TECHNICAL SPECIFICATIONS











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1 Professional Console ADVANTIS EVOLUTION



Reference in control centres. Experience, research, design. A non-stopping work from our engineers and designers who are looking for perfection. This is how ADVANTIS Evolution has been created, the technical console for command and control centres that has lead the market trend for over 10 years, combining innovation, functionality, elegance and strength in one single model.

Versatility evolved. Available and ready to be used from the very beginning. Flexibility together with precision and spontaneity to adapt to each need, each operator and each working environment. Shapes created by and for people. ADVANTIS Evolution is a model to follow for the organization of technical areas with an unlimited amount of configurations, clearly differentiating the space set aside for IT Systems and the space destined to the user.

Innovation and functionality. Uniting the most advanced technology with the most state-of-the-art design and the best quality. Perfect adaptation to any room, any sector, any function. A new console concept created from a continuous model of innovation and creativity.

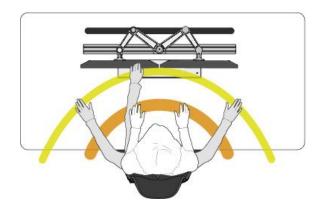
Ergonomics 24/7. ADVANTIS Evolution efficiently responds to any demand and technological environment 24/7. Its ergonomic design enables all the activity to be carried out with the highest level of comfort and precision. People are priority and ADVANTIS Evolution places them at the centre of its existence, thinking about their needs in advance, providing a unique experience where everything is under control.





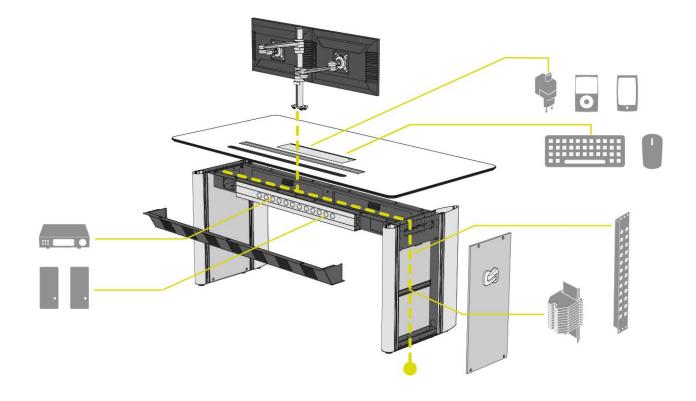
ERGONOMICS

Designed to respond to the demands of an operational environment 24/7 and under the strictest regulations, (UNE-EN:527-2011, NTP602, ISO-11064-3) optimising the control platform for all use frequencies from technicians, operators and technical support up to expert cleaning staff.



CONNECTIVITY

All the components of ADVANTIS Evolution have been redesigned in order to improve the connectivity of the console system as a whole. The sides, the horizontal beam support, the equipment trays and the technical bucks provide the necessary safety and simplicity for the comprehensive management of the wiring, equipment and connections. Each element has been designed to offer the highest performance both independently as well as in its interaction with the different elements in the console, thus improving the global performance of the product.









DESIGN:

Its great design, understood as the most intrinsic part of the product from its conception to the smallest detail, has been studied and analysed by GESAB's design, innovation and engineering team, in order to achieve the definitive control platform. A console which is able to surprise people because of its features and qualities to all potential users, from the installer to the maintenance staff, and of course the operator.



A rational and intelligent design that enhances the technological image that state-of-the-art environments must transmit, where they will be set-up and where they offer their best performance. The design lies in the details, and for that reason GESAB has used all its resources to study and improve each and every one of the functional and quality aspects of the new product, based on more than 20 years' experience in design and offering new solutions to the sector.

QUALITY:

Merging the most advanced and highly innovative technology with the best quality has been a challenge for GESAB when thinking about this new product. Certified by official bodies in the strictest of standards (ISO 9001-ISO-1401) to always guarantee the best quality, from the materials, design and manufacturing process to the internal quality controls. And always with efficiency as a reference in each stage of the process, as our certificate guarantees -CO2 (Voluntary Agreement to reduce CO2).









