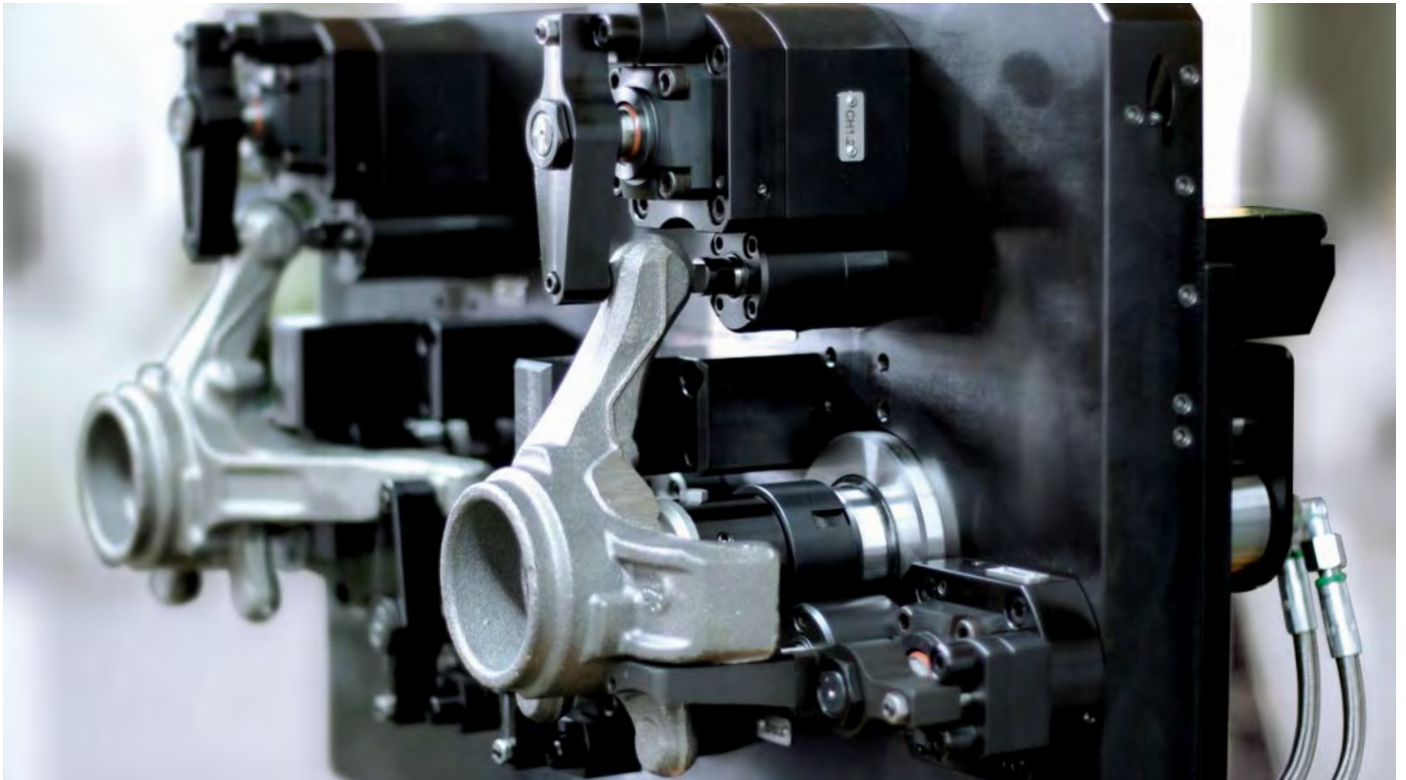


TOOLS AND DEVICES – UNBEATABLE AS COMPLETE SOLUTIONS



Innovative technology can only be called really innovative when it helps companies making their technical processes become higher-quality, more productive, and especially more precise. Tools and fastening devices are two fields of the industry that have always been closely linked. You may know the problem: you buy the tool from a tool manufacturer, the fastening device from another company, and you provide the platform, the CNC machining center. And it always takes time until these components are finally harmonized. Time that costs money and lots of headaches. We have been very aware of this problem for years. In this INSIDER, let us tell you more about such devices “made by AMLÜ”.

