

# X-SITE<sup>®</sup> PRO 3D SYSTEM



20

20

MOBA X-SITE / EXCAVATOR CONTROL SYSTEMS  
MOBA-AUTOMATION.COM

# MOBA EXCAVATOR CONTROL SYSTEMS

Construction sites and processes become more and more complex. The challenges for construction site organisations are rising, tasks of machine operators increase, and time and cost pressure is immense.

MOBA excavator control systems are for construction machines what driver assistance systems are for the car: They support and relieve the operator, optimise the work process and increase productivity. Besides this, they increase safety on the construction site.

The MOBA excavator control systems optimise efficiency on the construction site and save time. Construction-accompanying surveying can be omitted almost completely.

## QUALITY SINCE 1972

MOBA Mobile Automation AG has been an established name in mobile automation for more than 40 years. Our know-how and many years of experience in automation technology distinguish us as worldwide acknowledged experts in the development and production of machine control systems, identification and mobile weighing technologies as well as flexible software solutions.

From its founding as an engineering firm in 1972 to date, the owner-managed family company has developed into the MOBA Group with worldwide representation and four branches in Germany and nine subsidiaries in Europe, Asia and America.

Globally we currently have about 500 employees, half of whom are at the Head Office in Limburg. The MOBA Group has an annual turnover of about 54 million Euro. Whether it is levelling systems for asphalt pavers, identification technologies and weighing systems for waste disposal management or safety-related technologies for excavation work platforms - we offer powerful, reliable machine control systems for diverse machines and fields of mobile automation.



# Xsite FAMILY





# EARTH FIRST!

## THE PERFECT SOLUTION FOR EFFICIENT EXCAVATION



Manual control of surveying is not necessary

# 90%

90% of the surveying effort can be reduced



The safety on your construction site is increased

MOBA excavator control systems enable a smooth and efficient workflow on the construction site. Your staff is no longer required to be present on the construction site and can be planned for other tasks. Safety on the construction site is improved, particularly in areas with poor visibility.

With MOBA excavator control systems, up to 90% of the surveying effort on site can be reduced because manual surveying and thereby possible error sources are completely omitted. Thanks to the efficient deployment of your machine, a successful completion of the project is guaranteed.

You can optimally plan and record excavation work; at the same time you can save up to 20% of the fuel consumption of your machine. MOBA excavator control systems thereby not only increase productivity, but also the profitability of your company.

MOBA excavator control systems are tailored to your requirements. Whether for simple or complex tasks - the system accurately supports you in performing your work, both in 2D and in 3D. We have a suitable solution for every field of application. Thanks to the powerful hardware and software, MOBA excavator control systems operate as efficiently as you, and thereby save you time and money. Thanks to the powerful hardware and software, MOBA excavator control systems operate as efficiently as you, and thereby save you time and money.

- » Simple and quick installation of the system for a minimum of downtime
- » Simple commissioning and calibration
- » Intuitive, clear presentation of information on our full colour 8.4" display and control unit with touch function, readable even in bright sunlight
- » Clear, continuous control of the work progress from the driver's cabin

The experience of a competent machine operator and the precision of the MOBA excavator control system ensure **maximum performance of the machine!**

# FOR WHOM ARE THE MOBA EXCAVATIONS SYSTEMS OF INTEREST?



CONSTRUCTION MANAGER /  
FOREMAN



MACHINE OPERATOR



CONSTRUCTION CONTRACTOR



CONSTRUCTION MACHINE DEALER /  
RENTER

## MACHINE OPERATOR

The machine operator is ideally supported by the MOBA excavator control system, in daylight or in darkness. All important information is clearly displayed to him in real-time on his operating unit. This allows fast and extremely accurate work, without having to constantly perform manual re-measurement. The operator does not have to leave the driver cabin.

## CONSTRUCTION MACHINE DEALER / RENTER

Construction machine dealers and renters with MOBA components installed on their machines have a significant advantage over their competition: Excavators with MOBA excavator control systems have significant added value. This does not only apply to construction machine dealers and renters, but also for system integrators! Upgrading a machine with MOBA components is done absolutely non-destructive, i.e. they can be dismantled without leaving a trace. In addition MOBA offers comprehensive service and support.

## CONSTRUCTION CONTRACTOR

Increased productivity combined with lower material and transport costs at the same time are a major advantage for construction contractors. In this way, the efficiency of the machine is increased and simultaneously the time for completion of a construction site is reduced to a minimum. The efficiency of machine deployment can be increased significantly.