GUARANTEE

A strict selection of materials, the use of innovative manufacturing processes and the strictest quality controls enables us to exclusively offer 10 years warranty. The respect for the environment is our best bet in the present and a guarantee for the future.







2 General specifications

ADVANTIS Evolution represents the improvement of the reference system in the organization of technical areas with an acquired compromise between technology, modularity, quality and adaptability to virtually any need for more demanding control and command rooms. Knowledge acquired during more than 10 years in the life of an ADVANTIS product.



ADVANTIS Evolution is an organizational system with multiple uses, able to adapt to changing markets where technological requirements play an important role, as well as the user interaction with systems, allowing for the control and immediate access to computing equipment installed in each configuration, being aware of the specific wiring flow and connections.

The component systems that make up ADANTIS Evolution's console control have been designed so that you can build tailored and more demanding solutions in terms of number and volume of equipment and proper installation and management with the minimum amount of elements, but at the same time because of the simplicity of the system itself, it does not limit the types of solutions and designs, as it provides unlimited configurations with the same basic elements.

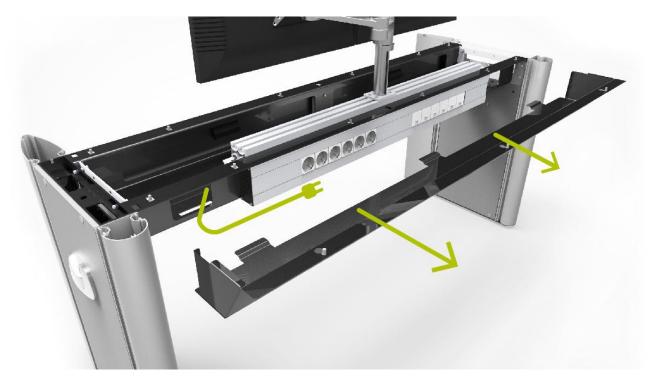
The main structure that forms the core of ADVANTIS Evolution is composed of structural Sides and/or Bucks as well as the horizontal beam support. This simple but effective system enables the widest variety of designs and at the same time offers great stability and capacity to integrate technology.



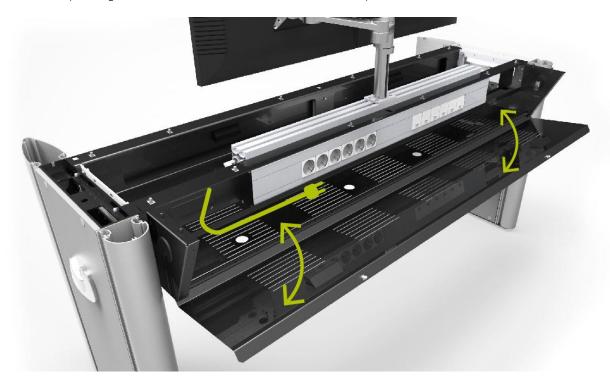




The Horizontal Beam Support System. The philosophy of ADVANTIS systems remains intact, although with substantial improvements since now the standard horizontal beam itself incorporates a number of capacities and accessories to hold computers and in turn ensure their easy installation or maintenance.



For larger equipment needs the company has also developed an additional component for the beam that increases its capacity to house small computers and KVM of up 2U high. This compartment integrated to the beam has a pivoting back door that allows the access inside the product from the back.

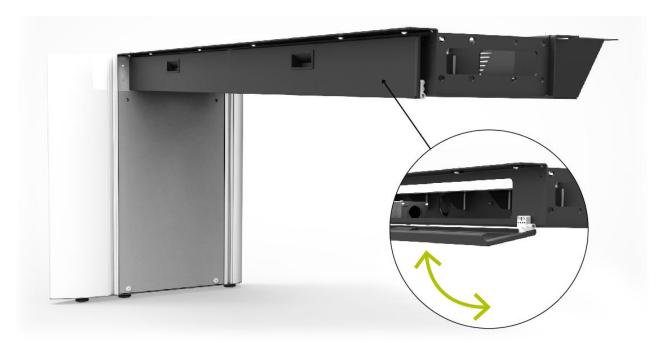








The large U-shaped section in the Horizontal Beam creates an element of great resistance while providing optimal space for the management of wiring between the console's different components. ADVANTIS Evolution's new design has added a frontal pivoting door to the inside as well as a fixed tray at the back to keep the connections and hide the management of wiring in a clean way without interfering with other elements. The installation of equipment and their subsequent wiring and connecting was never easier with the improved version of ADVANTIS Evolution's Beam.



