

Date: 20.08.2018

## Process solution for machining all types of connecting rods

Connecting rods are highly stressed engine parts. To take account of downsizing and the reduction of CO<sub>2</sub> emissions, connecting rods are also becoming increasingly lighter. This is achieved on the one hand through the use of high-strength and innovative materials, and on the other hand through modern production processes. This also changes the shape of the connecting rods and the variety of shapes increases. MAPAL offers the complete process for machining different types of connecting rods – whether on the transfer line or the machining centre as well as for wet or MQL machining.

When machining the connecting rod, the small connecting pin bore in particular is a challenge. Depending on the geometry, there are completely different drilling situations. For example, for various connecting rod forms, flat, deep and conical spherical surfaces or for existing forging noses. MAPAL has developed a modular tool concept for drilling from the solid with indexable inserts especially for this type of machining. Radially integrated, sintered indexable inserts each with four cutting edges are used here.

The placement of the indexable inserts and the chip flutes are adapted to the special requirements of the different drilling situations. The cutting materials are also adapted. Among other things, the new CVD coating from MAPAL is used, which combines the previously opposing high ductility and high wear resistance parameters and thus allows machining with significantly higher cutting speeds than before.

The tool body of the new tools is made of an optimised material with significantly less vibration. A central coolant supply in the holder ensures an optimum supply of coolant directly at the cutting edges. This means a significant increase in process reliability and stability during the machining of bores.

MAPAL Präzisionswerkzeuge  
Dr. Kress KG  
Postfach 1520 | D-73405 Aalen

Contact:  
Andreas Enzenbach

Phone: +49 7361 585-3683  
Fax: +49 7361 585-1019  
E-mail: [presse@de.mapal.com](mailto:presse@de.mapal.com)

# PRESS RELEASE



Date: 20.08.2018

As a complete supplier, MAPAL not only offers the optimum tools, but also chucks perfectly tailored to the respective type of machining, including hydraulic power chucks or the HTC with slim contour for locations that are difficult to access, such as the oil bore. With the mechatronic actuating tool TOOLTRONIC, MAPAL also offers the appropriate solution for complex geometries, for example bores that are not circular or shaped bores with an oil groove. MAPAL thus offers customers the complete process with minimum tool changes, which is specially geared to the prevailing conditions in each case.

MAPAL Präzisionswerkzeuge  
Dr. Kress KG  
Postfach 1520 | D-73405 Aalen

Contact:  
Andreas Enzenbach

Phone: +49 7361 585-3683  
Fax: +49 7361 585-1019  
E-mail: [presse@de.mapal.com](mailto:presse@de.mapal.com)

Captions:

MAPAL offers the complete process for machining different types of connecting rods.

Words:	376
Characters:	2,044
Characters with spaces:	2,419

If published, please send a voucher copy  
by mail to Patricia Hubert  
or by e-mail to [patricia.hubert@de.mapal.com](mailto:patricia.hubert@de.mapal.com).

## Short profile MAPAL Dr. Kress KG

### MAPAL – tooling the customer's success

MAPAL Präzisionswerkzeuge Dr. Kress KG is one of the leading international suppliers of precision tools for the machining of practically all materials. The company founded in 1950 supplies leading customers from the automotive and aerospace industries and from machine and plant engineering. With its innovations the family-owned company sets trends and standards in production and machining technology. MAPAL sees itself as a technology partner, supporting its customers with the development of efficient and resource-conserving machining processes using individual tool concepts. The company is represented with

# PRESS RELEASE



Date: 20.08.2018

production facilities, sales subsidiaries and representatives in 44 countries worldwide. In 2017 the MAPAL Group had 5,250 employees, generating sales of EUR 610 million.

**MAPAL Präzisionswerkzeuge**  
Dr. Kress KG  
Postfach 1520 | D-73405 Aalen

**Contact:**  
Andreas Enzenbach

Phone: +49 7361 585-3683  
Fax: +49 7361 585-1019  
E-mail: [presse@de.mapal.com](mailto:presse@de.mapal.com)