that are accepted by insurance companies.
- A European product developed for European trucks and buses.



INCREASE CUSTOMER VALUE



WHEEL ALIGNMENT HAS A LARGE INFLUENCE ON:

- FUEL ECONOMY
- TIRE COST
- DRIVING COMFORT
- SAFETY ON THE ROAD

CALCULATION EXAMPLE 1

Fuel cost reduction: 3%
Mileage/year: 150 000 km
Fuel price: 1.1 EUR/litre
Fuel consumption: 3.5 litres/10 km
Total cost reduction/year:
 $0.03 \times 150\,000 \times 1.1 \times 0.35 = 1\,733 \text{ EUR}$

CALCULATION EXAMPLE 2

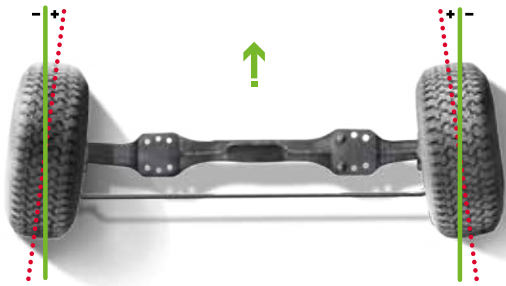
Premature tire change, 2 tires/year
Tire cost: 350 EUR/tire
Cost reduction/year:
 $350 \times 2 = 700 \text{ EUR}$



Estimated
fuel/tire cost
reduction per year:
2 433 EUR*

* Cost for wheel alignment not included in the calculation

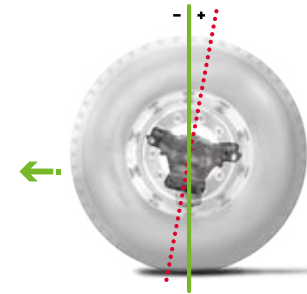
Source, fuel cost reduction:
Survey performed during 2013 on 500 vehicles from 12 different companies
by the research institute TNO, Holland



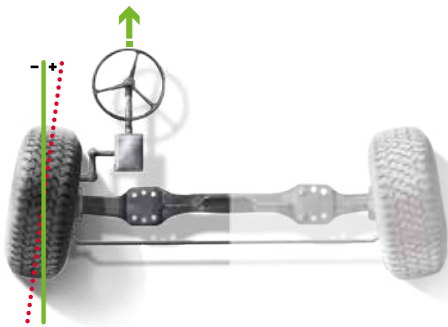
Toe



Camber



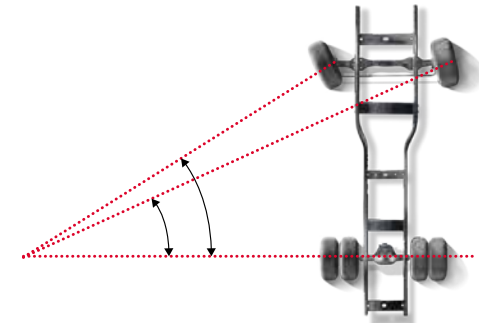
Caster



Steering gear middle position



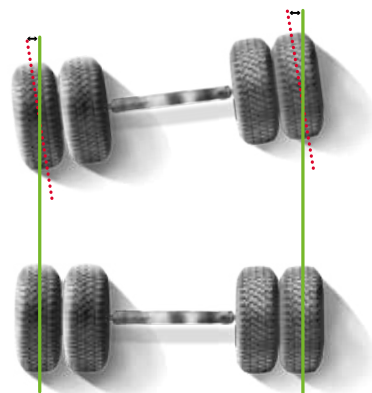
KPI



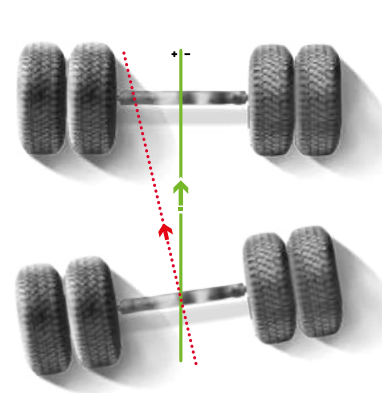
Toe-out on turn



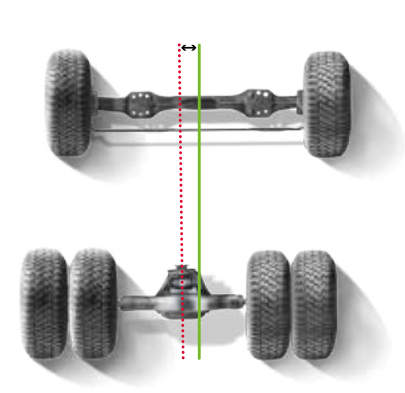
Maximum turn



Parallelism



Out of square



Offset

WHY JOSAM SHOULD BE YOUR BUSINESS PARTNER

- The same camera technology is also used in all Mercedes Benz truck and axle assembly plants globally.
- For 45 years, Josam has been a global supplier for wheel alignment equipment with its focus on commercial vehicles only.
- Josam was the first wheel alignment equipment to be homologated for Mercedes Benz trucks and buses in 1985.
- Our wheel alignment competence is spread globally through our training centres.



YOUR HOMOLOGATED EQUIPMENT COMPRISES

MERCEDES-BENZ CA MB K/74200

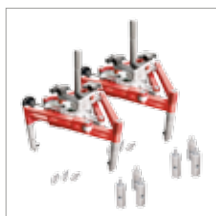
#	ARTICLE #	ORDER #	PCS.	DESCRIPTION
1	AM1227-1 A	10234	1	Magnet bracket for frame, right
2	AM1227-2 A	10235	1	Magnet bracket for frame, left
3	AM1622	10360	2	Front adapter for Mercedes
4	TC-1029	71349	2	Magnet bracket for frame gauge
5	JT510	12029	1	Adapter for bumper
6	JT295 A	14478	4	Turntable with non-friction plate JT280
7	CA3850	74850	1	Cabinet for equipment MB, with PC hardware
8	TC-361	70009	1	USB cable
9	TC-233-10	70032	1	Reflective Target FL
10	TC-233-20	70033	1	Reflective Target FR
11	TC-233-30	70034	1	Reflective Target RL
12	TC-233-40	70035	1	Reflective Target RR
13	TC-395	70040	1	Charging cradle
14	12860	70546	4	Wooden plate for height compensation
15	CA1000	72000	4	Wheel adapter spider 14"-22.5"
16	CA1004	72004	2	Compact frame gauge with hangers
17	CA ANGLE K A	75661	1	Additional kit for inclinometer
18	CA1009 A	75642	1	Wireless server
19	CA1010 A	75640	2	Camera sensor
20	CA1034	72034	6	Extension leg for spider wheel adapter 26"
21	CA3202	74202	1	Software, tailor-made for Mercedes



RECOMMENDED ACCESSORIES



2 x AM268 A / 13762



2 x CA1000 / 72000



2 x CA1006 / 72006



1 x CA BUS K / 72244



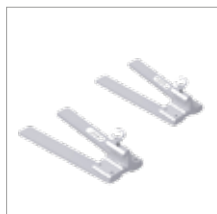
6 x CA1034 / 72034



1 x AM48 A / 10579



1 x JT167 / 11928



2 x JT485 / 12017



2 x JT5-8 / 12046

... WHICH WILL GIVE YOU

- Modern, ergonomic and user-friendly measuring technology covering today's vehicles.
- Fast and simple measuring procedures which increase your productivity on wheel alignment compared to a conventional nondigital system.
- Robust industrial design and in-built calibration functions to keep your equipment maintenance at a minimum cost.
- Process controlled and guided software, reducing your operator dependency.
- Opportunities to sell wheel alignment services.



**WE KNOW THAT THE PRODUCT IS NEVER BETTER
THAN THE SUPPORT AND TRAINING PROVIDED.**

AFTER 45 YEARS IN THIS BUSINESS WE HAVE THE
ABSOLUTE BEST SUPPORT AND TRAINING CAPABILITY IN
THE INDUSTRY. THIS WILL ENSURE THAT YOUR INVESTMENT
IN OUR EQUIPMENT IS SUSTAINABLE.

REPRESENTATIVE:

MANUFACTURER:

CAR-O-LINER®

 **JOSAM®**

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PRECISE HEATING FOR AN EFFICIENT WORKSHOP

JOSAM INDUCTION HEATERS



JOSAM®



SAFE AND SMART HEATING

INCREASE YOUR WORKSHOP EFFICIENCY

With 30 years of experience of using induction heating for collision repair, general repair and wheel alignment, JOSAM is the obvious supplier for your workshop.

The advantages of induction heating compared with an open flame are manifold. As heat is applied to a limited area with greater precision, the risk of personal injury and unintentional heating of sensitive nearby machine parts is minimized. Using induction heating instead of gas also makes your working environment safer and reduces operating cost as well as time needed for work preparations.