The version with hanging equipment compartment substantially increases the capacity of the beam, increasing its height by 2U through its entire length, allowing for the accommodation of small computers and KVM with an easy, fast and convenient access to the installation and operation of these equipment.









The **Side ADVANTIS Evolution** channels the wiring from the raised floor to the Beam and can provide different routes for power and data as well as 19" spaces to accommodate the Patch panel using adapters to improve the distribution and centralization of data.



Sides can be replaced by Structural Bucks when the volume and quantity specifications are higher than normal. There are different models and configurations of Structural Bucks so that they can perfectly adapt to the needs of each project.

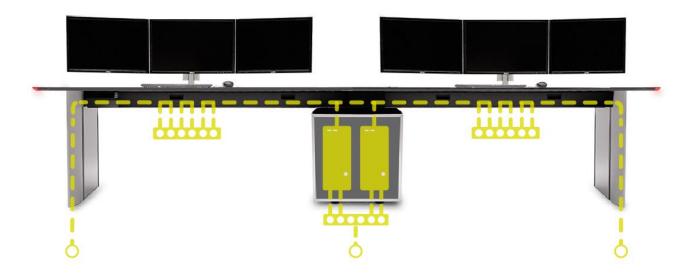




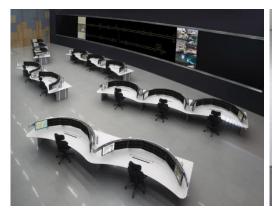




ADVANTIS Evolution enables the integration of Structural Bucks as support by replacing Sides, creating a space which directly communicates with the rest of the elements in the console to achieve optimal wiring management and making it possible to store a large amount of computers without affecting the user's ergonomics. Even in configurations with multiple PCs per operator, we still meet the strict Ergonomics norms: ISO 527-2011 for working positions and ISO 11064 control room. Each element in ADVANTIS Evolution has been designed to be naturally integrated within the component's ecosystem that forms the console to achieve an outstanding performance of the product.



ADVANTIS Evolution **work surfaces** are the element that is most related with the user and for that reason its main features lies in their great adaptability of designs and formats in order to improve the operator's ergonomics, high-quality and durable materials due to strict physical needs that affect environments 24/7.





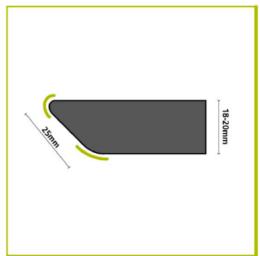




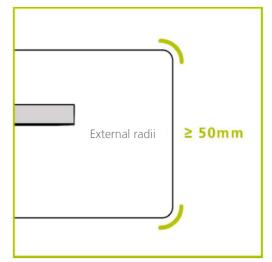


All working surfaces for GESAB consoles are designed so that the user's comfort and ergonomics come first. For this reason they are made of 18mm phenolic material, bevelled and rounded at all points of contact, eliminating any edge or aggressive angle that could cause micro-trauma.

Bevelled surface side view



Plan view of external surface



ADVANTIS merges all four techniques needed for the organization and administration of all the wiring and connections: surface connections, Technical Service Area, main command and wiring channelling. Maximum connectivity with the greatest ergonomics and functionality.

Personal connections. Optionally each user can have a personal space for their connection needs, so that they can enjoy an easy access from the workstation to energy strips, voice and data.