As a tool manufacturer, we have lots of experience with modern tool systems, and we know the troubles and the needs of our customers all too well.

Based on this knowledge, we have developed solutions over the past years: they increase the tools’ and installations’ efficiency, thus increasing the entire production.

The fastening device displayed here is needed to fix a hinge bearing for a mid-range car. Machining the front and back sides of the diecast part is done in two goes. Annual production is several 100,000 pieces. The machine used is a Heller CNC machining center with automatic robot loading. Based on these requirements, the device gets added some sophisticated technical refinements.

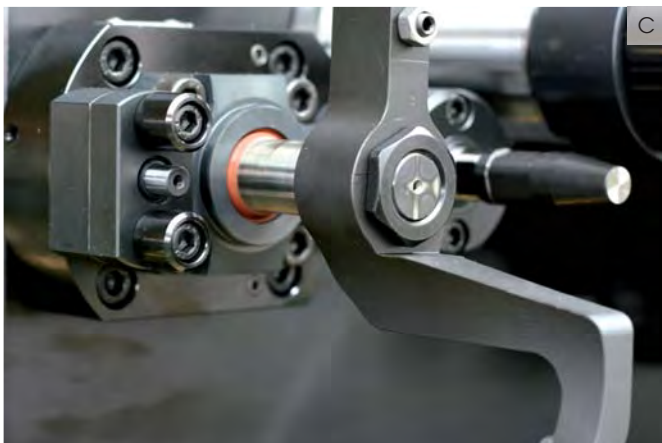
Let us first mention the internal pipe works. This feature prevents damages to the hydraulic pipes, as well as the accumulation of chips. For all serial production projects in the industry, planning is the most important factor. How can we as a renowned tool manufacturer support you? What are all the details we

both have to consider? The first stage is planning the project and the first production run perfectly. Our complete package takes care of it all:

- Creating a concept and time study
- Optimizing the tool package and its layout
- Layout of the chipping process
- Chipping concept
- Hydraulic fastening device
- Collision analysis

Combining the knowledge of a tool manufacturer and a device specialist, your mass production projects will take on an entirely new dimension. As we maximize your productivity, our products help you reducing downtimes, thus making you more competitive. Make sure you have a competent partner for complex solutions!

HIGHLIGHTS AT A GLANCE



- A // Pressure transmitter to increase the pressure with CNC machines, with low-pressure hydraulics, adjustable from 60 to 200 bar.
- B // Smoothed positioning of the parts, with pneumatic mount control
- C // Pneumatic mount control of the diecast part, as well as pneumatic control of the fastening position of the hinged fastening device
- D // Plugging of internal hydraulic drillings using special expanders. Bursting pressure is at 800 bar.

