

# POWER WELDING IN CONTINUOUS OPERATION WITH P-SERIES WELDING UNITS

## THE IDEAL WELDING UNIT FOR COMPANIES WITH A HIGH WELD PERFORMANCE

Started in 1987 in the owner's garage in Vrees, Manfred Kaiser Maschinenbau GmbH has grown into a leading specialist supplier of construction machinery, counting more than 100 employees. From the mini bucket of the excavator to the 12-cubic-metre swimming-pool-sized rock bucket of a wheel loader, this specialist manufactures anything that gets construction machinery ready for special applications. Depending on the size, add-on parts are custom-welded from steel sheets at thicknesses from 8 to 200 mm. Maximum priority: Any weld seam, no matter if in regular structural steel, special material such as Hardox 450, 500 or fine-grained structural steel up to S 700 QL, must be placed perfectly to withstand the extreme loads these tools are subject to. The company sends out more than 1200 parts every year. Enquiry and delivery are often merely a week apart. The welding units run continuously under high load (340-350 amps) in order to reliably maintain such short reaction times.

The company chose Lorch equipment for modernising its machinery, following a thorough test procedure that compared several suppliers. They invested in 60 new welding units of the powerful P 5500 series. Why? Lorch systems deliver the highest weld seam quality, the longest service life at the lowest possible energy consumption as well as best welding performance even in constrained positions.

### OVERVIEW

#### MANFRED KAISER MASCHINENBAU GMBH

- Vrees, Germany
- more than 100 employees
- Equipment of construction machinery
- [www.kaiser-vrees.de](http://www.kaiser-vrees.de)



Parts often require in excess of 100 weld seams per piece. Faster welding and less rework: Lorch's MIG-MAG speed processes can increase productivity by up to 50 percent.



Permanently at work around the clock: The P-series provides full performance under extreme conditions. Manfred Kaiser Maschinenbau GmbH works at 15 welding stations, day and night.

Innovative inverter technology combined with highly efficient welding processes

## **FASTER AND MORE ECONOMICAL WELDING WITH SPEEDARC AND SPEEDUP**

Saprom inverter technology, combined with highly efficient MIG-MAG welding processes such as SpeedArc, keeps energy consumption at Kaiser down by a considerable margin. The clearly focused arc gives SpeedArc a higher power density than other welding processes, raising the arc pressure point in the weld pool to significantly reduce operating costs. This has the advantage of making weld seam completion faster by up to 30 percent and allowing even thicker steel sheets to be welded in a single layer with the SpeedArc. This may save as much as 50 percent of the production time in weld seams

that may have 14 to 16 connection layers. While welding speed increases, the rework requirements drop. Kaiser was also able to significantly increase its productivity in repairs. Many parts must be welded in constrained position with vertical welds due to their sizes and weights. SpeedUp dispenses with the time-consuming "X-mas tree technique", allowing the welder to simply pull the weld seam straight up for an enormous speed advantage and guaranteeing the optimal root layer for the welder.



*"The P-series and MIG-MAG-Speed processes from Lorch keep us ready to face the future."*

*– Manfred Kaiser, founder and managing director*

## **FACTS**

- Possible power classes from 300 to 550 amps
- Freely configurable for any welding task
- Long service life, low energy consumption
- Highest seam quality
- EN 1090 certified
- Shorter welding times through the use of SpeedUp and SpeedArc
- Welds with argon-CO<sub>2</sub>-mix gas as well as with 100% CO<sub>2</sub>

