



## System 800xA EOW-x with the operator in focus

A unified control environment featuring the very latest in console technology improves operator performance. With the right tools for their task and an attractive, ergonomic environment in which to work, they do a better, more effective job of increasing plant availability, safety and profitability.

Required process information is served up on time to promote fast and correct decision-making. The control room environment turns potentially dangerous fatigue and distraction into proactive alertness that extracts the very best from every individual – in both routine operations and critical situations.

- EOW-x gives you all the information you need in one single environment. Access the information you need fast and intuitive, with a single mouseclick.
- EOW-x gives you the tools to manage all the information dynamically and effectively and deploy it into correct and fast decision and action.
- EOW-x gives you the tools to do this without moving an inch. With multiple monitors, a large screen and one unique keyboard to control the complete operator interface you stay focused at your task and the process at all times.

Front view



- ❶ Motorized large screen unit containing two 52" industrial LCD panels for 24/7 usage
- ❷ Four durable 23" wide screen LCD monitors
- ❸ Remote graphical units enabling removal of all computers away from the operator
- ❹ Advanced keyboard for multi client handling with hotkeys for frequent 800xA functions
- ❺ Integrated live video camera system for audio-visual communication
- ❻ Built in speaker system for public sound
- ❼ Directional sound system and integrated high frequency dimmable lighting
- ❽ Alerto, Class I SUPER PREMIUM™, operator desk system from CGM
- ❾ Motorized holder for each monitor
- ❿ The console is prepared for optional micro ventilation

#### Additional information

- Use [this link](#) to browse several layout proposals made for ABB projects
- Download the ABB EOW-x brochure from [this link](#) and the CGM brochure from [this link](#)
- Take a virtual tour of the Future Operation Centre by using [this link](#)

Please visit the Future Operations Centre (demo/lab environment) in Sweden to see the EOW-x in its natural environment - an eye opening journey!



**1** Motorized Close Large Over View with two integrated large 52" LCD panels

### Large screen and wide screen monitors

The rear base unit CLOV-x2, Close Large OverView, is equipped with the same type of strong and sturdy motorized height adjustable system as the main operator desk.

The 52" LCD displays, created for 24/7 use, are leading the heat backwards and up to reduce the surface temperature and extends the lifespan of the screens. There is a heat leading layer in the panels to even out the heat throughout the screen even further which reduces the risk of memory effects in the screen.

The EOW-x2 features four 23" wide screen monitors. As they have the same resolution and aspect ratio as the large panels, moving information windows between the screens is easy and without any surprises.

### Remote Graphical Unit

With the Matrox Remote Graphical Unit no computers have to be mounted in the EOW-x2 operator desk. All client computers can be safely placed in the computer room, in a controlled environment, for improved service. Removing all computers from the control room further improves the noise level and the temperature for the operators. It also makes it much easier to keep clean around the operator.

The Remote Graphical Unit contains a high quality graphic card with connectors for up to four full HD monitors, a sound card with connectors for both speakers and microphone and USB connectors for keyboard and mouse. The fanless unit communicates with the client computer via a fibre optic cable of up to 250 meters. Moving the graphics card to the operator desk means a non-compromised display quality without being sensitive to disturbances.

The EOW-x2 contains three Remote Graphical Units complete with interface cards for the client computers and 25 meters of fibre cables. All connecting cables for keyboard, mouse, microphone, camera and speaker systems are included for further convenience.



**2** Interactive large screen supported with four 23" LCD wide screen monitors



**3** All client computers remotely connected via fiber optic cables

### Multi client keyboard

All three client computers used in the EOW-x2 operator console are connected the one unique operator keyboard. That means that one operator can control the entire EOW-x2 unit with all its monitors and functions. In critical situations, one or two normal keyboards can be connected to allow one or two more operators.

The multi client keyboard contains four parts. One "normal" keyboard for text and numeric entry, one operator's keypad with twelve keys for process object interaction, one soft key section for quick access to process displays and other important aspects and one optional touchpad for future control of the operator environment like sound level, screen brightness etc.



**4** Multi client keyboard for convenient operation

### Live Video System

The EOW-x2 contains one multi pixel camera and a high quality microphone for audio-visual communication between operators. This "face to face" interaction can be performed without leaving the chair.

The live video system can easily be expanded with other interactive CCTV cameras for improved supervision of the process. All cameras can be configured with a video buffer to enable rewind and review special events.

As all video information is integrated in the 800xA system any video information can easily be viewed by any operator in any location. Group displays can be created to replace the need for ceiling mounted monitors and live video aspects can be added to any process object. This means that the operator can focus on the video information without knowing where the object is located or what camera to select.



**5** The built in live video system is certified for System 800xA

## Light- and sound systems

The EOW-x2 comes with dual sound systems. One is used for public sounds such as alarms and other information that must be heard loudly and clearly. The other is used for personal sound like operator to operator communication. The directional sound system focuses the sound over the operator without disturbing the surrounding area.