JOSAM induction heaters make your job in the workshop easier, safer and more profitable.



VERSATILE AND POWERFUL

AN INVALUABLE TOOL IN YOUR WORKSHOP

Josam's induction heaters are robust and durable, developed to operate in harsh workshop environments. The compact, yet powerful, machines can be used for a wide range of applications, from light to heavy repair work.

EASY HANDLING

The long reaching hose package and cabling means less need to move the machine. To control the heating process and prevent overheating, induction power can be regulated in five steps with the clear and intuitive control panel. All machines comprise a built-in, closed water cooling system. Just plug it in, and you're ready to go!

JH400

JH400 is used for sheet metal straightening and loosening of small machine parts such as nuts up to M24, pins or clamping rings. The machine is mainly used for general, lighter repair work.



JH1000

JH1000 is convenient for lighter straightening and loosening of larger machine parts, such as nuts and bolts, bushings and bearings. Our mid-range model is adapted for truck and construction machinery workshops. A fan and radiator uses the ambient air to actively cool the machine.

JH1500

JH1500 is designed for heavy duty work that requires plenty of heat, such as straightening of chassis, axles and heavier metal parts. Thanks to the efficient compressor cooling system, the machine is actively cooled for optimal operating time and reliable operation, also in high ambient temperatures.



PRODUCT RANGE



JH400

JH1000

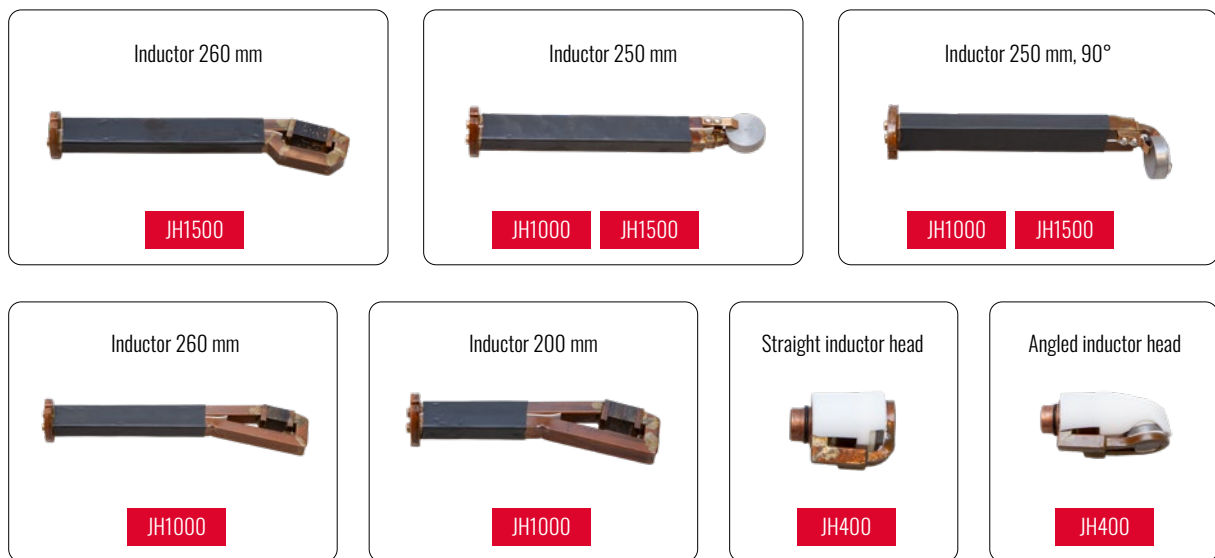
JH1500

	JH400	JH1000	JH1500
Mains supply:	208-240 V, 16 A	380-400 V, 16 A 200-240 V, 32 A	380-400 V, 32 A 200 V, 63 A
Protection class:	IP 21	IP 21	IP 21
Working frequency:	18-40 kHz	14-30 kHz	14-30 kHz
Max. input power:	4 kW	11 kW	15 kW
Max. output power - induction power	3.7 kW	10 kW	13 kW
Output stages	5	5	5
Induction cable:	3 m	6 m	6 m
Mains cable:	4.5 m	9.5 m	7 m
Cooling system:	Water cooled	Water cooled with fan	Water cooled with compressor
Continuous operating time:	20 minutes*	40 minutes*	> 60 minutes*
Weight	54 kg with full tank	105 kg with full tank	175 kg with full tank
Water tank:	20 litres	35 litres	40 litres
Size (L×W×H):	520×360×990 mm	757×557×1166 mm	973×663×1168 mm

*at 20°C ambient temperature at max. power

INDUCTORS

With several models of inductors to choose from, you can customize your induction heater to fit your needs.



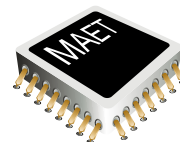
MEET FUTURE ENVIRONMENTAL TARGETS AND ENERGY REQUIREMENTS



Automatic cooling in the induction heaters means that the cooler is only active when needed. In contrast to continuous machine cooling, this makes the work environment quieter and reduces energy consumption.



The technology incorporated in Josam's induction heaters makes them extremely efficient and energy saving. Josam is therefore a truly environmentally friendly choice.



Modular Adaptive Energy Technology is an adaptive process regulator with variable frequency control and extremely fast FPGA (Field Programmable Gate Array) providing operationally safe and energy saving control of the induction heating.

WE STAND BY YOUR SIDE

FROM EDUCATION AND SUPPORT TO PROFITABLE BUSINESS

THE JOSAM ACADEMY – WORLDWIDE TRAINING PROGRAMS

We at Josam are proud of our unique educational program which helps you and your coworkers to get the best out of your investment. We know that the product is never better than the support and training provided.

SUPPORT TO KEEP YOUR BUSINESS RUNNING

In addition to our 2-year warranty on all equipment*, we or our distributors are never far away. If you have questions or need help regarding our equipment, it is our ambition to assist you in the best possible way.

* Warranty does not apply to wear parts



PEOPLE PLANET PROFIT

We love the fact that our products contribute to a more sustainable planet and we hope you will join us. But we don't just do it to be nice. For us – and for you – Josam induction heating also means sustainable and long-term profitability.



REPRESENTATIVE:

MANUFACTURER:



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Internet: www.josam.se

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JOSAM i-track II



Wheel alignment as it should be:
advanced yet simple



Fast, accurate and repeatable measuring

Josam i-track II is able to measure every vehicle from vans and buses to heavy-duty trucks and trailers, alone or in combination. It is even able to align huge construction vehicles such as cranes.

You can always rely on a smooth wheel alignment without interference from extreme tire sizes. This, thanks to the sensors mounted on the wheels measuring forward and backwards.

All this can be done following the same principle as the manufacturers, thanks to our unique touchless chassis and body sensing tool. With all Josam wheel alignment systems, you can be sure to speak the same language as bus and truck OEMs.

The wheel alignment procedure is guided by an animated software, minimizing all possible operator's mistakes.

It does not matter who you are, with I-track II you can be a master at wheel alignment.



Touchless chassis and body sensing tool

Simple and uncomplicated

3 axle vehicle
4 min

4 axle vehicle
5 min

truck and trailer
9 min



I-track II can measure all types of vehicles

- ✓ Truck
- ✓ Articulated bus
- ✓ Semi-trailer
- ✓ Complete carriage (truck + semi-trailer)
- ✓ Bus
- ✓ Trailer
- ✓ Transporter vehicle



Measuring of a complete carriage (truck and semi-trailer)

The best made even better



1.

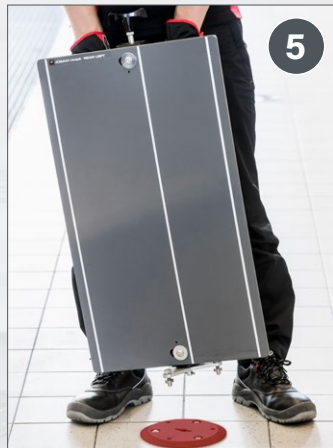
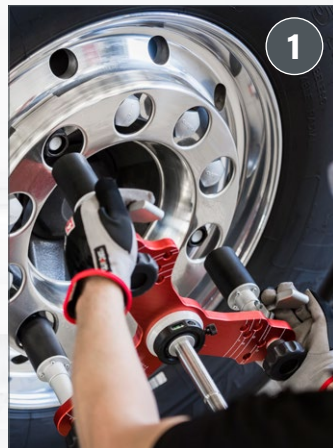
Scratch-free wheel adapter with nut attachment and quick release

2.

Compact laser measuring heads with built-in calibration function

3.

Built-in sensors for turn angles. No readings from turnplates needed.



4.

Touchless chassis and body
sensing tool

5.

New scale attachment. Easy to
install on top of floor.

6.

New user-friendly software



Buses? No problem!

Modern buses are complex vehicles to align, unless you have the right system. A bus often has multiple steered axles, individual front suspension and may also be articulated.