## CONSTRUCTION MANAGER / FOREMAN

The construction manager / foreman also benefits from MOBA excavator control systems. In the broader sense they allow a smooth and efficient workflow on the construction site and you can plan your staff better. In addition, increased safety is ensured on the construction site. Performed work can easily be documented by the system and thereby provides informative proof of the progress on the construction site.





# Xsite FAMILY

## ARE YOU X-SITED?

Our robust Xsite family ideally equips you for the daily construction routine. Harsh weather conditions, rough terrain or poor visibility do not pose a challenge any more. Our robust technology withstands the harshest conditions. We are the only provider in the sector offering heated 3-axis 360 degree inclination sensors, universally applicably on all systems. This guarantees highest accuracy and speed at all times. Our unique laser receiver with a reception range of 15 centimetres is a unique feature, which guarantees reception to the laser transmitter

in all terrains at all times, thereby allowing time-efficient and uncomplicated work. The intuitive software optimally supports you in your daily work.

The robust GNSS antennas allow accurate position determination of the excavator, irrespective of visibility and weather conditions. Whether it is for the construction of courtyard entrances, the laying of cables, the construction of a building or a street – our excavator control systems are the best choice for all types of earth moving.

## SERVICE

You deserve a special service, which will live up to your requirements. MOBA supports you as a competent partner – at all times.

Our service technicians and application engineers guarantee top quality, many years of experience and constant mobility.

- » Worldwide Service
- » Quick supply of spare parts
- » Remote service

## Xsite EASY

---

### IDEAL IMPLEMENTATION OF SIMPLE EARTHMOVING WORK

The 2D system Xsite EASY measures depth, elevation and inclination of the scoop and shows the scoop position graphically and numerically on the display. The upper carriage sensor thereby guarantees correct measurements for every excavator position, whether on a slope or on level ground. An optional LED display additionally shows at a glance whether the target level has already been achieved, or whether further excavation is required. Thereby you always maintain an overview of the exact work progress and you can accurately implement specifications.

Thanks to the option of using a rotational laser in combination with the scoop as a level reference, the operator can easily perform level control from the driver cabin. This saves time and increases safety. Even for aggravated visual conditions, like working in the dark or under water, Xsite EASY allows you to maintain the correct perspective. The system is ideally suited for foundation construction, excavation or embankment construction, or for levelling or under water excavation.



## Xsite PRO

---

### EFFICIENT WORK IN 2D OR 3D

With Xsite PRO you can also benefit from additional features, like up to two GNSS antennas, which determine the position of the excavator via satellite. Thanks to the fast processor, the measured values are processed in real-time and are displayed on the 8.4" graphic display immediately. The option of defining multiple profiles for different work assignments and having them ready at any time saves time, fuel and material and at the same time increases the efficiency of your machine.

Always be flexible for challenging work with our modular software. Cost-efficient upgrades can be obtained at any time, offering new functionalities. After starting off with a 2D system you can always upgrade to a 3D system, which allows you to easily input digital terrain models with multiple levels, if required. Thereby you can work accurately and implement the specifications without corrective re-work. If required, the wireless data transfer also allows processing of the data from the office, be it for purposes of further development, documentation or support. Thanks to the support of tilt rotators, you can utilise the excavator optimally





# THE BEST USABILITY FOR EVERY PROJECT

## 1. QUICK SELECTION BUTTONS

Change quickly between different models. Don't waste time browsing through complicated selection menus.

## 2. PROFILE VIEW

Profile view shows you the shape of the selected model at one glance. The profile view can be changed easily by swiping.

## 3. MEASUREMENT VALUES

Dashboard of the Xsite<sup>®</sup> PRO system shows you numeric values of your measurement. e.g. how far the bucket is from desired level. This view is also easily customizable by the user.

## 4. PROJECT INFORMATION

The status bar shows you the project name, selected bucket and other important information about your current project and the system.







### 5. MAP VIEW

The customizable map view shows you your project and the location of your machine. You can change and adjust the view just by one touch on the screen.

### 6. BUCKET CORNER VALUES

Bucket corner indicators gives you constant information about the height difference between the bucket and the model. Bucket tilt indicator guides you to tilt your bucket to correct angle regarding to your model.

### 7. QUICK BUTTONS

You can set different functions to quick buttons (e.g. saving an as-built point or changing the bucket measuring point) to be used quickly without entering the menu.