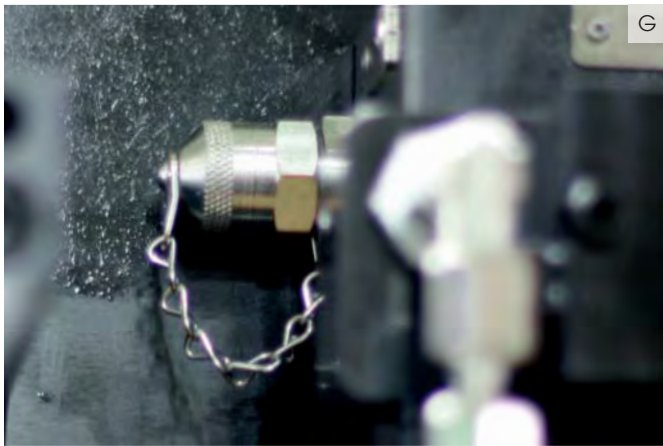
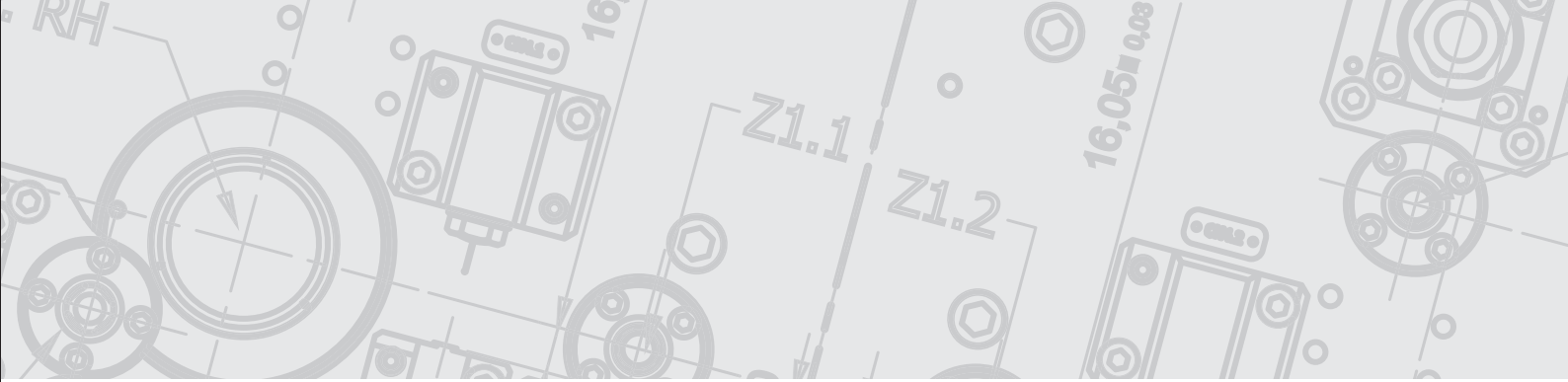
RH PART

15,2

200

A

LH
200



- A →
- E // Our flexible hydraulic tubes are actually special metallic tubes. Their bursting pressure is at 380 bar. The advantage of the metal material is that it is protected from hot chips. Such hot chips can damage conventional rubber tubes.
 - F // For adjusting the fastening sequences of the hinged devices, we use control valves.
 - G // You can measure the consecutive pressures at special checkpoints that are equipped with express couplings.
 - H // High-quality packaging makes sure your goods arrive in good shape. No matter where around the globe.



INTERVIEW WITH JAUME CUSSÓ TECHNICAL OFFICE BARCELONA



Insider: Mr. Cussó, you are working with Almä together since more than 12 years. How did it started?

Jaume Cussó: Since 1990, we are a technical office located in Barcelona which was supplying 2 product lines, hydraulic clamping fixtures and solid-carbide or interchangeable insert-tools, but we were looking for a partner to offer high quality PCD-tools also. With ALMÜ we found the right company to offer the complete range of tools for

the most demanding customers of the automotive field.

After a few time of cooperation we both saw that our companies were fitting very well and we became the exclusive ALMÜ's agent for Spanish and Portuguese markets.

Insider: How did you develop your unique profile?

Jaume Cussó: We as an engineering office can offer a complete solution to our customers, the project starts with a concept study, tool package proposal and fixture design and finishes - if needed - with the setting up at the machine.

Insider: What is your specialty?

Jaume Cussó: Over the years, we have installed tools and fixtures at various automotive companies. We are mainly focused on design and doing the colli-

sion analysis. As a unique source for the complete solution, we make sure that the customer will not have any problem between tools and fixtures once everything is on the machine.

If you take care of the complete package, it is easier to find best solution to have the most stable machining process.

Insider: How is Cussó and Almä working together?

Jaume Cussó: In the last year, we are working much closer with ALMÜ, not only on the tools field, now all the fixtures designed by Cussó are made in Germany by ALMÜ.

Apart from the highest technology in machining facilities, this cooperation gives us more capacity in design to cover the complete European market of high quality hydraulic fixtures and complete solutions.



"The 2012 AMB trade fair was one of our most successful ones ever", ALMÜ's CEO Markus Müller wrote in the latest issue of Diamond Business magazine.

Our way of completing our product portfolio was the big highlight of our trade fair stand. Now, ALMÜ's customers can not only rely on our classic tool services, but also order everything for the complete chain of processes in cutting and machining - and that is what the market is increasingly looking for.

We are glad having met with you all, and are looking forward for your inquiries.

