

MPS Control Console

The control desk for newspaper printing presses

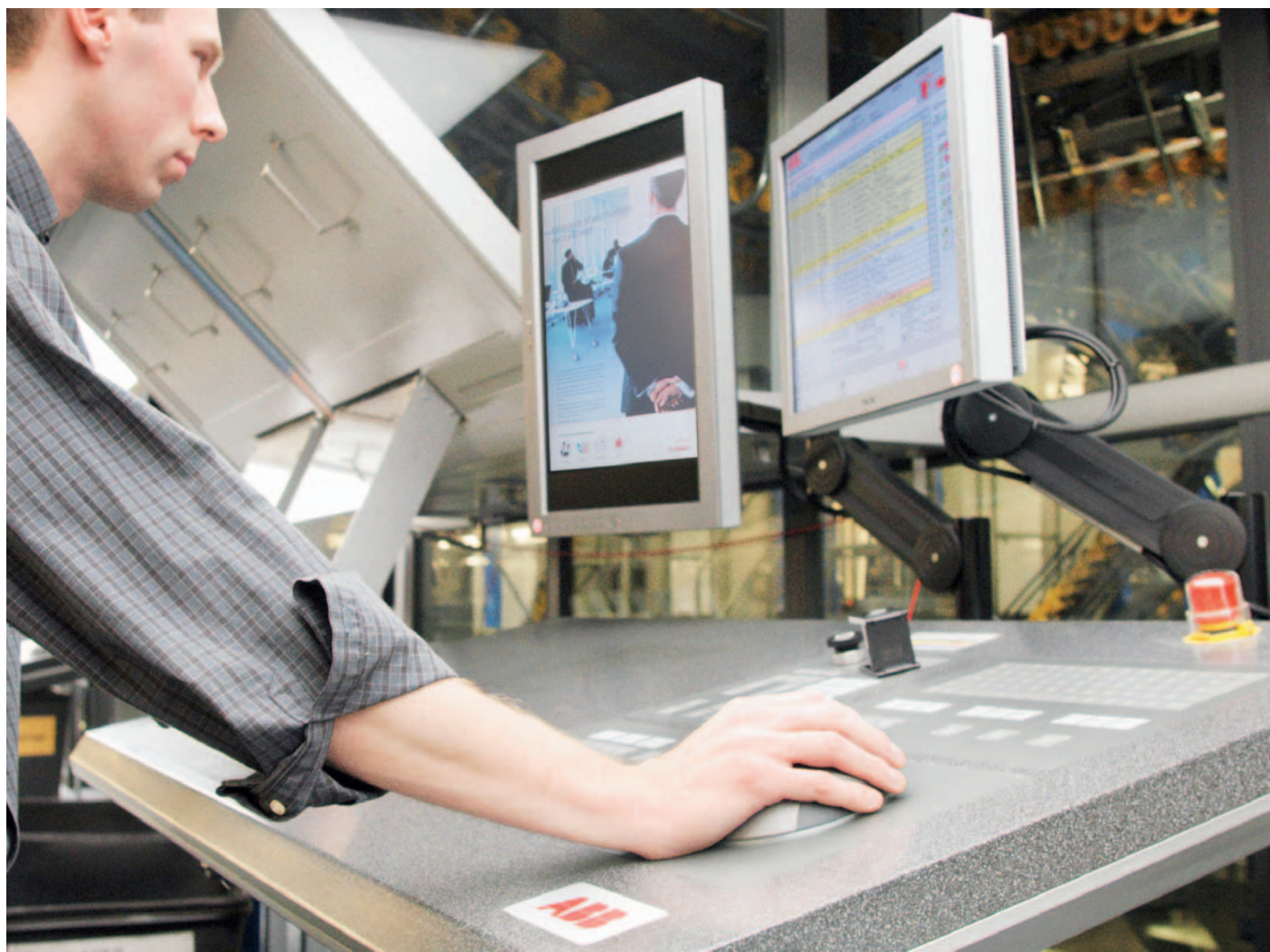
MPS Control Console

At the heart of controlling the press

Efficient newspaper printing with minimum waste depends not least on the printers themselves and their ability to operate the press. This is where the MPS Control Console can make a crucial difference to your business. ABB was the first company to introduce modern control console concepts to newspaper printing, and no other company has as much experience in developing ergonomic solutions for optimizing the cooperation between man and machine.