# XSITE® - SYSTEM FEATURES



## ALWAYS KNOW THE **BUCKET POSITION**

Forget the constant manual grade checking! The Xsites clear readings gives you exact information about your buckets height and distance comparing to your target level.



## USE **LASER** AS REFERENCE

The system's laser receiver enables moving your machine at the site without losing the original level. The laser can also act as a reference level.



## WORK **UNDERWATER - DIGGING/DREDGING**

Xsite uses next generation G2 sensors that are fully waterproof. G2 sensors also have an internal heating element, ensuring accurate measurement.



## SEE **ALL MODELS** AT ONCE

Surface models, lines, points and background maps can be displayed on the system screen simultaneously, if desired. With the Xsite® PRO you can also measure to multiple objects at the same time.



## CREATE **MODELS** YOURSELF

Utilize the easy-to-use built in model tool to make simple 3D-models, like small roads, foundations or barriers and use them as a reference when working.



## SAVE **AS BUILT** DATA

You can document your work, like pipeline installations and constructed surfaces right from your own machine. As-built data can be used e.g. for quality control or tracking the jobsite progress.



## INCREASE **SAFETY** WITH WARNING LEVELS

Be safe when working e.g. under powerlines or bridges. With the Xsite you can set a warning if your boom or bucket is rising too high or going too far.



## CLOUD **SERVICES**

You can connect your Xsite® system to 3rd party cloud services file transferring and fleet management.



## GET **GUIDANCE** VIA **REMOTE SUPPORT**

With remote support, your local reseller can provide you with guidance without having to visit the site. Remote support connects your system to the service centre and can be used to offer training, advice or troubleshooting.



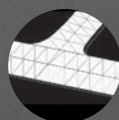
## JOYSTICK **INTEGRATION**

Save time and use different system functions straight from your machines joystick buttons.



## SUPPORT **FOR TILTROTATORS**

Connect your tiltrotator to the Xsite® system and make precise measurements, regardless of the buckets angle or position.



## IMPORT **3D TERRAIN** MODELS

XSite Pro makes it possible to import complex design files, using standard file formats