Since a bus is often subject to driving incidents, the need for bus wheel alignment is crucial in order to reduce operating cost and increase safety.

JOSAM i-track II provides a full solution for bus wheel alignment, coping with common challenges of servicing buses. The new touchless body sensing tool enables you to take references towards the bus body, for even higher accuracy.

There is no need to mount frame gauges on the vehicle. Just attach the magnetic wheel adapters and the measuring heads, and you are all set!

Bus wheel alignment as it should be.



It's all about profitability

- Approximately two thirds of European trucks & trailers are out of alignment.
- This leads to high costs for tire wear and fuel consumption.
- There is money to be earned and money to be saved.

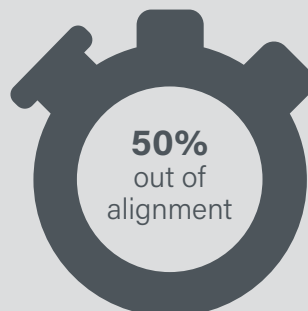
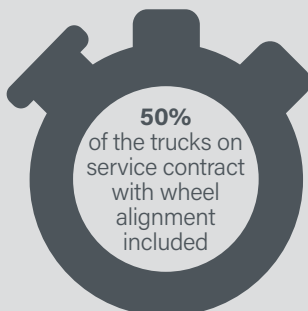


Return on investment for the fleet owner



You will find further information and a detailed example in the folder "Save fuel and tires" or on Josam.se

Return on investment of equipment



Your Josam representative will help you with calculation for your investment.

Success stories

"JOSAM i-track is superior in terms of diagnostics and a must when measuring buses and coaches."

Lasse Pedersen, Technician Wist Last & Buss AB, Sweden

"We have saved both tires and fuel and driving comfort has increased on the vehicles. The short measuring time, despite several steerable axles, is crucial!"

Magnus Vredin, Haulage contractor. Bjännsjö Kranbilar AB, Sweden

"Since the equipment is very simple, fast to use and the results of the measurements are very precise, we now perform more alignments than ever before. This has resulted in very positive feedback from our customers, as they benefit from decreasing costs in tire and fuel consumption within their fleet. In addition, the overall driving comfort is improved, which is greatly appreciated by the drivers."

Frank Jessen, Manager Iveco Nord Nutzfahrzeuge GmbH, Germany

We know that the product is never better than the support and training provided.

After 45 years in this business we have the absolute best support and training capability in the industry. This will secure that your investment in our equipment is sustainable.

Representative:

Manufacturer:

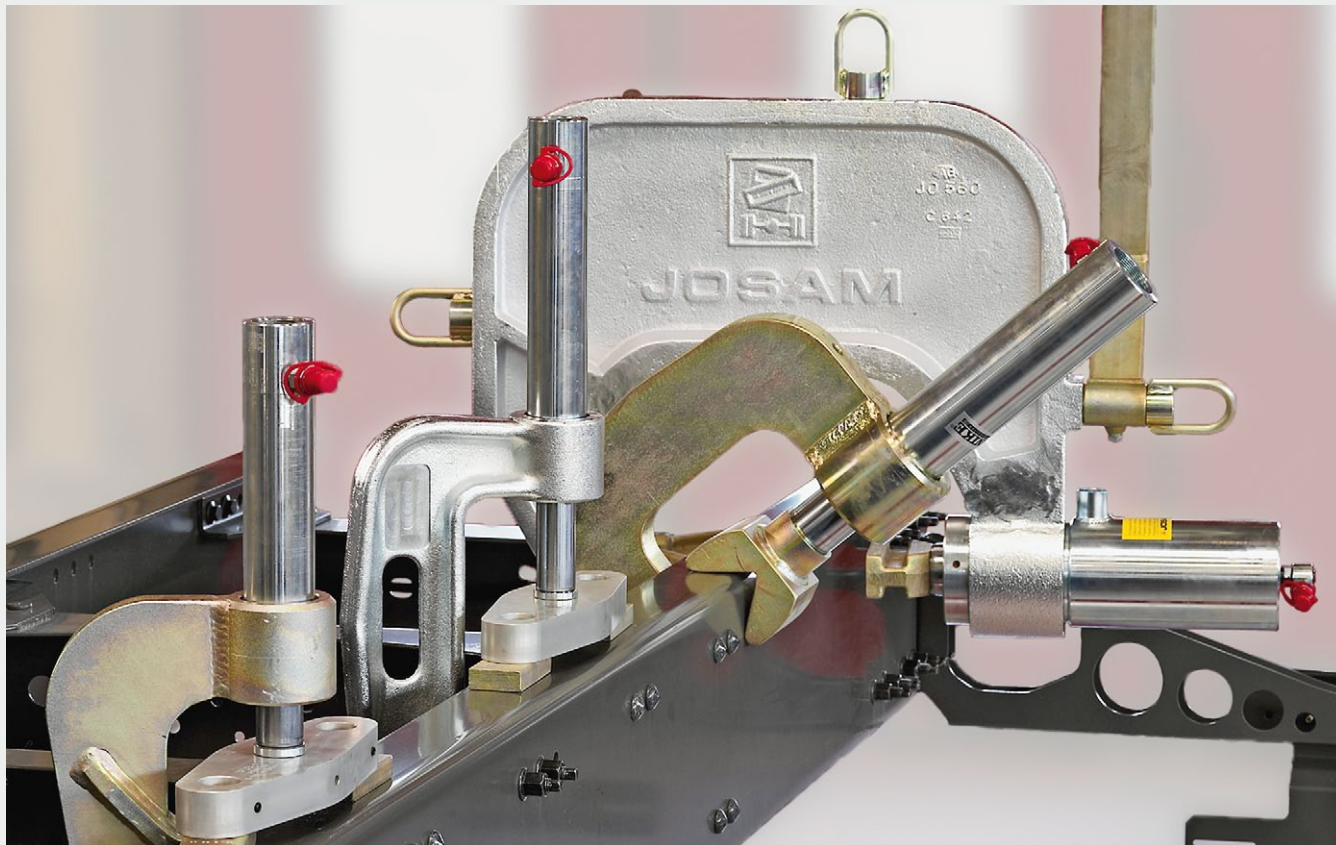


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JOSAM c-clamps

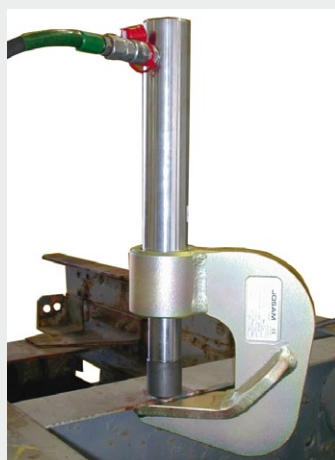
Press and riveting clamps from 10-40 tons



Our product line of C-clamps for pressing and riveting is unique and the different versions are well-suited for repair and bodywork on heavy vehicles. The clamps can be used as a complement regardless of the available equipment in the workshop. The offer includes small 10 ton C-clamps for minor local deformations up to 40 ton C-clamp that can be used for both pressing and riveting.

JOSAM 10 ton C-clamp

Easily straightens local deformations in confined areas. The damage can be reached without dismounting. All 10 ton C-clamps are ergonomically designed.



JOSAM 10 ton C-clamp

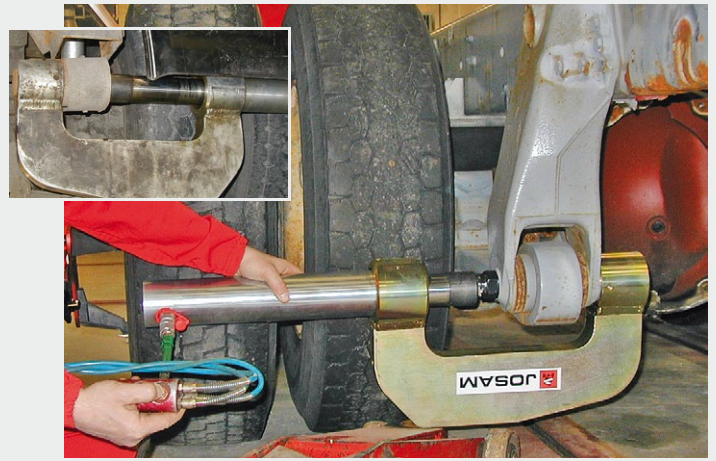
Offered in several versions. The standard kit contains a C-clamp with a gap of 200x100 mm and 200 mm piston stroke.



JOSAM 20 ton C-clamp

For pressing and riveting. 20 ton press force where yokes and press heads support overpressure of frame rails. The frame is effectively straightened by our frame flange kit. Riveting can be performed with up to 13 mm ($\approx 1/2"$) rivets. Tow eyelet for overhead crane is included.

