

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 blind-folded!

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. One 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 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 19-inch 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 three different alarm displays available. These show the following groups of events:

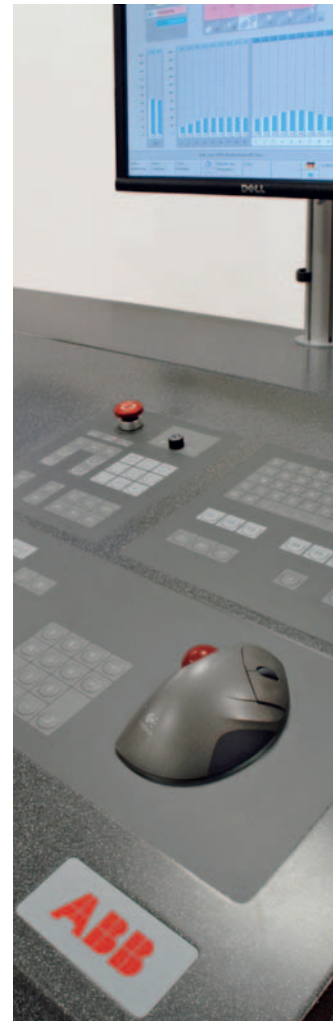
1. All alarms from the current press section that cause it to stop or not to start.
2. All active alarms on a given printing unit or folder.
3. All alarms and events that have occurred on the entire press section (typically the last 1000 events are stored).

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

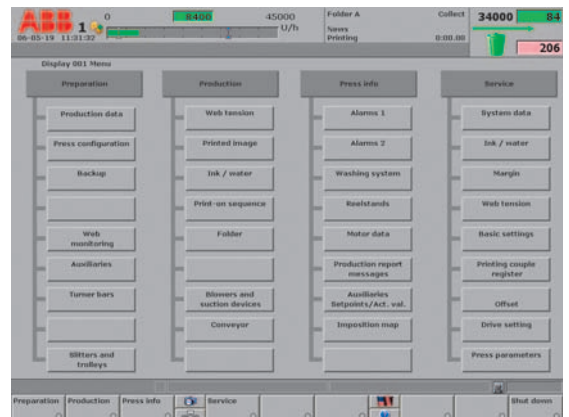
All MPS Control Console displays have the same framework. The header includes the following: date, time, production speed, production type, copy counts (waste, net and total), and the latest alarm message from the press. The footer includes soft keys for rapid access to selected displays, to the help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

The cursor can be moved around the display by using the trackball or by using the cursor keys on the quality control keyboard.

Main menu

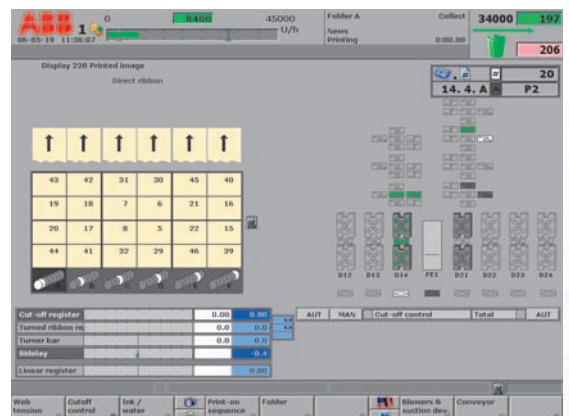
The displays are divided into four groups: preparation, production, press information and service. Functions for restricting the commands available at a console and defining which displays require the console key for access are included in the service arm.

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



Printed image

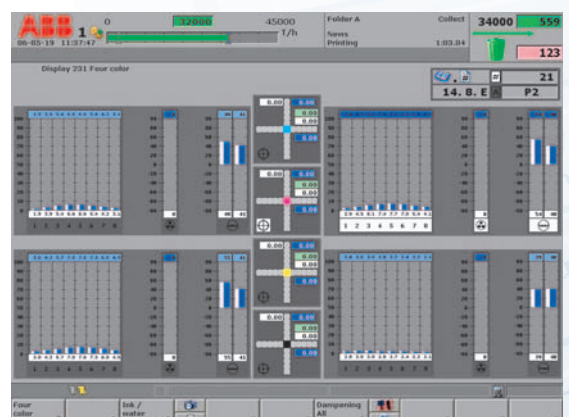
The press configuration is shown on the right hand side. When a web is selected, its path through the press is shown and the pages printed on the selected web are shown on the left. The preset and current setpoint values of the cutoff register, turned ribbon register, turned ribbon register, side-lay,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

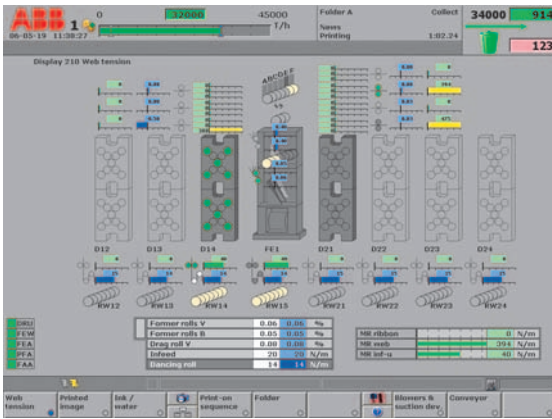


Four-color display

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.