Everything on the MPS Control Console, from the product-oriented operation to the specially designed keyboards, has been conceived to make the press operation as easy and error-free as possible. The logic behind the design is so strong that important press adjustments can even be made with the monitor turned off!

The MPS Control Console can be supplied for use with various control system configurations, for presses from all leading press manufacturers, and for both new presses and retrofit projects.



Key concepts and functions

Design concepts

The number of control consoles allocated to a press section depends on the size and the color content of the products, but is normally between 2 and 4. (The maximum is 8.) All control consoles on a press have the same software and hardware, but specific functions can be allocated, e.g. ink and water control at one console and register and web tension at another, if so wished. A selected console acts as the master console for a press, and it is only on this console that the make-ready commands can be given.

Control consoles can be switched from press section to press section at any time, even during production. One console per press stores all the current press values in the Press Master module, another console acts as a backup. When a console is allocated to a new section, it merely connects to the database of values in the relevant Press Master via Ethernet and is immediately ready for use.

The MPS Control Console receives the press imposition for the coming production from the press management system, MPS Production, at make-ready time. It therefore knows where each page is printed on the press and can therefore provide product-oriented operation, where the printer can simply move from page to page on the console without having to know which print couples or adjustable elements are affected. There is also a backup operating mode in case the connection to MPS Production is not available for whatever reason. In this case a library of backup productions is used. In all cases it is also possible to run the press from the MPS Control Console in press-oriented mode, where the press elements are selected directly.

All consoles also have the same furniture design, have a flat-screen monitor and include ergonomic necessities like electrical height adjustment. The MPS Control Console is available for all web widths including triple-width presses.

Alarm displays

As well as controlling the press, the printer needs to know what has been happening on the press. For this reason there is an extensive event logging system built into the MPS Control Console. The header of the console display (see pages 4 and 5) always shows the latest alarm on the press. In addition, there are the two following displays available:

1. All alarms from the current press section.
2. All events that have occurred on the entire press section (typically the last 1000 events are stored).

All alarm and event messages include date, time, location, technical designation, message text, a symbol for first occurrence, and a symbol for alarm on or off.

There are also extensive filter functions (see page 5).

Help function and user manual

A plant-specific user manual, complete with all the screen layouts as supplied and detailed instructions for their use, is provided for each installation. This manual is also stored electronically on the MPS Control Console. Whenever the printer selects the help function on a screen, the relevant page of the manual is displayed automatically.

Examples of process displays

All MPS Control Console displays have the same framework. The header includes the following: date, time, production speed, production type, copy counts (net, waste and total), and the latest alarm message from the press. The footer includes soft keys for rapid access to selected displays, to the help function and for changing the language (where relevant).

The cursor can be moved around the display by using the trackball.

Main menu

The displays are divided into four groups: preparation, production, press information and service. Functions for restricting the commands available at a console and defining which displays require the console key for access are included in the service arm.

As an alternative, access can be controlled through the use of ID cards. A profile per user can then be defined.

