

When multitouch operation meets easy configuration and powerful hardware ...



Well equipped, for today and the future

Simplicity, high performance and customization are demands which are particularly important in automation solutions for injection molding machines. KEBA AG is one of the top technology providers and a pioneer in the industry, supplying the industry and mechanical engineering companies with its optimized control platform KePlast, a fully scalable system with flexible adjustment options.

All hydraulic, electrical and hybrid injection molding machines can be equipped with KePlast. The KePlast i8000 system complements the i1000 and i2000 series, which have been used successfully for many years. All systems use a common software platform and scalable hardware that is designed for Industry 4.0, and with which maximum continuous use is guaranteed. This means that KePlast is ideal if companies rely on having a system that can grow quickly without special training effort as market requirements increase.

In the following, we introduce three essential components for the KePlast i8000 system: The operating unit with multitouch screen, where the main focus is on the user. The software, with which customer requirements can be rapidly implemented, and the reliable hardware, which is responsible for smooth operation in the background.

The main focus is on the user

KEBA operating devices are characterized by their high quality design, and they are extremely robust. The user of the KePlast i8000 series can look forward to a user-friendly operating panel with multitouch screen, to which special attention was paid

during development. KePlast product manager Günther Weilguny says: "As a provider of total solutions, it is important to us to realize products which are attractive to the end user. We have therefore put the spotlight on the user, and developed an extremely user-friendly interface together with international experts from the user-experience and application engineering area.

The complexity of the process has been reduced to a minimum, and the operating speed increased by means of intelligent gesture control." In other words, navigation takes place using swipe gestures and sidebars, users are already familiar with from smartphones and tablets. The navigation and the input screens have been designed so that the user can familiarize with a multitouch system on an injection molding machine equipped with KePlast quickly and without training. Thanks to the intuitive multitouch gesture operation, workflows are supported in the best possible way and valuable working time is saved.

The use of multitouch screens in combination with the KEBA Realtime multitouch solution makes things extremely convenient for the operators. The machine is controlled in real-time, and movements are only permitted in certain machine states during entry – which reduces errors and increases safety.

Great emphasis on customization, flexibility and operation.

The main focus is on the user! KEBA also proves this by using a configuration software, with which specific customer requirements can be fulfilled quickly. This means that the input mask on the operating panel can be adapted in a way that is user-customized and specifically matched to every operating task. As far as Günther Weilguny is concerned, it's clear: "Yes, the operation of the machine must suit the individual operating principle of the customer. This flexibility is guaranteed by the software concept of the HMI software and made possible by perfect tool support. Be it design adaptations using stylesheets, changes to the mask or gesture navigation, or the programming of complex applications – all of this is possible using a single software tool."

If necessary, a ready-made KePlast application can be used, which forms the basis for customer and machine-specific modifications. According to the motto "Why re-invent the wheel?", the software is tailor-made by adapting to the requirements of the customer. For example, the corporate design of the company was implemented on a joint project in Asia, and some parts of the KePlast application were taken over. The customer also injected some of his own ideas, which were realized just as quickly. It was a successful project which was characterized by outstanding cooperation, and during which unique operator guidance that fulfilled the operating philosophy that the customer was looking for was developed within a short time.

The software makes the difference

Planning is quicker than programming! In order to make this possible, KEBA provides a tool that is user-friendly and provides machine manufacturers with optimum support

when creating their visualization interfaces: its graphical design tool KeStudio ViewEdit. It is part of the KePlast tool suite, with which applications can be realized in a convenient way.



A large number of ready-made widgets, apps and other tools are available for extensive customization, with which new user interfaces and customer application solutions can be realized quickly and easily using drag & drop. This reduces costs, saves money and ensures that there is a quick time to market.

Günther Weilguny highlights another advantage for customers. "The openness of the KePlast framework provides manufacturers of injection molding machines with complete freedom, whereby the new multitouch user interface is to be regarded as a starting point. The machine manufacturer decides which concepts he takes over from the KEBA application, and where he would like to introduce his own ideas." This means that adaptations and expansions can be conveniently created and up to 90% of the development costs are saved. Anyone who still thinks that this is not enough can use the state-of-the-art Java technology, with which the required applications can be programmed and added without problems.