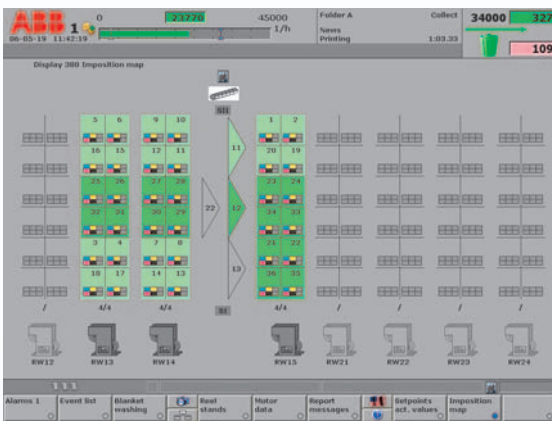
There is also the standard ink/water display which shows all ink, water and register settings for one color for two adjacent pages.





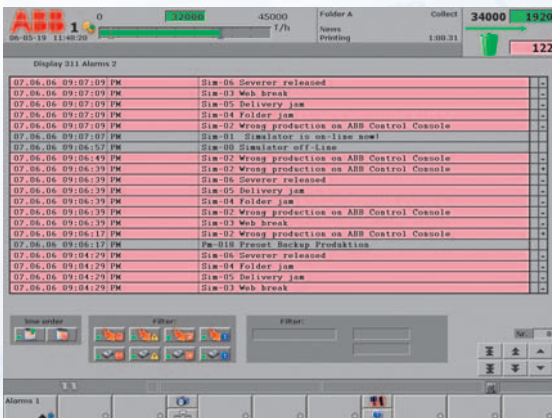
Web tension

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.

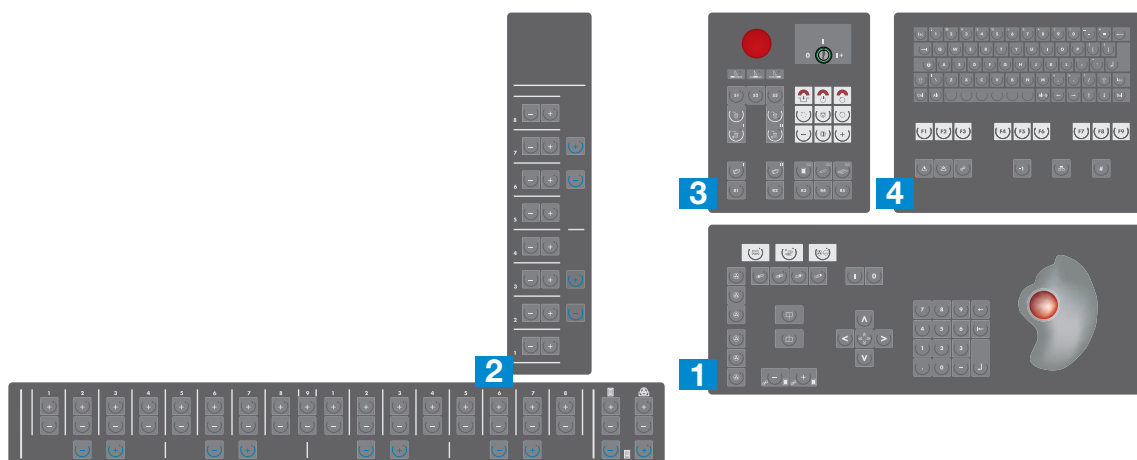


Alarm display – event list

This display, one of three different alarm displays, shows all press events and alarms. 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 and all that fall within a specific time period. 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

These keyboards are situated around the lay-down area and are used for adjusting the ink and water supply. The main keyboard can

be used for broadsheet and tabloid products, the smaller keyboard is optional for tabloid products. Both are tailor-made to fit to the ink zone size on the press.

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 in a most intelligent way. No special mechanical devices are required, no special signals and no special actions by the printer. The printer simply lays down the proof copy of the newspaper in the middle of the lay-down area as usual and can use all the ink and water adjustment keys in the normal way. The system makes use of the production data, supplied by MPS Production, to ascertain the web width being used for the product and to map the ink and water keys dynamically to the relevant actuators on the press. This takes full account of which side of the web (both vertically and horizontally) the page is printed on. Exactly the same mapping is used in the opposite direction to generate the values displayed on the monitor, making the system completely consistent.

Optional extensions

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

Color Adjustment Interface

A fully integrated interface to an X-Rite densitometer for the measurement of ink density and the subsequent calculation of any changes to the ink screw values required on the press.

Soft-proof

This provides the printer with a color-calibrated image of the current page on an additional 24-inch 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 Graphic International. 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.

Further details of these options are available on the relevant flyers.

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.



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