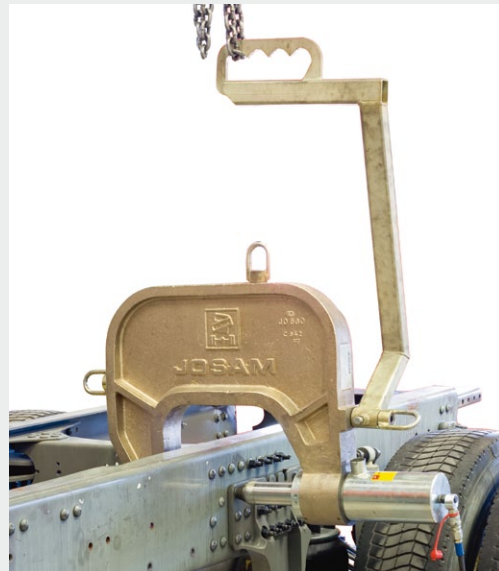
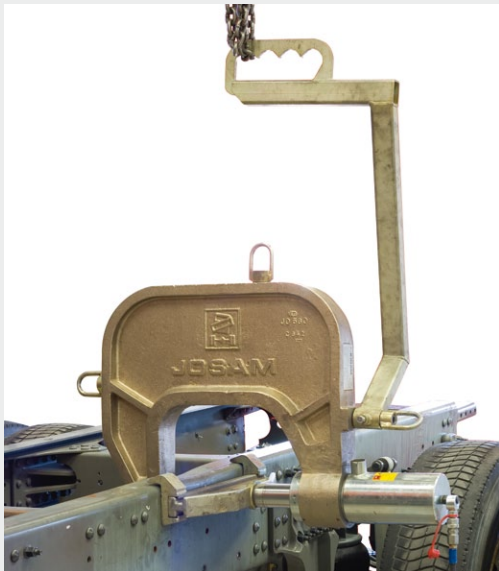
Piston stroke: 200 mm Gap: 180x120 mm



JOSAM 20 ton C-clamp

A special version for replacing bushings. The C-clamp is turned upside down on a standard jack and then pushed under the vehicle. The bushing is simply pressed out directly through application of a pressure force of >20 tons without dismantling torsion bar etc.

Piston stroke: 300 mm Gap: 320x120 mm



JOSAM 40 ton C-clamp

For pressing and straightening of deformed frame rails. The press version is equipped with two different yokes with support and press heads. This allows to overpress the frame until it reaches its final form.

Piston stroke: 150 mm Gap: 335x225 mm

JOSAM 40 ton C-clamp

For riveting with a dolly and extension. Is ideal for cold riveting up to 16 mm ($\approx 5/8"$). Our 40 ton clamp is delivered with trolley and a balance arm for suspension, turning etc.

Representative:

Manufacturer:



JOSAM®

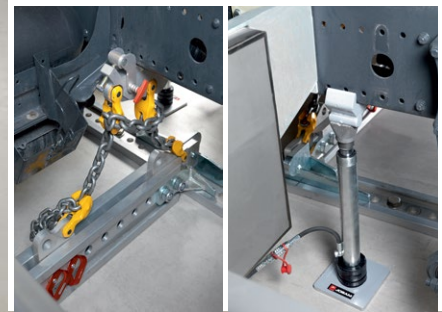
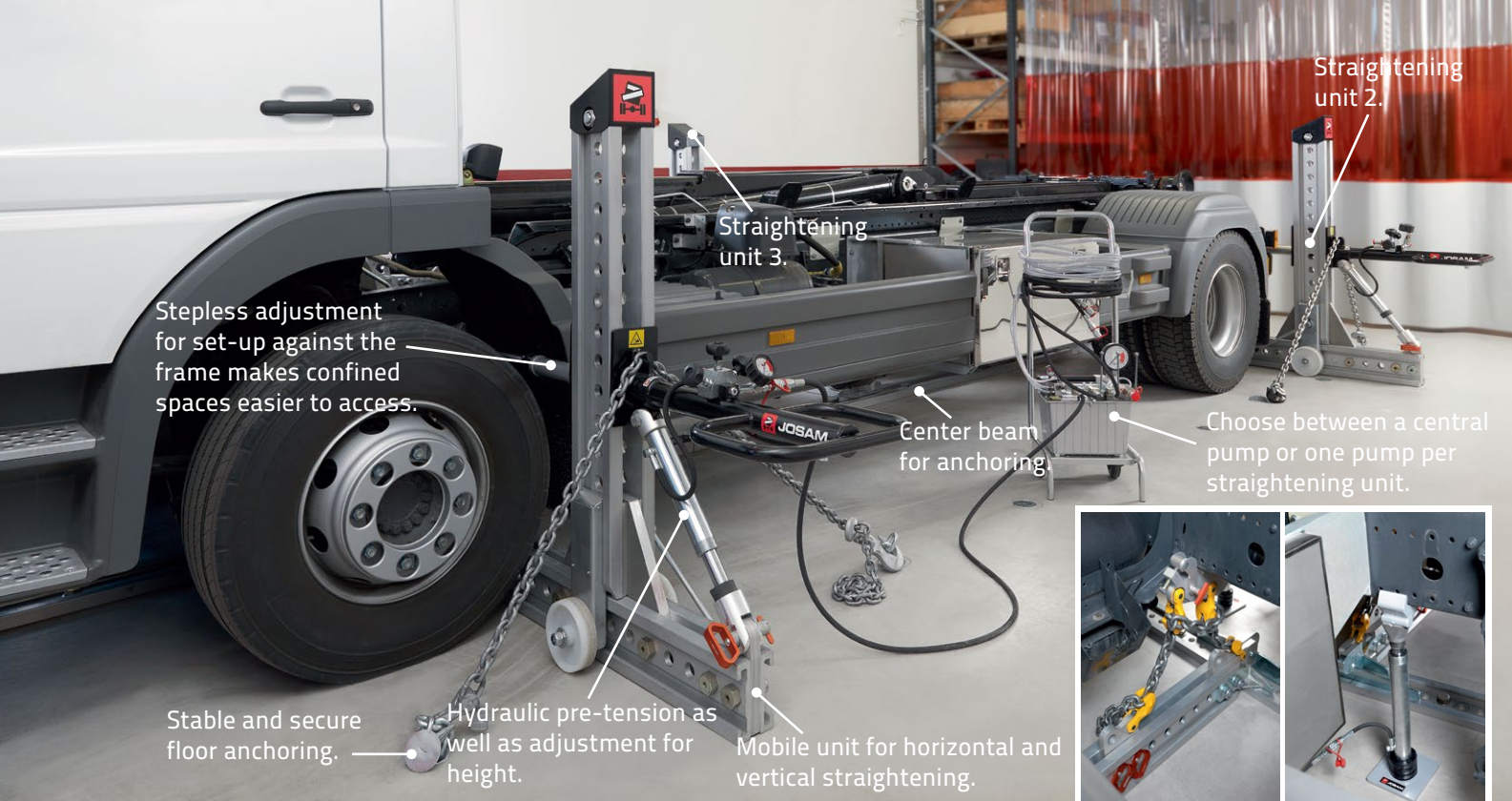
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JOSAM i-press

A universal straightening system
for heavy vehicles





Vertical counterstay.

Vertical press for twisting.