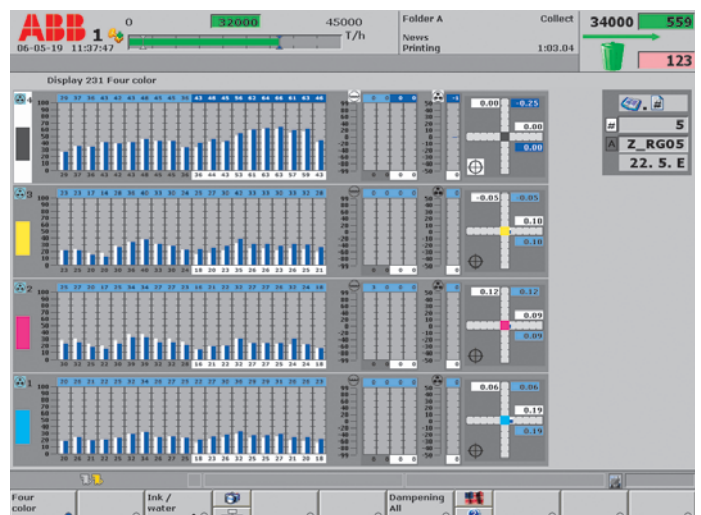
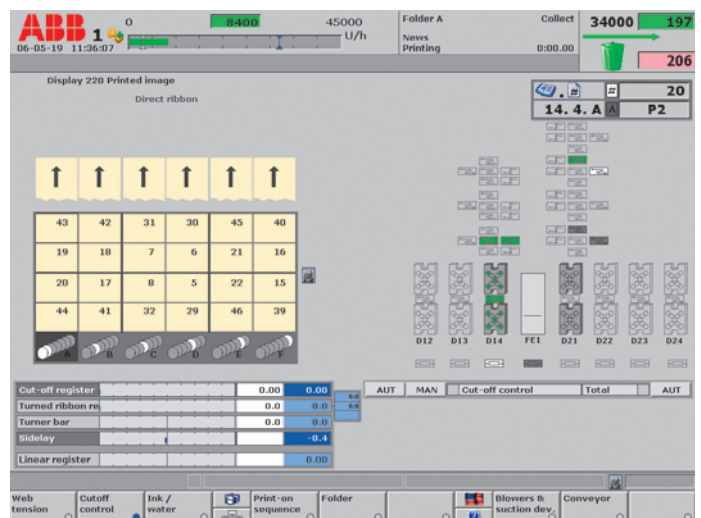
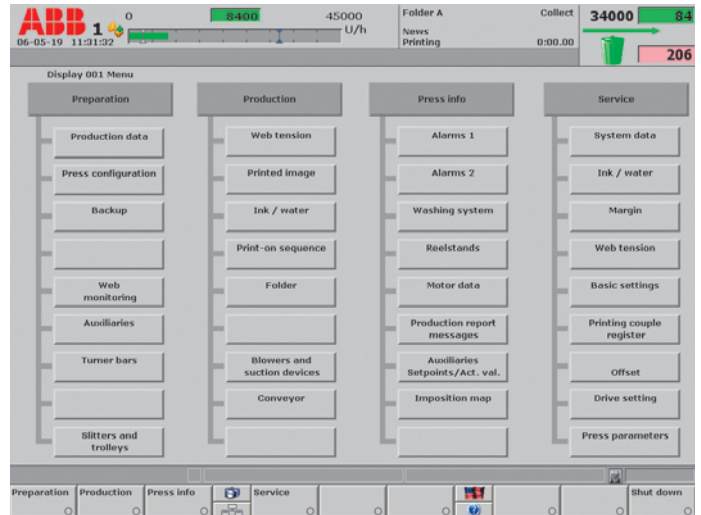
Printed image

The press configuration is shown on the right hand side. When a web is selected, its path through the press is shown and the pages printed on the selected web are shown on the left. The preset and current setpoint values of the cutoff register, turned ribbon register, sidelay, etc., are shown and the setpoint values can be changed.

Four-color display

All ink, water and color register values for one page are shown on the one display. Both preset and current setpoint values are shown and the latter can be changed.

There is also the standard ink/water display which shows all ink, water and register settings for one color for two adjacent pages.