Smooth running in the background

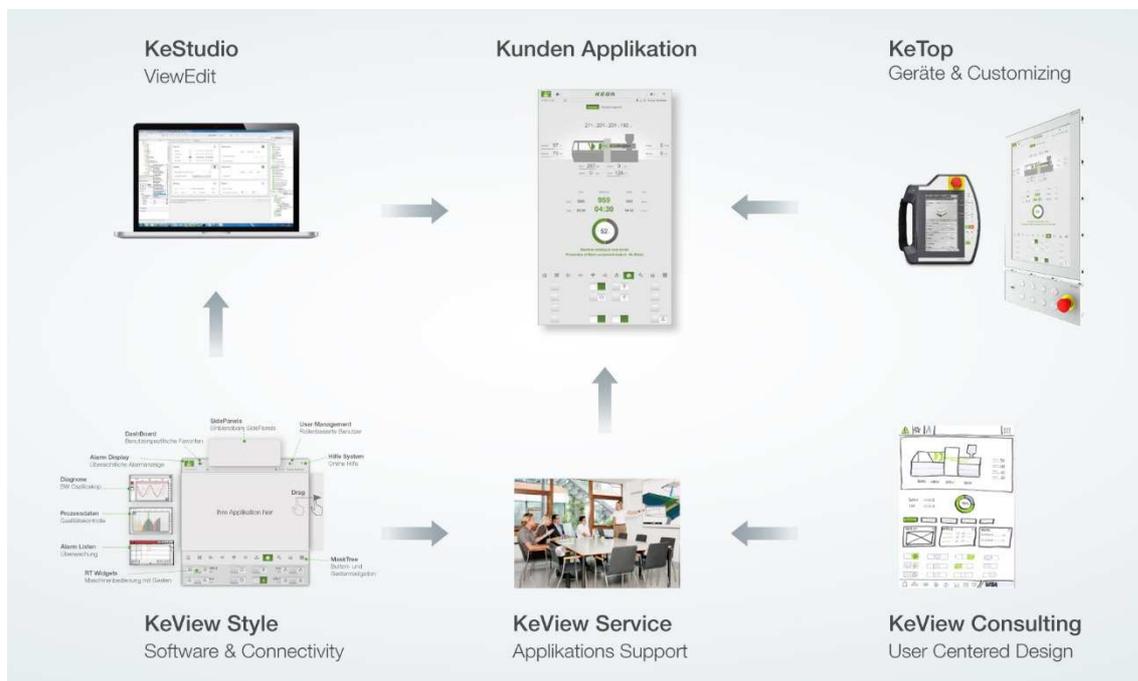
Powerful hardware with the latest software is responsible for smooth running in the background. In accordance with the high quality requirements, only scalable devices which have been optimized for the automation functions of injection molding machines are used. The open Linux control platform is used as the operating system, which makes integration of existing libraries and access to an excellent developer community possible. Furthermore, there is no need for an additional virus scanner

with the security software that is available from KEBA. Here too the following applies: The main focus is on customer benefits.

All systems are OPC/UA-capable (OPC Unified Architecture) and have plenty of networking options. This is a prerequisite for Industry 4.0, and ensures that KEBA customers will be sufficiently looked after for many years and be equipped for all of the challenges of the Industry 4.0 world of automation.

Long-term partnerships create security and trust

Every customer project is geared to having a long-term partnership and good cooperation. As far as KEBA is concerned, successful implementation starts with the initial consultation with experienced employees who have the relevant knowledge of the industry.



The customers are accompanied by experienced experts in every phase during the implementation of their project, who use their profound knowledge of markets, technologies, processes and understanding of the individual requirements to ensure that there is a short time-to-market that is worth mentioning.

For KEBA, a project is not yet complete when a made-to-measure KePlast is commissioned. Now starts the phase of training, maintenance and after-sales service, where customers are kept up to date about new trends, system developments and adaptation options for their systems.

With this support and KePlast, the optimized automation solution for injection molding machines, KEBA customers are well prepared for today and also for their future in Industry 4.0. They receive a solution that is both made-to-measure and turnkey with the highest quality, which can grow with the increasing demands of a company without problems.



Facts about the KePlast i8000 series

KePlast i8000 is suitable for hydraulic, hybrid and fully-electric multi-component injection molding machines and large machines.

The following components are part of KePlast i8000:

- Operating panel: Multitouch widescreen displays (currently available with 12, 15 or 21 inches of the AP500 series)
- Control: Hardware platform with Linux architecture and IEC 61131 sequence control
- HMI software technology and architecture: Java, JavaFX and OSGi (Open Services Gateway initiative)
- Seamless integration of KEBA drive and I/O technology via EtherCAT interface

About KEBA AG

Linz-based KEBA AG is one of Austria's leading companies. This stood out clearly in a study which was produced on behalf of the Federation of Upper Austrian Industry. KEBA operates in the field of automation technology for machines and robots, and is a technology leader in the development and manufacture of highly-optimized injection molding machine controls. The customers of the internationally-operating company include machine manufacturers and industrial companies who appreciate the quality of KEBA products and services, the almost 50 years of experience and the long-term cooperation. Each customer is accompanied and looked after individually across the machine's entire life cycle – from development and configuration, commissioning, to training and service.