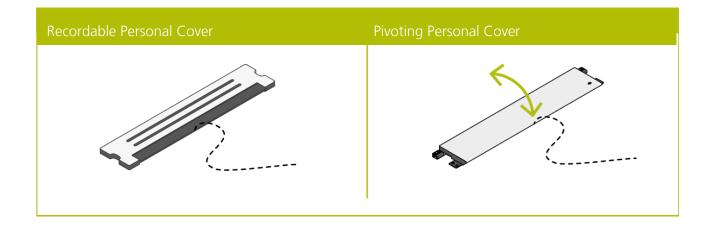








Personal Cover has two versions to offer. The recordable Personal Cover allows the entrance and exit of cables from the workstation to the Backbone's interior, where the cover is manually removed from the console without any type of mechanism. The second available option performs the same function but in this case the lid incorporates friction hinges with position control allowing the cover to be pivoted in order to access the interior of the beam and allowing a more convenient lock when rotating to any position. Additionally it is possible to incorporate energy strips under both models of Personal Covers.





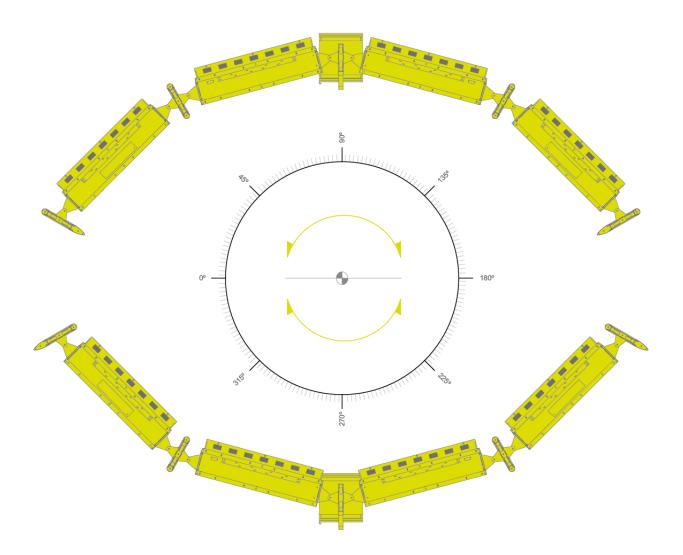






The **modular structure** of ADVANTIS Evolution adapts to any configuration. No matter the space or the number of operators, thanks to its perfect console integration and Bucks, it offers the best solutions for operator stations with large spaces.

For curved configurations, it has an angle generator system that allows the formation of any degree of curvature without interrupting the wiring communication between the modules.



The great variety of sizes and variations of each element forming the structure of ADVANTIS Evolution, such as the range of Horizontal Beams that exist ranging from 800mm to 2200mm, or the different types of Sides (Double, Meetings, Peninsula, etc.) can generate virtually endless design solutions in order to adapt to the precise needs of each project.



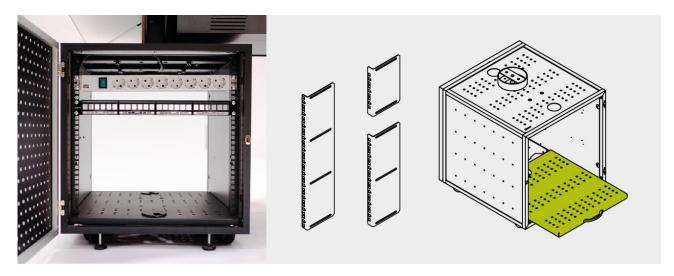




ADVANTIS Evolution Technical Bucks provide a comprehensive solution for operational posts with a high volume of computers. Its modular structure with an aluminium outline can adapt to any possible measure and configuration, adapting the different accessories to create a Technical Service Area (TSA) in the intermediate area between the bucks, specific to the management, administration and connection of all equipment, allowing fast, convenient and secure access.