Web tension

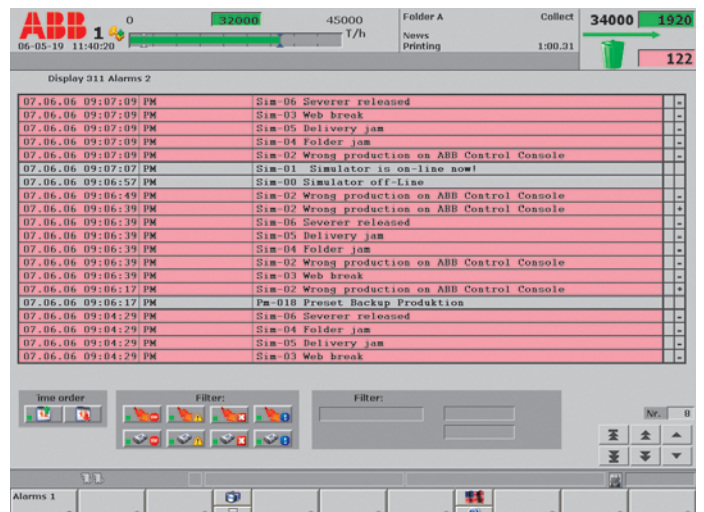
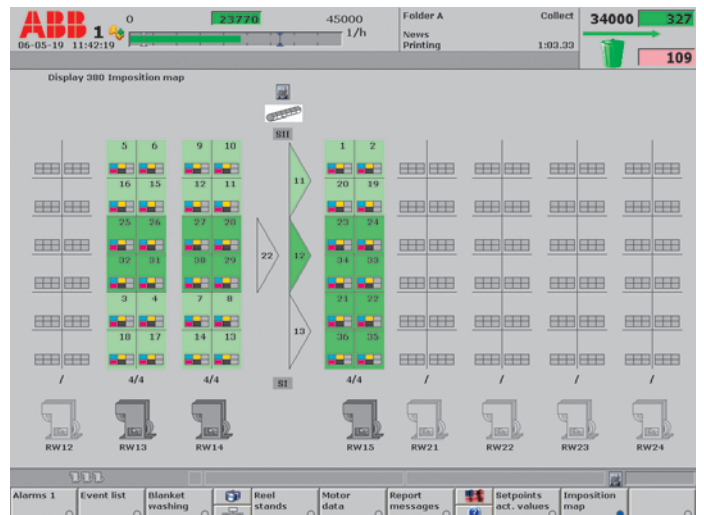
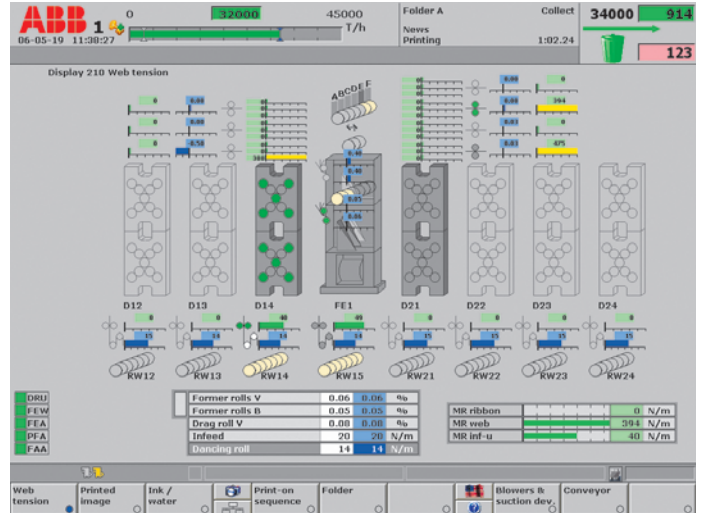
This display shows all values associated with the web tension elements used in the current production. Each web can be selected and the values changed.

Imposition map

This display shows the current imposition on the press. Each web lead is shown along with the page identification and color content of each page. The color coding of the different parts of the web shows which ribbons run over which formers.

Alarm display

This display shows all current alarms on the press. The list can be filtered to show only alarms that stop the press, alarms that prevent the press starting, alarms that need the attention of a printer, alarms that need the attention of an electrician and so on. The messages can also be filtered to select all that include a specified string. The order of the messages can also be changed.



MPS Control Console keyboards...