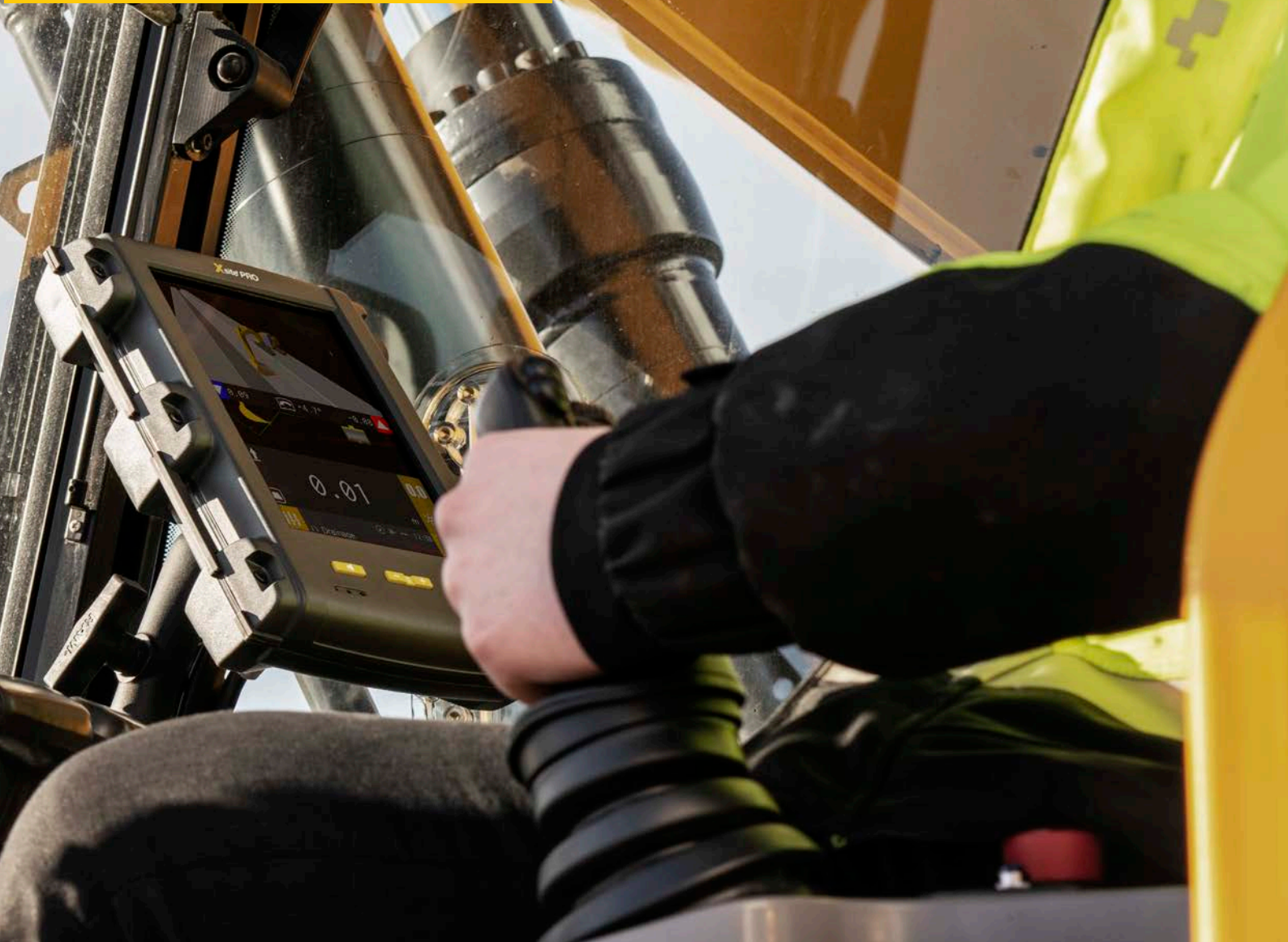


## WORK WITH **SLOPES**

Working with slopes is easy with the Xsite PRO. Just enter the target slope into the system, reset your height value, and start working!