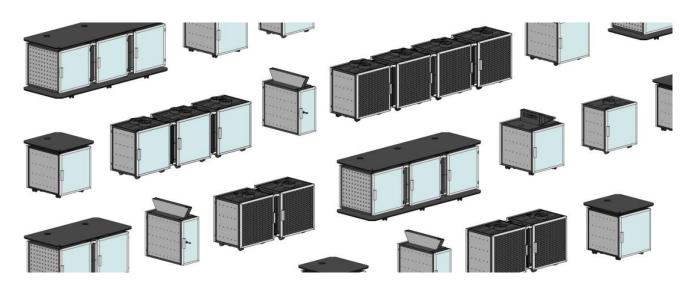


ADVANTIS Evolution Technical Bucks integrate and grade, both the height and depth of a wide variety of specific accessories inside, either fixed trays, removable trays or specific accessories for the installation of computers or 19"-format communications. The combination of the different available accessories transforms the compartments depending on the special needs and tasks of each operational post, keeping visual balance within the same project.









Both the Buck's modular design and its range of accessories offer a wide variety of options never seen before in the integrated and auxiliary console storage with high added value. Whether it is its printing module version with phenol surface in the upper area or integrated into the structure of the console, the huge variety of measures and viable configurations make an added tool for the proper functioning of the environment as well as its visual integration with other elements of the ADVANTIS Evolution series.

The Evolution ADVANTIS closed compartments offer a variety of different configurations, allowing them to be

assembled together, using the TSA (Technical Service Area).

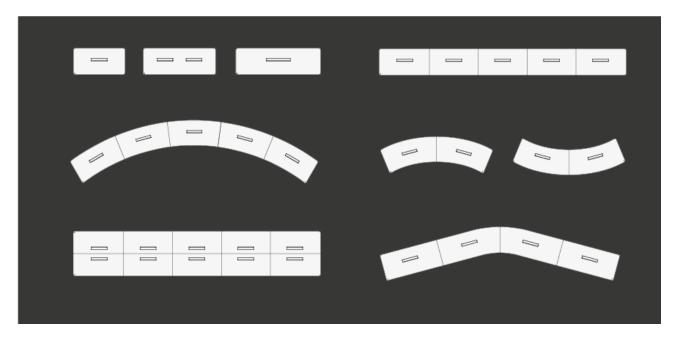
The exclusive Technical Service Area (TSA) allows its user to create, among compartments, a specific area for the management, administration and connection of all equipment, allowing fast, convenient and secure access. Access is achieved by folding aeration grids located both in the front and rear.



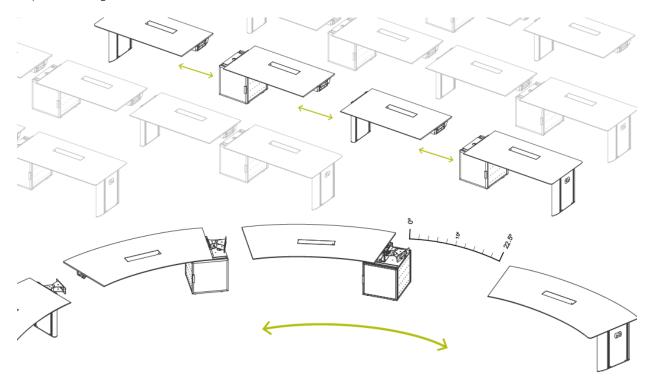




ADVANTIS Evolution has no limitation in combining different structures, either single or double linear or curved configurations, concave or convex, simple or double...... All accessories are designed considering the maximum interrelation between them to offer a wide product range, capable of satisfying the most demanding highly technological environments,



ADVANTIS Evolution is an organizational system with multiple functions, able to adapt to changing markets where technological requirements play an important role, as well as the user interaction with systems, allowing for the control and immediate access to computing equipment installed in each configuration, being aware of the specific wiring flow and connections.