The keyboards and layout have been designed to give the printers the fastest access to the information they need, and the fastest, easiest and clearest means of controlling the press.

Quality control keyboard **1**

These keys are for controlling the product quality. The top buttons take the user directly to the web tension, register and ink/water screens. Other keys select the color, the zone group on a cylinder and the next/previous page/web. The arrow keys are adjusting values. The printer has the choice of single steps, continuous adjustment, or continuous fast adjustment. Numerical values can also be entered.

Ink/water keyboard **2**

This keyboard is situated below the lay-down area and is used for adjusting the ink and dampening.

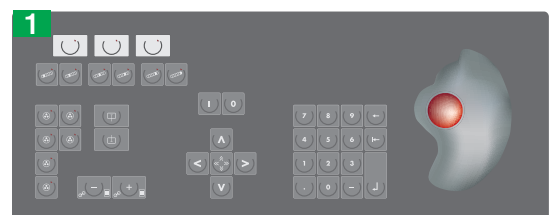
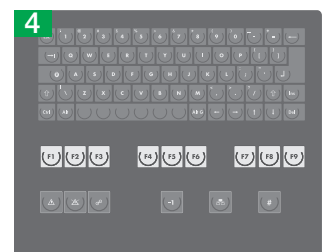
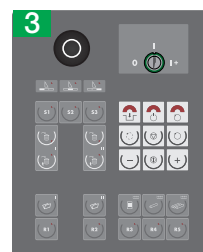
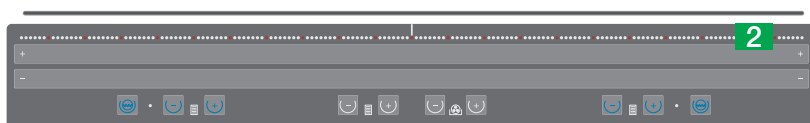
The keybars for making ink and dampening adjustments to individual zones are in the form of a continuous stripe across the whole width of the newspaper. The boundaries of the relevant zones are highlighted by a series of LEDs and adjustments to the ink and water settings can be made by pressing either the “+” or “-” keybars anywhere within the zone. The keybars feature an excellent tactile response as an aid to user-friendliness and correct operation. The LEDs within the zone being adjusted also light up as a visual confirmation.

Control keyboard **3**

This keyboard is used for controlling press speed, opening and closing waste gates, taking proof copies of the newspaper, etc. The key switch is for setting the priority of the console and giving the user access to any commands that have been “protected”, i.e. are not available to users without the key.

Alphanumeric keyboard **4**

This is used for entering stop reasons, etc.



...and options

Variable web widths

Many print sites operate these days with two or more web widths. This is fully supported by MPS Control Console. The printer simply lays down the proof copy of the newspaper in the middle of the lay-down area as usual and the system calculates where the various ink zones lie. The boundaries are then highlighted by LEDs on the zoneless ink/water keyboard, and the printer can work in the normal way.

Optional extensions

A number of optional extensions to the MPS Control Console are available. These include:

Soft-proof

This provides the printer with a color-calibrated image of the current page on an additional monitor. Whichever page is currently selected on the MPS Control Console is shown on the soft-proof monitor.

Training Simulator

This is the extension of the MPS Control Console with the offset printing simulation software from Sinapse Print Simulators. An image of the simulated newspaper is either shown on an additional monitor or beamed onto the lay-down area, thereby allowing the printer to practice using the press without the cost for paper, ink and so on that are associated with running the press.

Standardized lighting

The MPS Control Console is available with built-in standardized lighting.

Retrofit and console replacement

The MPS Control Console is available not only for new press installations but also presses that are retrofitted with ABB controls.

It is also possible to replace previous generations of the MPS Control Console in use on older press control systems with the most modern version. This gives customers the benefit of modern ergonomics and is a further example of ABB's commitment to providing a continuous upgrade path to its customers.

In addition, the zoneless ink and water keyboard with the continuous keypads is available as an add-on unit for consoles with conventional keys.



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