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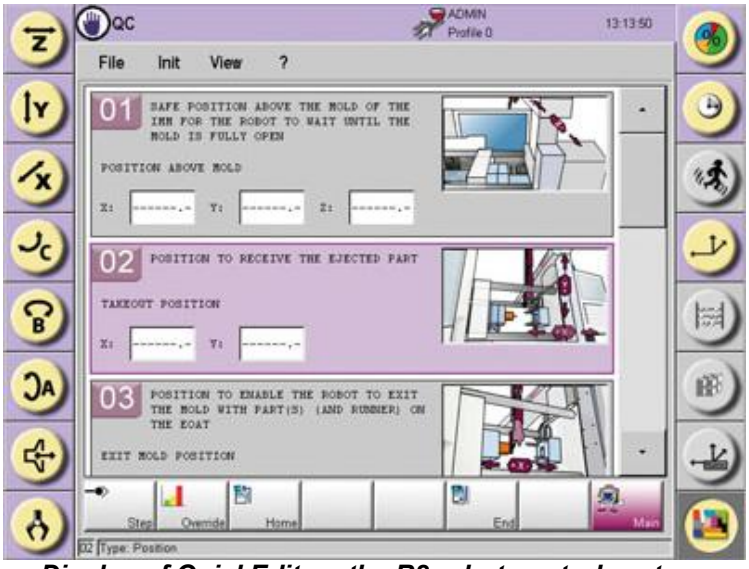
[Witt-NR-02-2019_Functions-against-skills-shortage]

Support in the struggle against the lack of skilled staff

Certainly not a universal remedy for skills shortage, but a practical means to procure operating staff able to work safely and expertly with reduced training expense: ***QuickEdit****,* ***TextEditor*** *and* ***Wizard*** *– control functions from WITTMANN which substantially facilitate working with robots.*



Display of QuickEdit on the R8 robot control system: this function provides template programs which can be used as the starting point for robot programming on site.

In virtually all industrialized countries, the production sector suffers from an acute shortage of skilled labor. Due to the expected demographic development, it is foreseeable that this shortage is going to get even worse in the coming years, especially in the European countries. Even now, numerous projects have to be put on the back burner or entirely deleted from the agenda in many places, because they simply cannot be realized due to lack of technical capacities, or because long-term reliable operation of technical equipment cannot be guaranteed.

When planning the realization of injection molding projects today, aspects of technical feasibility are not the only questions to be considered, but increasingly also the capacities for reliable production in view of an often insufficient pool of expert staff.

The principle known in the Anglo-American region by the acronym of KISS (= “keep it simple and stupid”) is also taking on greater significance in Europe. For the injection

molding industry, the KISS principle indicates an increasing necessity to invest in optimized production cells which are easy to run. This includes intuitively operated, self-learning control systems for injection molding machines – such as the **B8** machine control system from WITTMANN BATTENFELD with its **HiQ** software packages. Just as vitally important is the selection of a robot to take care of fast molded parts removal and to support high-speed downstream finishing. Robots equipped with the **R8** and **R9** control systems from WITTMANN are ideally suited for such purposes. Linear axes are used for the basic traverse movements, which must be carried out within the generally very confined mold space. For additional functions – which are normally required outside the mold space – they are combined with compact rotation axes. The linear axes permit quick and easy extension and retraction of the gripper. In contrast to working with articulated robots, the operator here is not required to change to and fro between different systems of coordinates or concern himself with all possible types of collisions that may be caused by multi-axis movements.