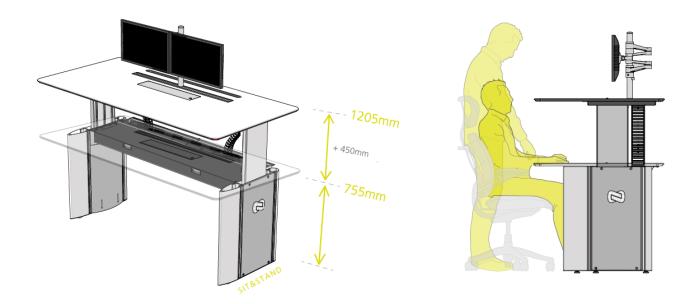






ADVANTIS EVOLUTION SIT&STAND VERSION

ADVANTIS Evolution has incorporated its SIT&STAND version for those operational posts where flexibility is key. ADVANTIS Evolution SIT&STAND system allows the user to work in a sitting or standing position through the regulation of the work surface of 450mm, without the movement on it affects the intrinsic characteristics of the product, such as the monitor management and wiring, ergonomics or maintenance.



Companies increasingly need adaptable spaces, as the operational posts can change quickly. With ADVANTIS Evolution SIT&STAND version, we provide a solution that has never been seen before, a practical and ergonomic need which has more and more demand in open work environments.

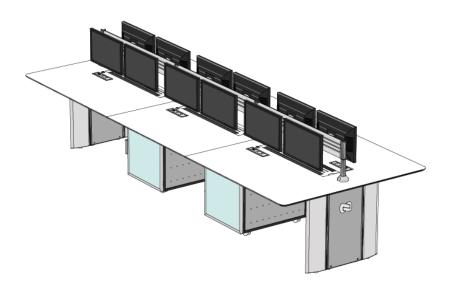
The height regulation of the work surface from 755mm of base to a maximum of 1205mm covers the ergonomic range that European regulation UNE-EN 527-2011 states for standing and sitting working positions and fully regulated standing only.

ADVANTIS EVOLUTION DOUBLE SIDE/TRADING VERSION

GESAB has come up with ADVANTIS Evolution Double Side / Trading as a solution for projects where the optimisation of operational space is a need and the volume of equipment and staff is high. The Double Side version, with or without Buck for equipment, can greatly reduce the necessary space for each operational post, wiring or each of the employee's ergonomics, maintaining an innovative and different image that only ADVANTIS Evolution can offer.

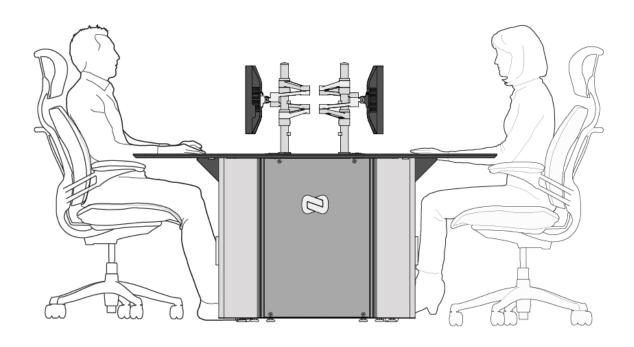






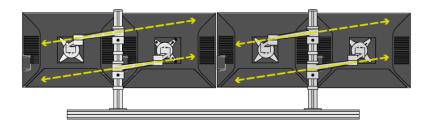
As in the rest of product lines, different solutions can be used and adapted for the organization of monitors, thus ensuring that each project has the best possible solution. Depending on the volume and the amount of computers and communications that require the solution, a Buck for the equipment can be added between the modules, a space designed to organise, manage and store different equipment and

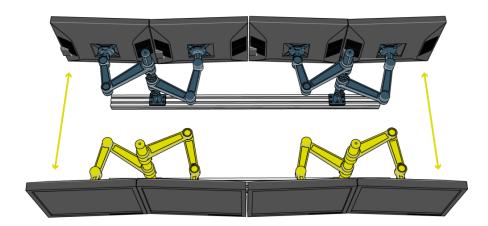
wiring, always guaranteeing the best way of manipulation and maintenance. If there is a great need for computer space we recommend the integration of Buck Modules, since ensure a better organization and maintenance of the equipment and its wiring without affecting the ergonomics of the user's operational post.

