

GS-506 MOTORGRADER SYSTEM:

**ACCURACY CREATES PROFITABILITY.**



**MOBA**<sup>®</sup>  
MOBILE AUTOMATION

# GRADE AND SLOPE MONITORING TO THE POINT OF PERFECTION.

## **An investment in profitability.**

Hardly any industry is experiencing competitive pressure to such an extent as the construction industry. Any company hoping to maintain or improve its position in the market must improve its profitability. In other words: more efficiency by increasing work speed while at the same time improving quality. For the MOBA GS-506 leveling system, it's all part of a day's construction work.

Both graders and dozers can be equipped with grade and slope control. The increased productivity ensures that all leveling is performed faster and more accurately. This is the best way to meet high quality requirements and short deadlines.

*Control panel*



*Controller*



*Multi switch*



*Connecting box/Mainfall*

*Rotation*



*Cross slope*

*Proportional hydraulic valve*



## **Modular layout for customized solutions.**

The MOBA GS-506 is a flexible system that offers the right solution for each application. However different the individual construction machines, jobs, and working methods may be, the modular layout creates a basis for a customized solution. Another advantage is compatibility with many other MOBA sensors. This compatibility gives the GS-506 an advantage over other systems and ensures your investment is protected well into the future. In addition, the system can also be extended to a 3D application.



### **Universal, versatile, long lasting.**

The MOBA GS-506 can be used on practically any construction machine with grade and slope control. The system has an impressively flexible range of uses and a great variety of sensors. Each individual component is designed for rugged use on the construction site. The robust and reliable software ensures optimum precision for years to come.

# THE BASIS FOR GREATEST ACCURACY.

## **Efficient integration of precision and speed.**

Everything fits the MOBA GS-506 leveling system. The individual components are optimally designed for each machine and its application. The result is a combination of precision and speed which together ensure the most efficient use of your machines. Intelligent software guides the user quickly and intuitively through all processes. This provides reliability and helps to prevent errors.





### **Control panel**

A quick glance at everything important. All control information and current work status for the operator is always visible. The operator can also enter corrections, bring up system information, or change central settings.

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### **Controller**

The controller is equipped with the most modern microprocessor technology. It receives and compares set target values with data continuously provided by the sensors. It controls the valves of the corresponding hydraulic cylinder in mere fractions of seconds.

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### **Connecting box/Mainfall**

Make the correct connections. The connecting box is the connection point for all sensors active in the system. This makes cable routes shorter, thereby reducing possible sources of errors. The mainfall sensor is also integrated into the box: It measures the inclination of the grader on the longitudinal axis.

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### **Rotation**

Works together with the mainfall sensor. The sensor measures the value of the blade rotation. Together with the mainfall sensor, it provides optimum compensation for cross slope.

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### **Cross slope**

Maintains specified slope values. The cross slope sensor works with a dynamic fluid sensor. It records current measurement values for blade slope, vehicle inclination and blade rotation, taking into consideration interfering factors such as acceleration or impacts. This ensures the desired cross slope in relationship to the direction of travel is maintained.

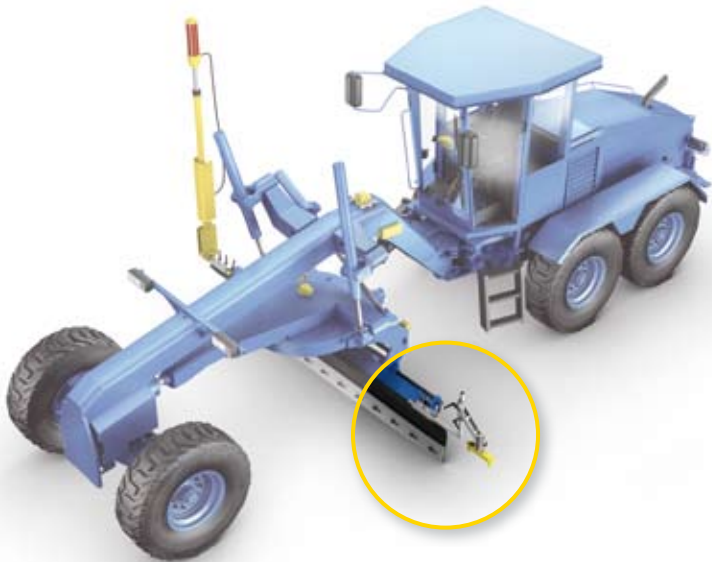
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### **Proportional hydraulic valve**

Convert signals into motion. The hydraulic unit controls the cylinder movements based on signals generated by the controller. The specially developed proportional valves ensure that the speed of the movement is consistent with the measured deviation.