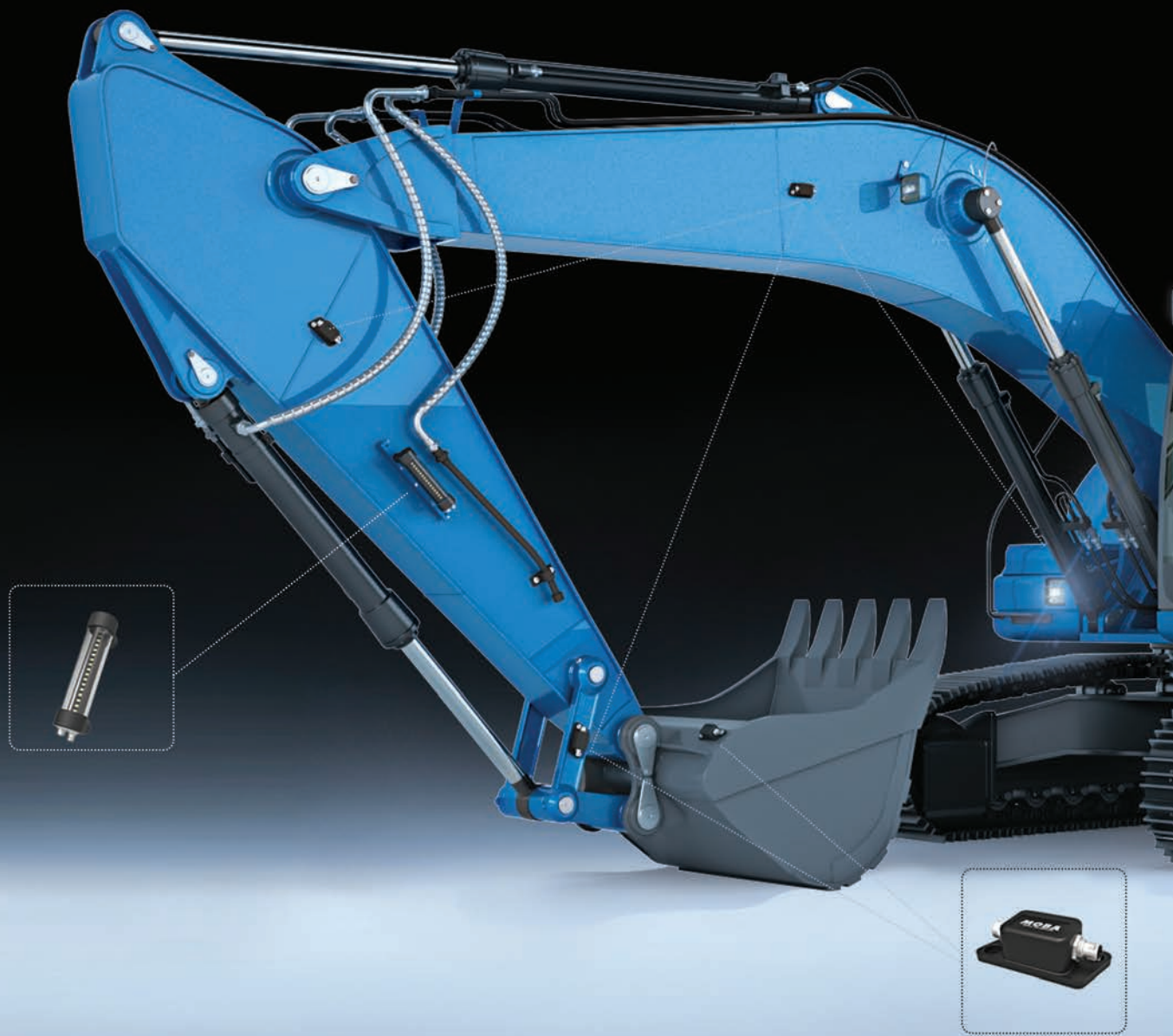


# SYSTEM COMPARISON



	Xsite EASY	Xsite PRO
Simple 2D models	×	×
Importing and creating 3D models	-	×
Importing complex 3D models	-	×

For detailed product functions, please refer to the data sheet



## GUARANTEED MODULARITY - MAXIMUM FLEXIBILITY

With the Xsite EASY or Xsite PRO system you are always equipped optimally for all requirements of a construction site. Whether it is easy work assignments or complex construction projects, MOBA excavator control systems guarantee a pinpoint, efficient result through perfect interaction of all components. Thanks to the modular structure of the 3D software, Xsite PRO can be upgraded at any time. Stay flexible for every construction project with the easy and non-destructive installation of additional functionalities and the compatibility with all base stations.

1. **XSITE PRO** efficient work in 3D
2. **GNSS ANTENNA** receives position and level data
3. **GNSS COMPASS** determines the orientation of the machine
4. **CONTROLLER** processes all received position data
5. **XSITE EASY** graphical and numerical display of all work steps
6. **LASER RECEIVER EL-3** automatic level adjustment
7. **INCLINATION SENSOR** 360° measuring range in 3 axes
8. **LED DISPLAY** additional display of work progress





1



2



3



4



5



6



7



8

# XSITE® - OPEN AND COMPATIBLE

Xsite® PRO 3D machine control system allows for using network correction signals, base stations and satellite positioning devices from several different suppliers without issues. This avoids having to commit to single-vendor solutions and allows you to work on different projects without fear of machine control system incompatibility. This gives you a genuine competitive advantage in a market that keeps getting tighter.

”Xsite® PRO 3D is compatible with third-party software, like BIM Cloud Services. Different openBIM data formats can also be used without additional format conversions or compatibility issues.”

## XSITE® OFFICE CLOUD SERVICE FOR DATA AND FILE TRANSFER

Xsite® OFFICE is a web based, free of charge cloud service for data and file handling.

### AUTOMATIC FILE SYNCHRONIZATION

Automatic file synchronization makes sure that all the machines have the same, up-to-date models in use.

### WEB BASED SERVICE

You can use the Xsite® OFFICE with your favorite devices. No need to install any applications.

### QUALITY ASSURANCE

Xsite OFFICE's data export supports all open standard (openBIM) data formats. You can easily export as-built data from certain layers, machines and from chosen time frame.

### SUITABLE FOR LARGE PROJECTS

Xsite® OFFICE also supports sub folders, so it is more than suitable even for the largest projects. No limitations for file size or number of machines!