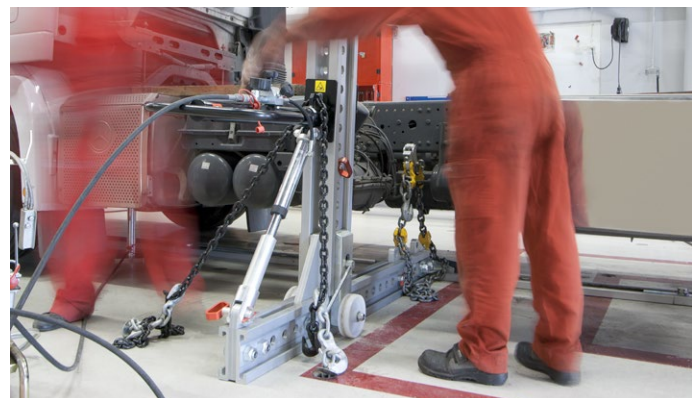
Here is how the JOSAM i-press works

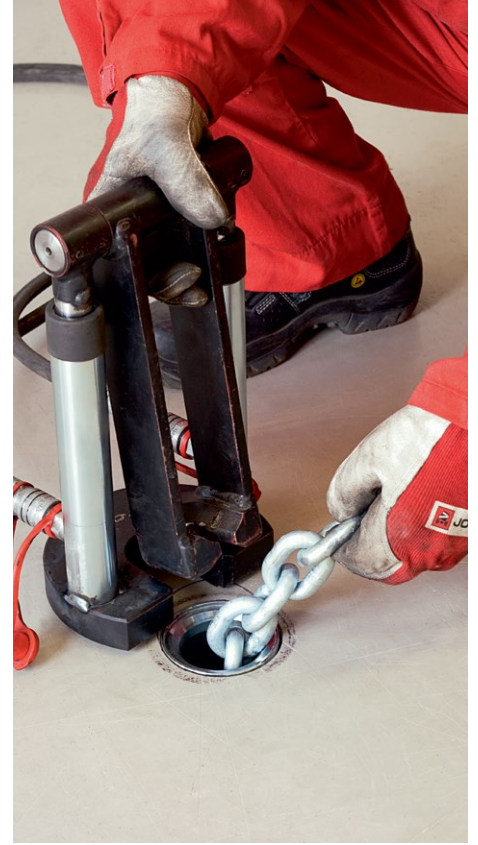
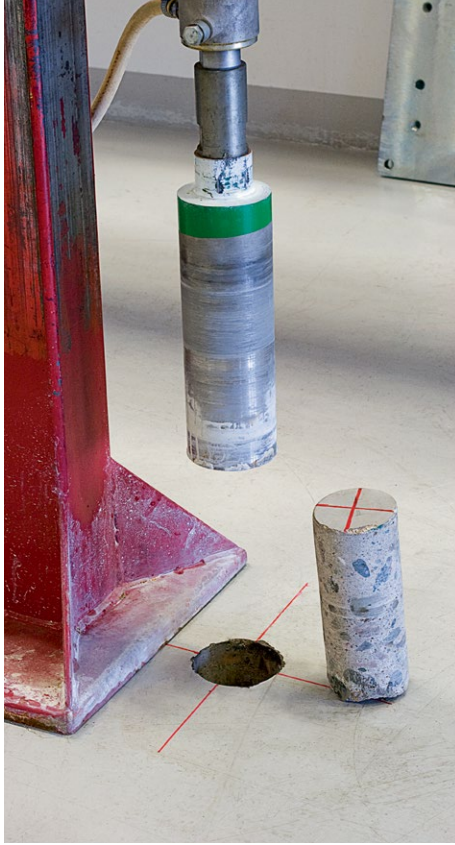
The system consists of three complete straightening units each mounted on wheels and with accessories. It can easily be complemented with other Josam straightening tools such as our C-clamps and hydraulics.

The JOSAM i-press has a unique capacity. The three multi-functional straightening units work in X-,Y- and Z- directions and can press and withstand pressure both in a horizontal and vertical direction. The equipment is ergonomic, easy to handle and is moved with a stable handgrip.

The JOSAM i-press is made of aluminium alloy. The low weight makes installation and handling easier. Minimal set-up time. When you take hold of the handgrip, you take with you the complete straightening unit. The force is distributed through several floor anchorings. The pre-tension makes it possible for a variable set-up.

When the straightening system is not being used, wheel it over to the side and the floor area is free to use for other work. The JOSAM i-press is optimal for use on a floor surface area of approximately 4 X 14 meters. The system is flexible and if the facility is longer than 14 meters, the workplace can simply be prolonged. It is safe to use.





Easy to install. Just as easy to move

JOSAM i-press can be installed in existing concrete floors with a thickness of at least 150 mm. Our recommendation is for the installation of at least 13 x 3 anchorings.

For the floor anchorings true-to-gauge holes need to be drilled into the concrete floor (for measurement specifications, refer to the illustration in this folder). In every hole, floor anchorings need to be installed (chain anchorings or screw anchorings).

The centre beam is installed by attaching it to the floor anchorings with bolts. The centre beam can be removed at any time by loosening the bolts. In every joint between the beams, a joint connector is to be used.

The JOSAM i-press is easy to move. The floor anchorings can be knocked out and the centre beam dismantled for installation in a new location.





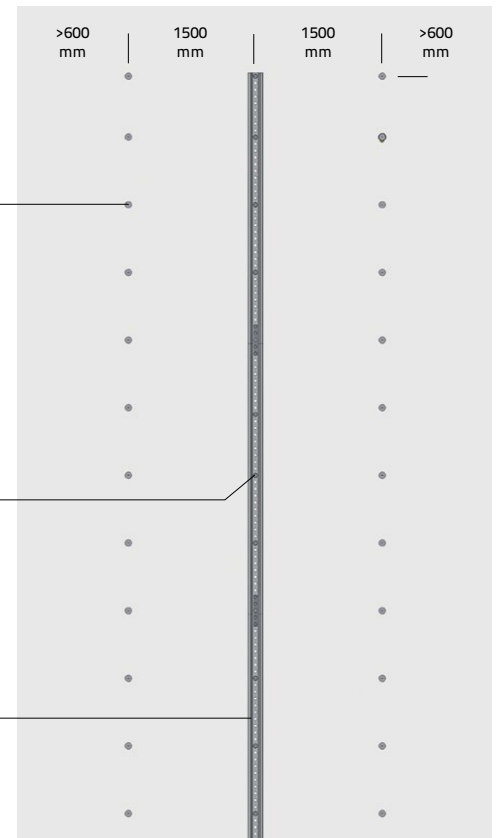
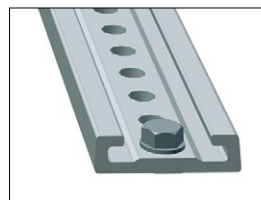
Are you considering the possibility of beginning to do damage repairs on heavy vehicles?

The JOSAM i-press makes it easy to get started!

The JOSAM i-press is an innovative and patent pending, universal straightening system developed by a world-leading supplier of straightening and wheel alignment equipment for heavy vehicles.

The JOSAM i-press is designed for straightening of vehicles with an U-shaped chassis beam. The straightening system is easy to use and quick to install on existing concrete floors in your workplace.

If you later want to make the floor space available for other jobs, dismantling the straightening system is just as easy and simple. One day a workplace for straightening of heavy vehicles, and the next morning the workplace is ready for another type of work.



Representative:

Manufacturer:



JOSAM®

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WHEEL ALIGNMENT FOR HEAVY DUTY VEHICLES

JOSAM CAM-ALIGNER



JOSAM®

A high-angle, wide shot of a multi-lane highway stretching into the distance. A white bus is captured in motion, blurred to suggest speed, traveling away from the viewer. The scene is bathed in the warm, golden light of a setting or rising sun, which creates long shadows and a hazy atmosphere. The landscape on either side of the road is flat and open, with some sparse vegetation and distant hills visible on the horizon. The overall mood is serene yet dynamic.

WHY WHEEL ALIGNMENT?

By measuring and adjusting wheel angles on a vehicle, fuel costs and tyre wear can be reduced. At the same time, driver comfort, road safety and driveability is improved. This leads to a better economy and environment for everyone.

JOSAM CAM-ALIGNER

ALL-AROUND WHEEL ALIGNMENT SYSTEM

The compact wheel alignment system from Josam enables workshops and tyre service centers to offer quick and accurate wheel alignment. Thanks to its portability, the system can be used at every location in the workshop or at the customer's site. This will optimize the flow in your workshop and therefore also your productivity.

MEASURE THEM ALL

Cam-aligner allows you to align any commercial vehicle:

- Trucks with multiple steered axles
- Buses and light commercial vehicles
- Trailers and semi-trailers
- Special vehicles such as agricultural and construction vehicles, mobile cranes, off-road and military vehicles
- Motor homes

TRUSTED BY OEMS

Cam-aligner is officially approved by Mercedes-Benz, Volvo, Renault, Scania and other OEMs for wheel alignment. Moreover, the static ADAS calibration procedure is approved by Volvo Group.

INCREASE YOUR REVENUE

Josam wheel alignment systems create a wide range of opportunities:

- A vehicle can be diagnosed in matter of minutes. This will increase your revenue, as many vehicles are subject to being adjusted.
- Alignment diagnosis creates spin-off activities, like sales of suspension-related services and spare parts such as bushings, tie rods and bearings.
- High fuel and tyre prices increase the importance of regular, preventive wheel alignment to reduce operational cost for fleet owners.



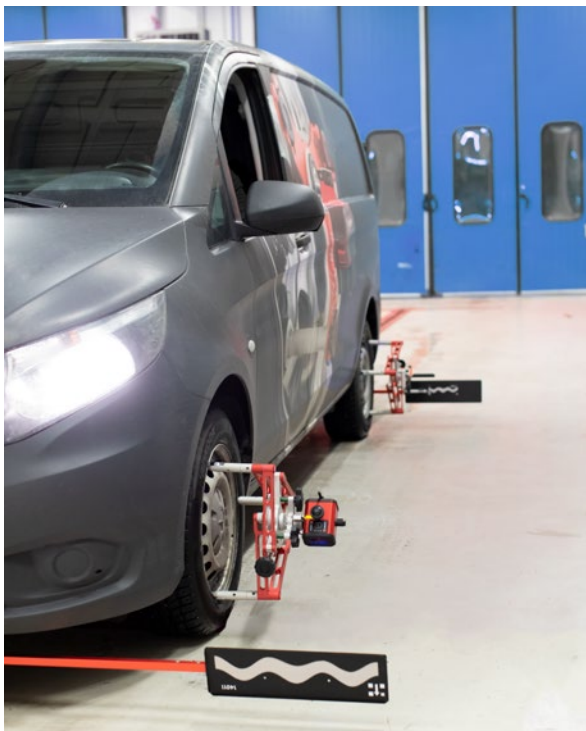
ROBUST AND ACCURATE

COUNT ON IT WHEN YOU NEED IT

This camera-based system is developed for harsh environments, with proven technology used in many heavy-duty OEM factory facilities worldwide. Lightweight equipment in aluminium and an easy-to-use software makes handling easy.