The public sound system speakers are mounted inside both sides of the noise absorbing frame of the large screen and the directional sound speaker is mounted on the two bars holding the dimmable lighting system.

The high frequency dimmable lighting system has both upward- and downward lighting available to get either a softer light, easy for the eyes or to get a brighter more focused light. These two settings can be adjusted separately. The high frequency of the light prevents the tabletop from glaring and the monitors from flickering.

## Operator desk system

The Alerto operator desk system is an essential part of the EOW-x concept. It is designed for highly complex, fully-integrated 24/7 environments. The entire operator desk is motorized and height adjustable from 650 mm to 1300 mm. Alternate positions for better health and vitality is important to reach improved operator effectiveness.

The Alerto is CGM Class I SUPER-PREMIUM™ 24/7 operator desk system. See separate brochure from CGM to read more.

The monitor board carrying the four pieces of 23" wide screen monitors is individually motorized height-adjustable from +70 to -130 mm independently of the working board.

All wide screen monitors on the monitor board can motorized be tilted simultaneously from +5 degrees down to -45 degrees. The distance range between the monitor board and the working board is motorized adjustable within 150 mm.

The Alerto operator desk system is also prepared for a micro ventilation system. This is an optional feature for a future upgrade.

## Coordinated solutions to further support the EOW-x consoles

The EOW-x concept provides the right conditions from the first planning stage and onwards. The Alerto modular operator desk system including accessories is the result of many years of knowledge and experience in designing 24-hour working environments.

The operator desk system from CGM has functions and accessories adapted for both operators and technology, which are integrated in and around the workplace. In addition to the operator desk systems, CGM supplies a wide range of auxiliary furniture to complete the optimal EOW-x console.

With support from CGM the total 24-7 environment could be planned and furnished as a complete solution. By involving CGM early in a project means that we can easily avoid many common errors associated with the ergonomic design of 24/7 control centres.



*Bose public sound system for crisp and clear sound*

6



*Dimmable, high-frequency, lighting and intelligent directional sound system*

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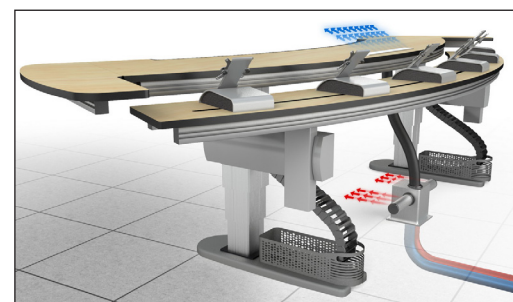
*Alternate positions improves circulation, reduces strain and increase alertness*

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*CGM Seventh Motion Variability™ allows rapid personalization at shift changes*