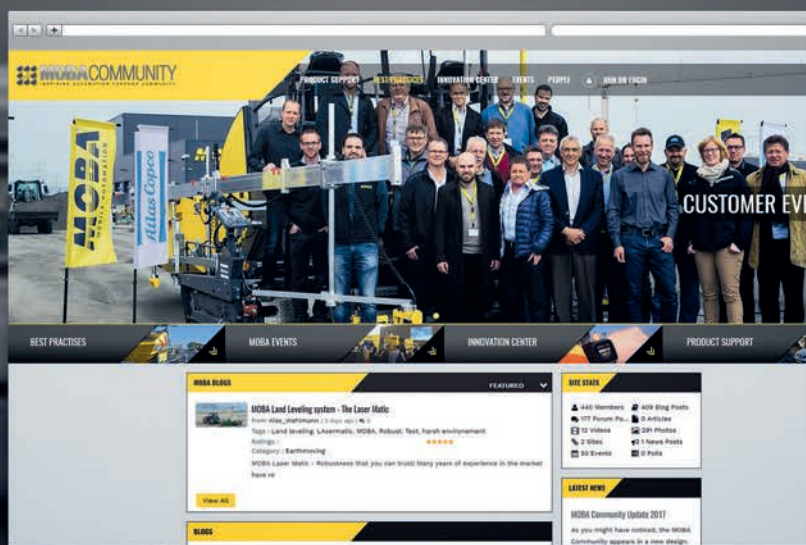
# THE EXPERT NETWORK - INSPIRING MOBILE AUTOMATION

Would you like to know how the system is already being used successfully by our customers? In the online expert blog **MOBA Community** you will find everything from job stories to feature releases, discussion forums and field reports to inform yourself extensively about our technologies.

In addition to blog contributions on the automation solutions of MOBA Mobile Automation AG, the community offers numerous forums, discussions, event announcements and expert contributions on a wide variety of automation topics for construction machinery. As an interactive, international platform for the exchange of industry news, the MOBA Community is the point of contact for all those who wish to actively participate in the development of this industry.

Contribute your own expertise and perspective in interesting dialogues, ask important questions about the (r)evolution of the industry and exchange opinions and experiences with other experts.

JOIN THE EXPERT NETWORK -  
**WWW.MOBACOMMUNITY.COM**



# ONE GROUP - ONE RESPONSIBILITY



● HEADQUARTERS ● SUBSIDIARIES ● DEALER

## MOBA GROUP

The **MOBA GROUP** is a leading global player in the world of mobile automation. Close collaborations between the headquarter in Limburg an der Lahn and subsidiaries all over Europe, Asia, North and South America create new perspectives for recent and future developments.

Superior technical know-how and more than 40 years of experience combined with an international dealer network guarantee a premium support - **worldwide. INSPIRING MOBILE AUTOMATION** - this is what the **MOBA GROUP** stands for since more than **40 years**.

### **MOBA GERMANY**

65555 Limburg / Germany  
Phone: +49 6431 9577-0  
E-mail: sales@moba.de

### **MOBA ITALY**

37069 Villafranca die Verona / Italy  
Phone: +39 045 630-0761  
E-mail: salesitaly@moba.de

### **MOBA FRANCE**

77164 Ferrières en Brie / France  
Phone: +33 (0) 1 64 26 61 90  
E-mail: infos@mobafrance.com

### **MOBA UK**

HP178LJ Haddanham / UK  
Phone: +44 184 429 3220  
E-mail: ilewis@moba.de

### **MOBA SPAIN**

08211 Barcelona / Spain  
Phone: +34 93 715 87 93  
E-mail: moba-ise@moba.de

### **MOBA USA**

Peachtree City GA 30269 / USA  
Phone: +1 678 8179646  
E-mail: mobacorp@moba.de

### **MOBA BRASIL**

Belo Horizonte - MG / Brasil  
Phone: +55 31 7513-4959  
E-mail: mobadobrasil@moba.de

### **NOVATRON FINLAND**

33960 Pirkkala / Finland  
Phone: +358 (0) 3 357 26 00  
E-mail: sales@novatron.fi

### **MOBA SWEDEN**

861 36 Timrå / Sweden  
Phone: +46 (0) 73-3750097  
E-mail: pwallgren@moba.de

### **MOBA TECMASERM**

08700 Barcelona / Spain  
Phone: +34 93 804 24 85  
E-mail: moba-tecmaserm@moba.de

### **MOBA CHINA**

116600 Dalian / China  
Phone: +86 411 39269311  
E-mail: ysun@moba.de

### **MOBA CHILE**

Avda. Providencia 1476  
Phone: +56 (9) 61678464  
E-mail: mjmarco@moba.de

### **MOBA INDIA**

Gujarat - 382044 / India  
Phone: +91 989 855 6608  
E-mail: sdesai@moba.de

### **MOBA DENMARK**

5250 Odense / Denmark  
Phone: +45 70 26 96 91  
E-mail: jlindskov@moba.de

### **MOBA AUSTRALIA**

Victoria 3061 / Australia  
Phone: +61 393 570 055  
E-mail: dramondetta@moba.de