FEATURES AND BENEFITS

- **Guided software**
Guided measurement procedures, in combination with custom or generic specifications, reduce operator dependency.
- **Full frame referencing**
Cam-aligner uses the centerline principle to determine the position of axles and wheels, the preferred measuring method approved by so many OEMs.
- **Run-out or rolling method**
Choose between lifting the vehicle and performing a run-out compensation, or simply roll the vehicle half a wheel turn forward.
- **Frame check**
The camera technology enables the system to diagnose frame damages and create report sheets that are accepted by insurance companies. No additional equipment is needed.
- **Multi-roll kit (optional)**
Save time by measuring two axles in a single rolling sequence. By adding more wheel adapters, multiple axles can be measured simultaneously.
- **Inclinometer kit (optional)**
Compensate for floor unevenness and lifted axles.



Van measured with multi-roll



Semi-trailer measurement

A SCALABLE SYSTEM

GROW WITH NEW BUSINESS OPPORTUNITIES



Cam-aligner can be configured with many different accessories to match the vehicle population served by your workshop. Expand your service offering, and increase efficiency with add-ons for different applications and equipment for facilitating the measuring process.



TWIN-STEERED VEHICLE KIT

The system is designed to measure and adjust multiple steered vehicles in a simple and accurate way.



MAGNETIC WHEEL ADAPTERS

Attach directly to the wheel stud or wheel nut to prevent damage to aluminum or clear-coated wheels.



BUS AND LCV KIT

Extend the system with functions to measure buses, coaches and light commercial vehicles.



ADAS CALIBRATION

Reduce operation time by calibrating inside your workshop instead of dynamic calibration by driving.

FLEXIBLE AND MOBILE

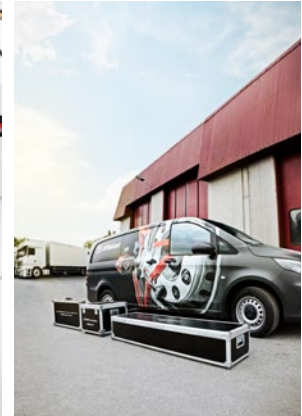
IN YOUR WORKSHOP OR AT THE CUSTOMER'S SITE

CABINET STORAGE

Since no fixed workshop installation is needed, the system can easily be moved between workshop lanes or different locations. All measuring equipment is stored in the cabinet, available in two sizes.

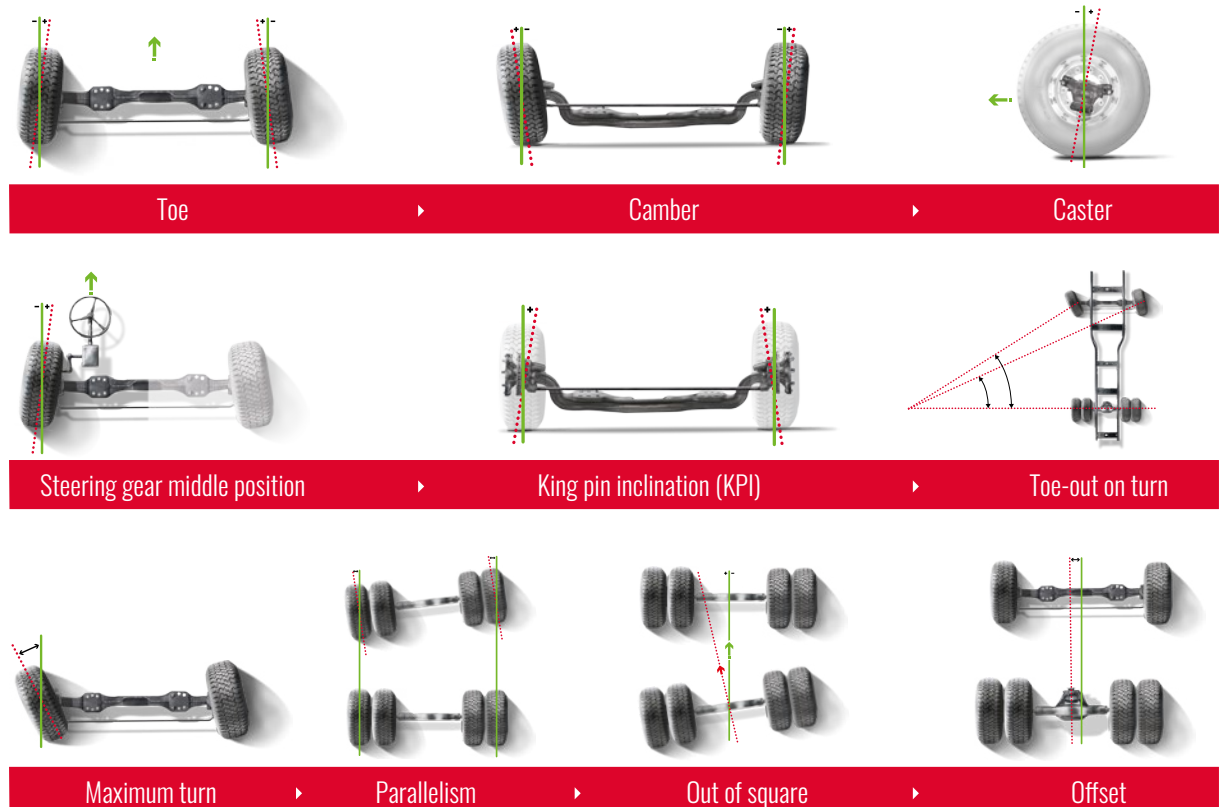
MOBILE WHEEL ALIGNMENT

For mobile wheel alignment, three portable boxes is all you need for transporting the equipment. They can easily be fitted in a smaller van.



TOTAL WHEEL ALIGNMENT

Cam-aligner can measure all these wheel angles:



WE STAND BY YOUR SIDE

FROM INSTALLATION TO PROFITABLE BUSINESS

INSTALLATION AT YOUR WORKSHOP

Of course, we make sure that your equipment is delivered and is installed on site as agreed. This obviously includes the adjustments required in your workshop to ensure an efficient workflow around the equipment.

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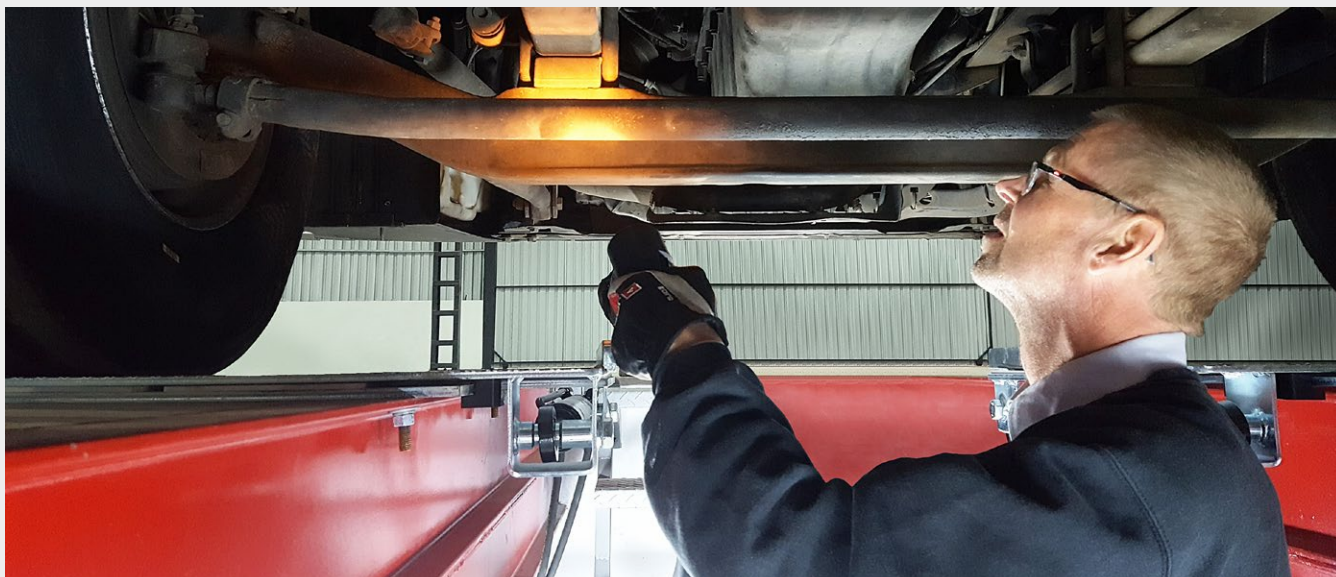
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JOSAM play detectors

A necessity before the wheel alignment

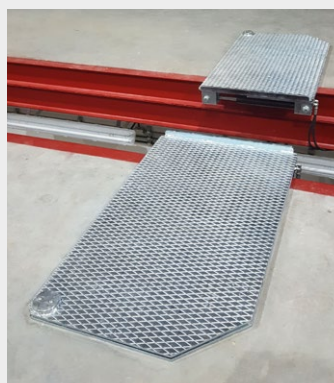


First-rate and versatile equipment is required to determine wear and tear on wheel suspension and steering systems.