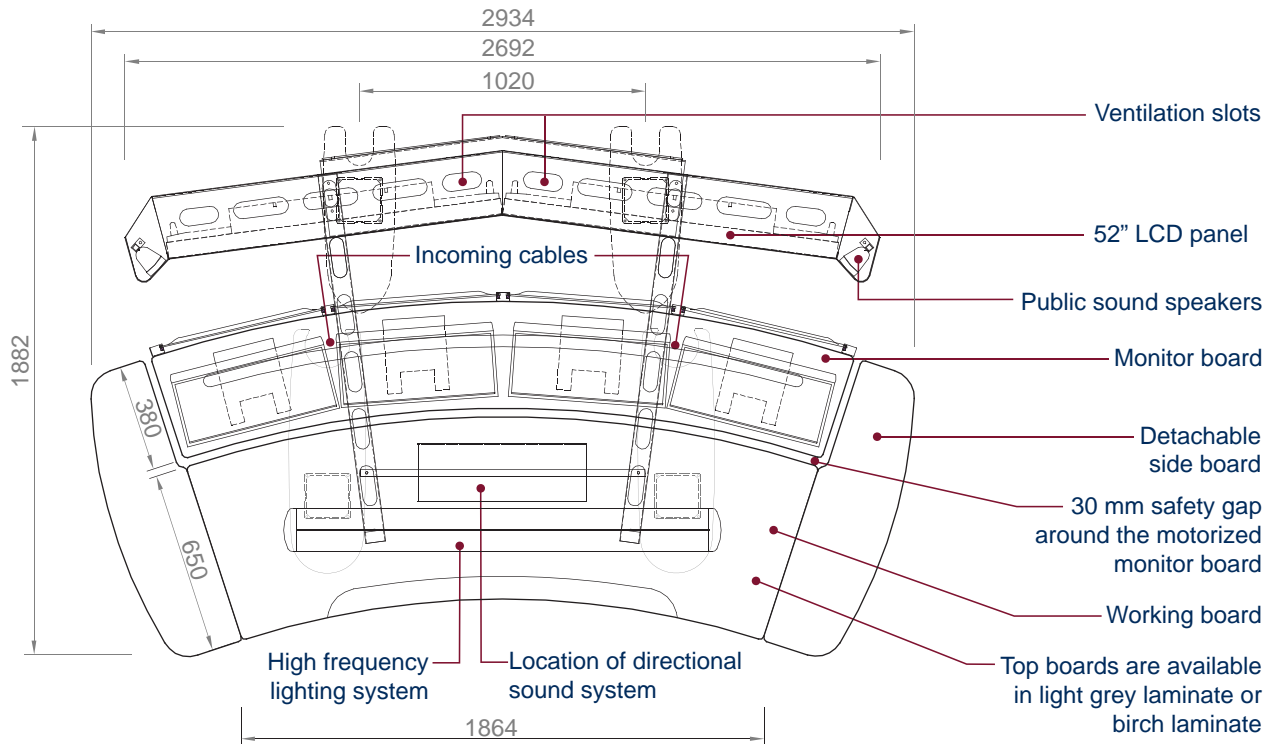
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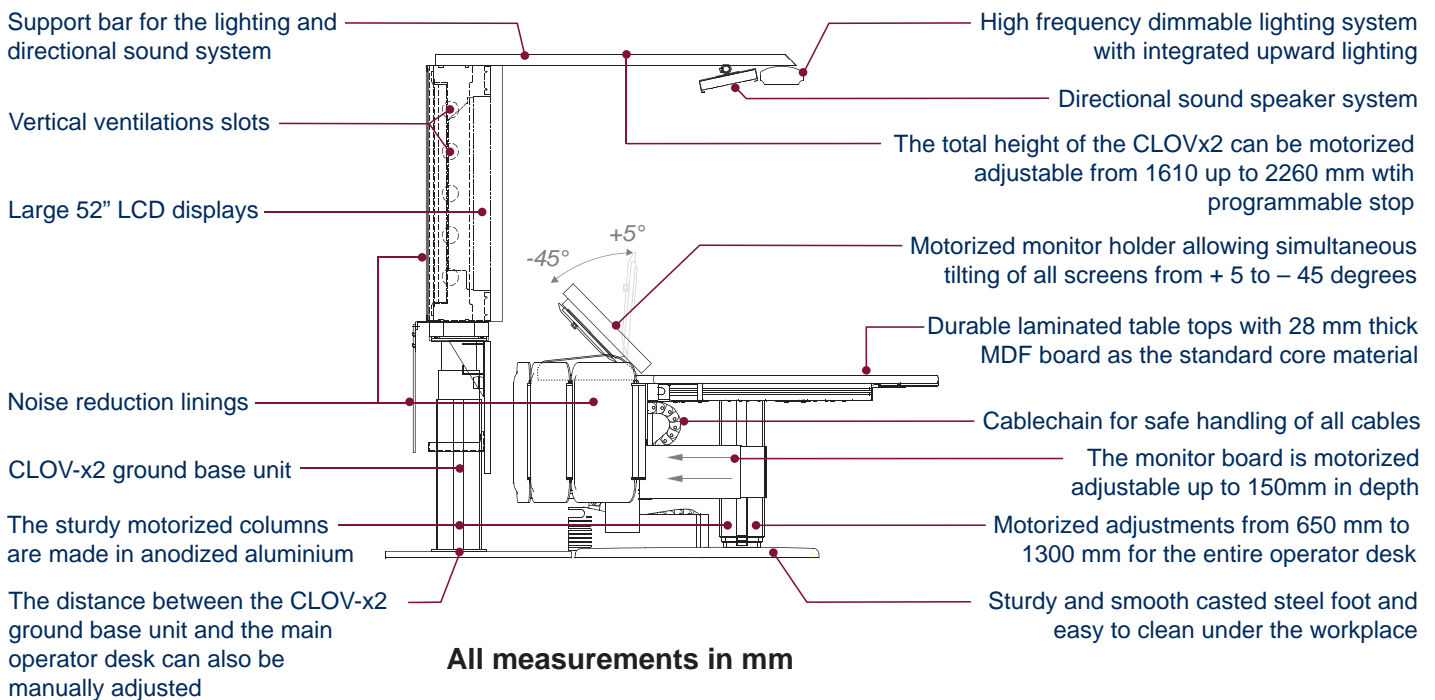
*The EOW-x is also prepared for a micro ventilation system to match future needs*

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### Top view



### Side view



■ With the robust, intelligent motorized sit/stand height adjustment the working board starts at 650 mm and goes up to 1300 mm at a speed of 35 mm/s.

