Fast Interpress Cell
ABB Press Automation Offer

Fast etc...

With the Fast Interpress Cell, ABB sets the pace on standardized solutions for press line automation. It creates new standards with its modular concept, a completely new form of automation design in press shops.

With these modular cells we dramatically reduce the installation and commissioning time.

To contain and reduce the risk exposure is the objective of both ABB and our customers. By using standard designs and field-proven solutions, we ensure easy commissioning and reliability throughout the lifetime of your asset.

The modular concept also means every system is a cost-efficient investment, designed to match the exact needs of the user, and yet is readily expandable to meet future demands. It is a true lean solution that will lead to increased customer lifetime profitability.

When output is the request, due to different factors such as increasing capacity or reducing working hours, some innovations can be added to the classical lean inter-press concept in order to improve the cycle time.

Focused on output, when you want to:

- Increase press line capacity
- Reduce working days/hours
- Reduce shifts
- Increase the number of references per line

All the pieces of this puzzle are specially designed to work simultaneously and together minimise the cycle time. From the robot stand to the external robot’s seventh axis and the synchronization with the press, every single component influences resulting output in its own way.

Special control is built for the cell to achieve a true modular architecture.

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Robot to Press Synchronization

With Robot-Press Synchronization, the robot follows the press movement, smoothly adapting its speed on-the-fly to optimize cycle time and minimize mechanical stresses. Therefore synchronization with the previous press during the unloading movement allows the robot to enter the press precisely when it is sufficiently open. If the line bottleneck is in one of the interpress robots, the improvement in the cycle time will be directly reflected in the cycle time of the whole line and therefore its productivity.

Your benefits:
- Best cycle time
- Easier programming
- Automatic adaptation
- Improved safety
- Energy saving
- Better maintainability

These benefits are achieved by an easy upgrade of the software and the hardware. The required components are: new software functionality in the robot control, a link to an external encoder and an encoder mounted on the press mechanics.

Over the last two years ABB Press Automation has installed dozens of Press Synchronization systems and some of them have been working to the forecasted targets for more than one year. In a short period of time, the return on your investment is guaranteed.

Robot external 7th axis

The ABB 7th axis is an additional external axis integrated in the robot wrist which transports the part from press to press maintaining the part orientation and thus following the optimal, natural path. Obviously, this entails important reductions in both the inside-press times and also in the inside-press overlapping between loading and unloading robots. Increases in production rates are the result of both the effect of maintaining the orientation of the part and also the reduction in the inter-press distance, besides the obvious advantages in reducing floor space in the workshop. Unlike most existing products, the ABB external axis does not consist of a simple translation from the 6th axis of the robot, but a real co-ordinated additional axis which maximizes your robot’s versatility at a minimum cost.

Your benefits:
- Best cycle time
- Reduce inter-press distance up to below 6 metres
- Keep part orientation

By means of the 7th axis, you could achieve a substantial and quantifiable increase in your output. Improved cycle times are demonstrable by either our lab tests or by real project measures. However, in the race to stay ahead, we never compromise on safety. Extensive checks including deflection, accuracy, repeatability and belt stabilisation are performed.