To obtain reliable results when carrying out wheel and axle measuring on vehicles, it is essential to first check for any excessive play. The play detectors from Josam do this job in a matter of minutes.

The design of the plates permits circular movement which can detect play in both axial and radial directions. The wheel moves forwards, backwards as well as sideways.

The play detectors are simple to install and are secured in place by three expansion shell bolts.



Josam play detectors can be installed either directly on the floor or over the service pit



Function

The JOSAM play detectors can be used for checking trucks, semi trailers, trailers, passenger cars as well as buses. Before the axle is checked for possible play, it is placed on the plates and the brake is applied.

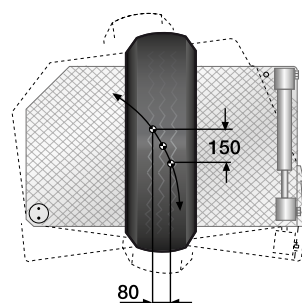
The operator steers the movement of the plates by means of a control handle. This control mechanism includes a halogen lamp which makes it easy to spot any play in the wheel suspension.



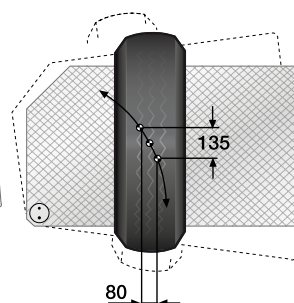
Technical data

- Max axle pressure: Dynamic load 13 tons. Static load 20 tons
- Mains voltage: 3 x 400 V standard 50 Hz.
(Alternative voltage delivered to order)
- Sideway play: ~ 80 mm (AM 800 K) ~80 mm (AM 900 K)
- Longitudinal play: ~150 mm (AM 800 K) ~135 mm (AM 900 K)

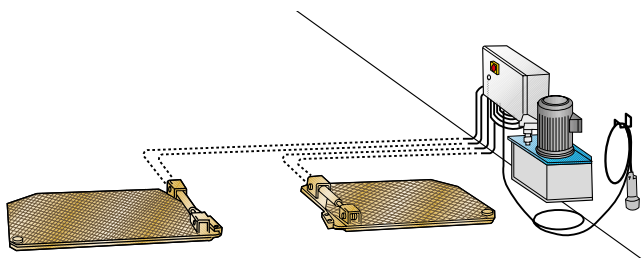
AM 800 K



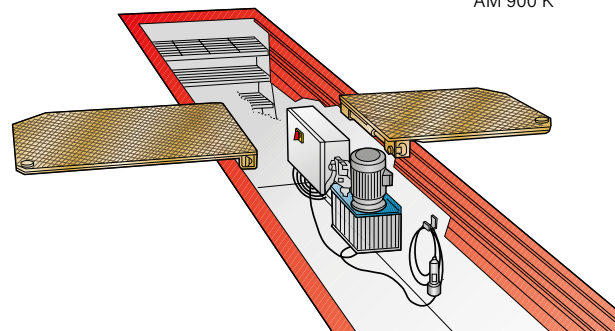
AM 900 K



AM 800 K



AM 900 K



Representative:

Manufacturer:



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H4 | PRO

INDUCTION HEATING FOR PROFESSIONAL SHOPS

EN

EFFICIENCY—ALL AROUND THE WORKSHOP

Designed for light repair services, the **H4PRO** delivers the best productivity available in today's compact and mobile induction heaters.

When quick releasing a few bolts when performing a vehicle alignment, repairing a vehicle suspension, or preparing a vehicle for collision repair, **H4PRO** is a mobile induction heater that will follow you anywhere in the workshop.



ACCURATE
AVOID OVERHEATING
SAFE

Offering a versatile working range with customised programmes, the **H4PRO** allows controlled heating and ensures that the nearby parts are kept undiminished, making the day-to-day tasks easy, fast and safe.

- The tailored preset programme ensures heating is applied to satisfy car manufacturers' expectations
- Heating programmes ensure that each car part receives the ideal heating temperature and duration, which prevents damage to materials

H4 | PRO

GO BEYOND WITH THE POWER OF INDUCTION.

SAFER, GAS-FREE WORK ENVIRONMENT

CONTROLLED HEAT WITH BROADER EXPANSION

NO NEED TO DISMANTLE HEAT-SENSITIVE PARTS

Without an open flame or gas, **H4PRO** is safer for your workshop, your technicians and the vehicle's materials.

This powerful heating solution goes beyond the surface, reaching deeper into the metal layers and reducing the torque applied to loosening nuts, bolts or joints, even on corroded areas.

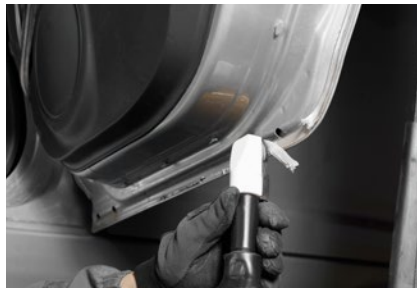
WORKING SMART IS OUR DESIGN.

The **H4PRO** is loaded with preset heating programs for different types of services. There are no complicated processes.

Simply select the ideal configuration in our user-friendly software, and **H4PRO** is all set to make your challenging work easier than ever before.



WHEEL ALIGNMENT APPLICATION
LOOSEN TIE ROD NUTS SAFELY



COLLISION REPAIR APPLICATION
LOOSEN DOOR SEAL GENTLY



SERVICE APPLICATION
REMOVE RUSTY EXHAUST BOLT

SPECIALIZED SERVICES MADE SIMPLE.

Shops that specialize in tire and alignment can rely on **H4PRO** to speed up their daily tasks. Controlled heat is applied directly to the suspension screw without overheating the material or its surroundings to loosen rusty nuts, bolts and tie rods easier, safer and faster.

PERFECT TOOL FOR A BUSY COLLISION SHOP.

H4PRO is the right tool for high-volume collision shops. Customized heating programs help perform dent repair without damaging the vehicle body and loosen door seals efficiently so the technician can better focus on the task at hand.

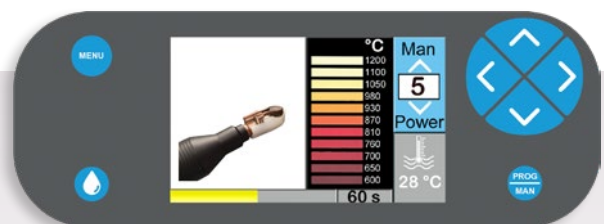
SAFE AND PRODUCTIVE LIGHT REPAIR WORK.

Ideal for service shops with a wide range of applications, removing rusty nuts, bolts on steering, exhaust, suspension and braking systems. **H4PRO** makes it easier, safer and faster!

WANT MORE AUTONOMY? NOT A PROBLEM.

H4PRO also offers an improved, more secure manual feature with up to five power levels. The time counter and progress bar clearly display the heating time elapsed. When the desired heating time is reached, the time can be entered in the timer mode.

This allows for repeating the heating process with the same time setting, showing a countdown timer in yellow. Heating will stop automatically when the pre-set time is reached. This feature helps the technician do his work optimally without having to check how long the heat is inserted.

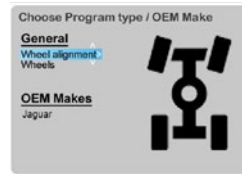




EASY AND INTUITIVE PROGRAMME NAVIGATION.

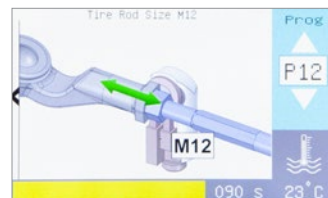
Lightweight and compact, the **H4PRO** is loaded with preset heating programmes for different types of services.

Simply select the programme type. The wheel alignment setup has two preset programmes, tie-rods and camber bolts. Select bolt or tie-rod size and press the trigger.

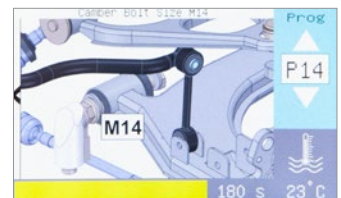


When the trigger is pressed, the countdown begins. Releasing the trigger automatically stops the countdown. In that way overheating is prevented.