# THE SPECIALISTS FOR SPECIAL TASKS.



## ULTRASONIC SENSOR

### **Greatest flexibility with different references.**

The accuracy of the MOBA Sonic-Ski® is currently unmatched on the market. Altogether five sensors for height measurement plus an additional sensor for temperature compensation allow for an accuracy of



$\pm 2$  mm over the sampling width of 250 mm. This large sampling width makes it possible to guide the Sonic-Ski® especially easily with a cable. The special software automatically keeps the blade on

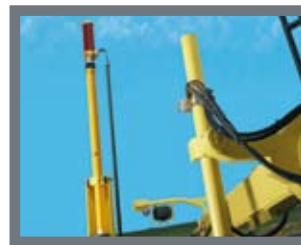
the cable or edge. For easy positioning, target values from the control unit can also be entered directly on the sensor with a push button.



## LASER RECEIVER

### **Freely selectable working point with millimeter precision.**

The LS-3000 laser receiver is a highly precise sensor for grade measurement. It works with all common rotary laser transmitters. Deviations are recorded with millimeter precision in a reception range of 360°.



This allows for proportional evaluation over the entire reception range. The LS-3000 shows its strengths especially in construction of open squares and large surfaces. Since each reception cell can be evaluated

individually, the set point can be freely chosen within the reception range and shifted at any time. The MOBA power mast bridges large height differences. It reliably controls differences up to 900 mm via the control unit.



## 3D CONTROL

### Non-contact, no physical reference.

The course of the terrain is recorded in three dimensions during the measurement. The data acquired in this way is then used as a basis. Planning data is transferred directly to the construction machine. There




is no on-site surveying with guide wires, for example. Grade control information is processed with the aid of a special PC program and a robotic tracking total station or GNSS system. This system continuously

determines the position of the grader and sends the data to the on board computer. Incoming actual values are compared with set values here and are regulated directly by the GS-506. This makes it possible always to move the machine completely freely on open terrain.

## MODULE AND FUNCTION OVERVIEW OF MOBA GS-506

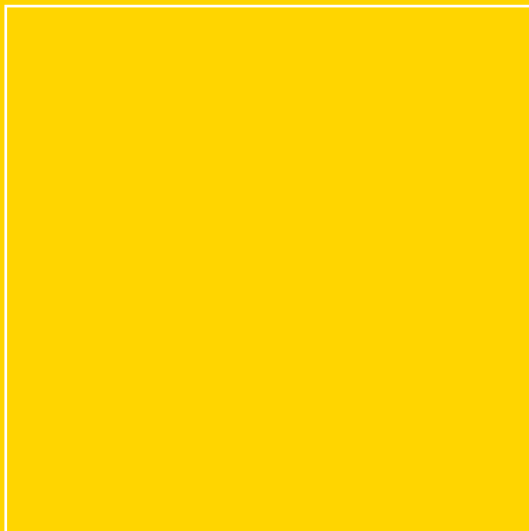


|                  |   |  |  |
|------------------|---|---|---|
| BASIC PRODUCTS   | Control panel                                     | ●   | ●   |
|                  | Multi switch                                      | ●   | ●   |
|                  | Controller  | ●   | ●   |
|                  | Connecting box/Mainfall                           | ●   | ●   |
|                  | Rotation  | ●   | ●   |
|                  | Cross slope                                       | ●   | ●   |
|                  | Proportional hydraulic valve                      | ●   | ●   |
| SYSTEM EXTENSION | <b>Ultrasonic sensor</b><br>• Sonic-Ski®          | ●   | ●   |
|                  | <b>Laser receiver</b><br>• LS-3000                | ●   | ●   |
|                  | <b>3D control</b><br>• MOBA 3D-TS<br>• MOBA 3D-GS | ●<br>○  | ●<br>●  |

● used frequently   ● possible   ○ suitable

### Mobile layout, maximum options.

The MOBA GS-506 module system allows for an optimized combination of individual system components for each application area and machine design. The table shows which functions and combinations are possible together with application areas.



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