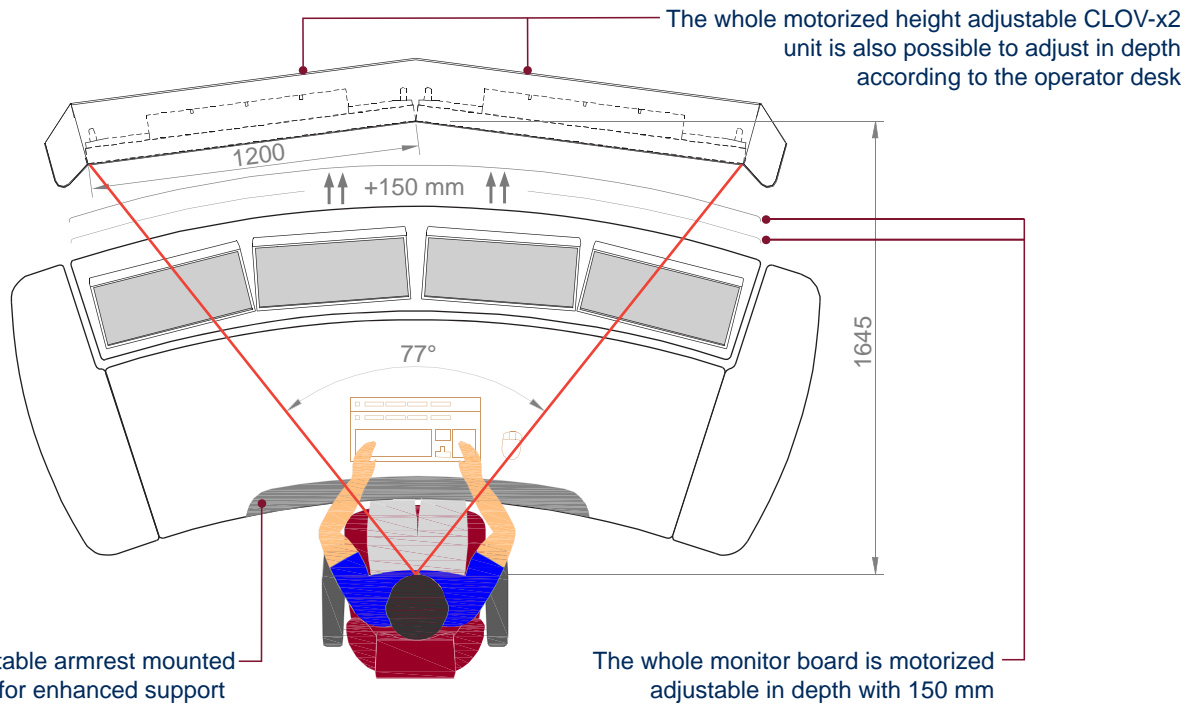
The unique motorized monitorboard can be adjusted both vertical (+70 -130mm) and horizontal (+150mm)

■ Total weight of the EOW-x2 = 540 Kg

Power: 230 V or 115 V (50-60 Hz)

Our entire range of products are available in detailed 2D and 3D formats

## Sight angles overview



For further information regarding recommended dimension and ergonomically position please see the handbook of *Control Room Design and Ergonomics - A perspective for the future* (second edition) written by Toni Ivergård and Brian Hunt. Use [this link](#) to require a copy of the book.

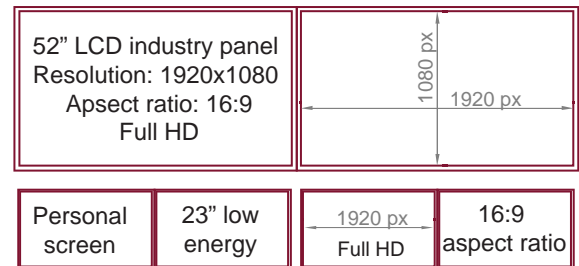
## Screen configuration

The four pieces of 23" LCD screens have the same resolution (1920 x 1080) and the same aspect ratio, 16:9, as the large 52" LCD panels.

The 23" personal screens has mercury-free LED backlight with very low power consumption during normal operation.

Full integration with System 800xA workplace configuration, supporting three clients. Licences for System 800xA are purchased separately.

The total resolution of the three large industrial LCD screens is 3840 x 1080



## Unique heat leading screen

The large 52" LCD screens are created for industrial usage and all components of the screen are of highest quality which shows in their high 24/7 reliability. This special LCD panel together with the CLOV-x2 arrangement are leading the heat backwards and up to reduce the surface temperature and a built in layer evens out the heat further. The parts of the screen are also produced in sheet metal instead of metal to even out the heat distribution further. This lower screen temperature reduces the risk of memory effects and also elongates the lifespan of the screen.

The screen are running at 30% intensity in the EOW-x configuration and no fans are needed to transport the heat backwards. FOC are giving a five year 24/7 warranty for the large screens.