Tie-rod programme

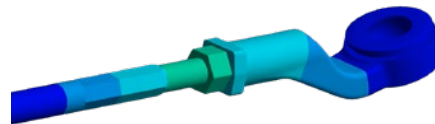


Camber bolt programme

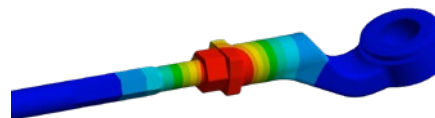


PRESET PROGRAMMES TO AVOID OVERHEATING

Too high a temperature degrades alloy steel materials' strength and stiffness properties. Using the right power and heating time is important to avoid overheating. Our preset programmes maintain the proper temperature and length of time with a touch of a trigger.



Using the tie-rod preset programme



Manual mode at maximum power

EXTENDED DUTY CYCLE FOR EXTENDED WORKING TIME.

We offer an optional 20-litre tank that will provide a surplus of up to 60 minutes operating time. This High-Duty Cycle Trolley is ideal for warmer regions where the environmental temperature requires more from the cooling solution.

Connecting the cooling trolley to your **H4PRO** is easy and fast. With easily-maneuverable wheels, the convenient mobility of your **H4PRO** is not affected. You can easily move your induction heater around anywhere it is needed in the workshop.

H4PRO is all about efficiency, mobility and safety—definitely a great addition to your workshop!

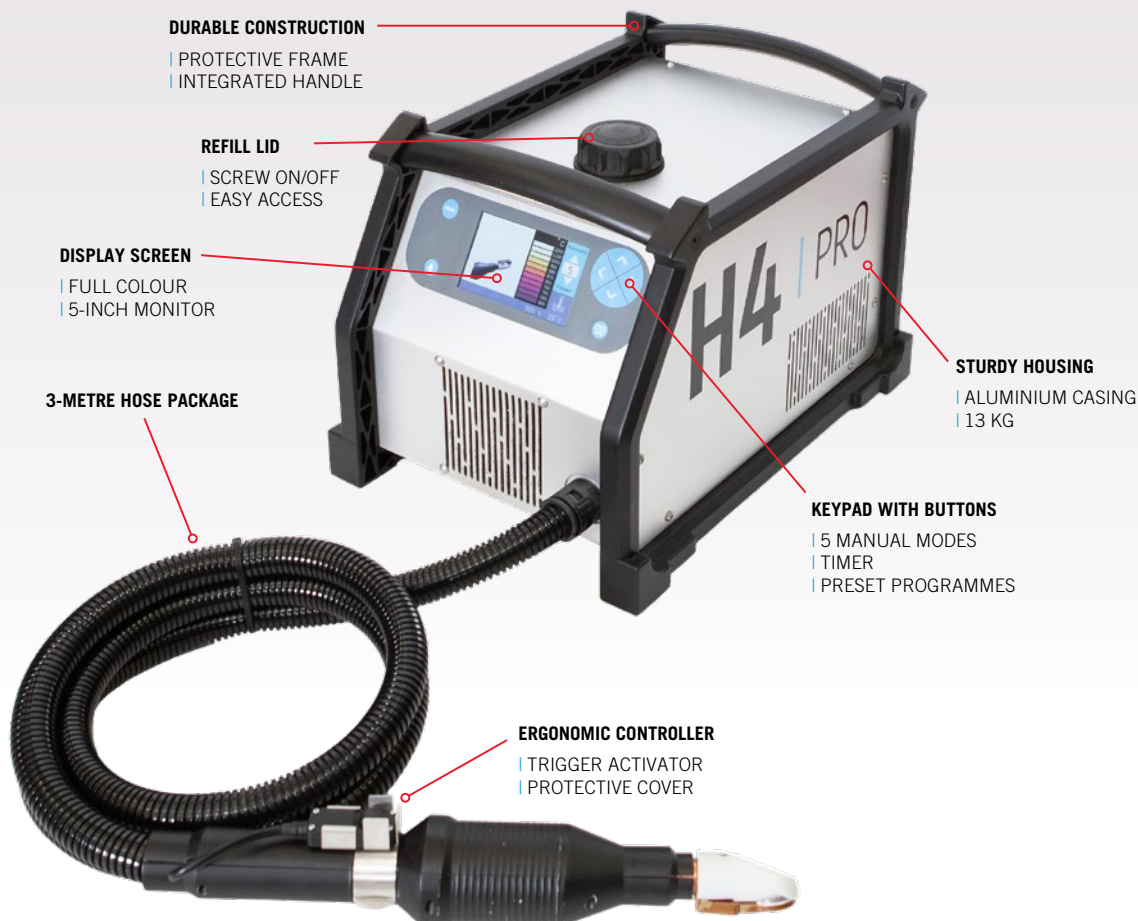


High-Duty Cycle Trolley



Transport Trolley

H4 | PRO



ACCESSORIES



High duty cycle trolley



Transport trolley



LRA5 coolant (5 litres)



Angled inductor head



Straight inductor head



Repair kit & field effect amplifier

WARRANTY

One-year guarantee from the date of delivery covers material defects, provided regular care and maintenance are evident.

TECHNICAL SPECIFICATIONS

	H4PRO	Heavy-Duty Trolley
Input power	3,7kW	—
Main supply	208-240V, 1-phase, 50-60Hz	—
Working frequency	15-30kHz	—
Built-in water capacity	2 litres	20 litres
Hose cable length	3 metres	—
Dimensions (L x W x H)	440 x 325 x 320mm	360 x 600 x 780mm
Weight	13kg	48kg including water
Duty cycle max. power (20°C)	9 minutes	60 minutes
Water-cooled induction head	Yes	—
Heating preset programs	Yes	—
Timer countdown	Yes	—
Display	5-inch color screen	—
Protection	IP21	—
Mains supply cable	2.5 metres	—



TOTAL SHOP SOLUTIONS

Total Shop Solutions is a family of Snap-on® brands that brings together best-in-class automotive repair products from across the industry. From wheel balancers, wheel aligners and diagnostics, to brake lathes, automotive lifts, and collision repair, the brands of Total Shop Solutions offer a unique breadth of solutions to outfit any shop from floor to ceiling.

12/2022 ssmi22051a EU_en



JOSAM®

Air driven vibration gun for tie-rods



When lubrication and rust removal spray is not enough to soften up the tie rod, this air driven hand tool is the solution.

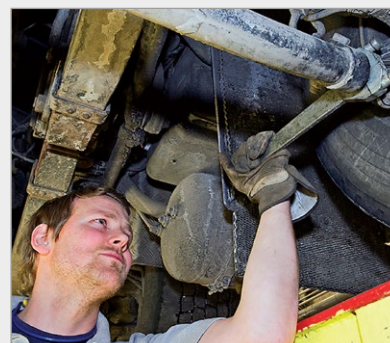
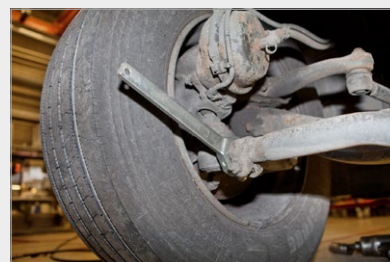
Article no. 15072/BAT-TRUCK

Bar loosening tool



Tool for loosening the tie rod (toe adjustment) and steering bar.

Article no. 15071/2MB-KEY



Representative:

Manufacturer:

CAR-O-LINER®  **JOSAM®**

Car-O-Liner • Box 419 • SE-701 48 Örebro • Sweden
Tel: +46 19 30 40 00 • Fax: +46 19 32 03 16
E-mail: info@josam.se • Internet: www.josam.se

MOVE HEAVY-DUTY VEHICLES WITH EASE

PNEUMATIC TRUCK ROLLER



JOSAM®

SIMPLIFY THE WHEEL ALIGNMENT PROCESS

Rolling wheel alignment with Cam-aligner or I-track II is commonly done by driving the vehicle. With this easily operated pneumatic roll mover, you have greater control over the vehicle's movement, thanks to smooth and stepless speed control. This makes the wheel alignment process more convenient and reliable.



V1250B

FEATURES AND BENEFITS

- Less effort required for operator, compared to entering and exiting cab when moving the vehicle
- Better control over the run-out procedure
- Eliminates risk of unintentionally moving the steering wheel, thereby increasing measuring accuracy
- With no need to start the engine, you avoid producing exhaust fumes, leading to an improved work environment
- Light-weight, compact and easy single-hand operation

SPECIFICATIONS

The truck roller is available in two versions:

- V1250B for vehicles up to 25 tonnes
- V350B for vehicles up to 15 tonnes

Technical data

Capacity:	V1250B: 25 tonnes • V350B: 15 tonnes
Max speed:	V1250B: 25 m/minute • V350B: 23 m/minute
Working pressure:	6 bar / 0.6 MPa
Min. wheel diameter	600 mm

MANUFACTURER:



DISTRIBUTOR:



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