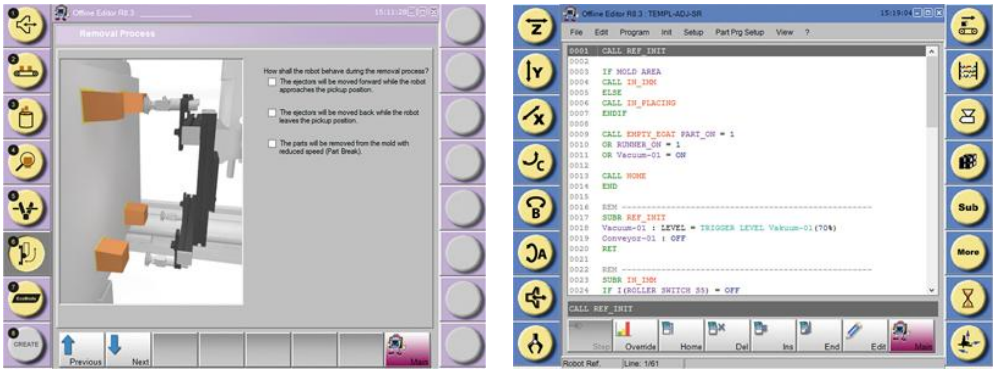
Although the WITTMANN **R9** robot control system also allows manual selection of any desired movement coordinates in space, the movements of the robots' main axes are nevertheless invariably orientated within the Cartesian coordinate system. Again, in contrast to articulated robots, the risk of collision can be substantially reduced, and last, but not least, the training expense for the operating staff as well, for whom the movements of the robot invariably remain clear and understandable at all times.

Another important, central attribute offered by the **R8** and **R9** robot control systems from WITTMANN is the presence of special input assistants for preparing, editing and operating process sequences.

Unlimited flexibility

WITTMANN robot control systems provide two different user levels as standard, which can be selected depending on how familiar the operator is with the system. ***QuickEdit*** allows changing of a few commands and programming with templates. The ***TextEditor*** grants complete freedom in programming. With its help, any desired robot sequence can easily be realized menu-driven. Each individual function is carried out directly on the robot and then taken over into the program by pressing a key. Free allocation of names for interfaces of auxiliaries, cylinders, gripper and vacuum circuits facilitate readability and permit clear structuring of the program.

The idea behind ***QuickEdit*** is to enable operators without previous experience in equipment programming to create a program. With ***QuickEdit,*** the robot is programmed in very easy steps. Using pictures and animations, the control system proposes the sequence step by step and explains to the operator the correct input. This method of programming is primarily used for simpler applications, such as "pick & place" functions or parts removal with sprue picking and subsequent depositing. Such simple programs can be created with the help of the new ***QuickNew*** function. ***QuickNew*** is the animated program editor which supports users in the creation of ***QuickEdit*** programs.



Additional screen displays of the R8 control system: QuickNew (left) and TextEditor.

For more complex tasks, the proven ***TextEditor*** is available, which also offers the possibility to generate a simplified illustration in ***QuickEdit*** for this type of application. Moreover, the ***TextEditor*** can be used to create templates, and users can add their own animations and integrate them into the control system.

An extremely efficient control function for programming is the WITTMANN ***Wizard***. When using the ***Wizard***, the robot operator is guided through the creation of the program in only eight steps by way of simple yes/no questions, resulting in the development of a full-fledged process sequence.

The WITTMANN Group is a worldwide leader in the manufacturing of injection molding machines, robots and peripheral equipment for the plastics industry. Headquartered in Vienna/Austria, the WITTMANN Group consists of two main divisions, WITTMANN BATTENFELD and WITTMANN, which operate 8 production facilities in 5 countries, including 34 direct subsidiary offices located in all major plastics markets around the world.
WITTMANN BATTENFELD focuses on the independent market growth in the manufacturing of state-of-the-art injection molding machines and process technology, providing a modern and comprehensive range of machinery in a modular design that meets the actual and future requirements of the plastic injection molding market.
WITTMANN's product range includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, mold temperature controllers and chillers. With this comprehensive range of peripheral equipment, WITTMANN can provide plastics processors with solutions that cover all production requirements, ranging from autonomous work cells to integrated plant-wide systems.
The syndication of the WITTMANN Group has led to connectivity between all product lines, providing the advantage plastics processors have been looking for in terms of a seamless integration of injection molding machines, automation and auxiliary equipment – all occurring at a progressive rate.

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