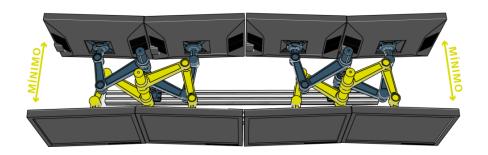












The **optimization of space** for Double Side / Trading configurations is essential. For this reason GESAB has incorporated the ViewLite monitor organization system as part of its product range. These arms are designed with asymmetric geometry so that the space between the different lines of monitors could be reduced without it affecting their capacity of regulation.

Centralizing monitors as much as possible can significantly reduce depth measurements of the workstation, eliminating the central free area left unoccupied between monitors, and this without affecting the ergonomics of displays, as happens with other products.

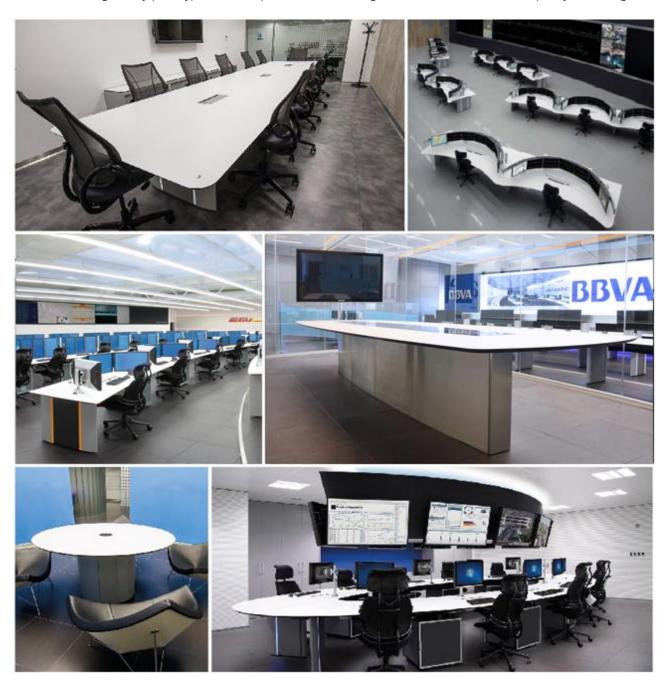
The space required to manage the wiring is also reduced, thereby improving the handling and maintenance of these kind of consoles.





GLOBAL CONCEPT

ADVANTIS Evolution is much more than a system of control consoles, it is a design and proper functioning concept for demanding environments where work dynamics are changing and the degree of effectiveness is a key factor. ADVANTIS Evolution combines design, effectiveness and emotion. With neutral and aesthetic lines, its minimalist design blends perfectly with different work dynamics and caters for both the design of a single console and the creation of shared spaces for teamwork, as well as critical decision spaces. Its flexibility allows for the modelling of any post type, area or space with the best guarantee for effectiveness, quality and design.







Finishes

The finishes are an intrinsic part of the product; therefore GESAB has opted for and recommends optimal colours and finishing touches for the AVANTIS Evolution series, because of their looks and functionality.

PHENOLIC COMPACT IN WORK STATIONS

The material applied to work surfaces is MaxCompact Fundemax's phenolic Compact because of its excellent structural properties, its high resistance to wear and tear and because of its freedom of design which adapts to any simple or complex shape.

The product's standard colour is white with low reflection matte finishes. On the one hand its white colour provides a refractive index that is adequate to optimise the room's natural or artificial light, because the white colour has the highest refraction index (between 65-85%, depending on the surface). At the same time the surface's finish colour is matte to avoid the reflexes produced by intense light sources that could have a negative

FUNDERMAX **

impact on the operator's visual ergonomics.

Optionally, GESAB can provide any finish from the wide range FunderMax provides under minimum quantity determinants.

STRUCTURES AND METALLIC COMPONENTS

As part of AVANTIS Evolution's design, all metallic components in the structure are painted in anthracite black due to its lower visual impact and the durability of the finish. On the other hand, the aluminium profiles that form the extremes of the sides are silver, to contrast with the rest of the structures and thus differentiate the console's vertical elements. The lateral lids also have silver finishes to homogenise all the sides, generating a minimalistic but different image of the product. Although these are the recommended standard finishes, you can request other colours or finishes to best adapt to your corporate image.



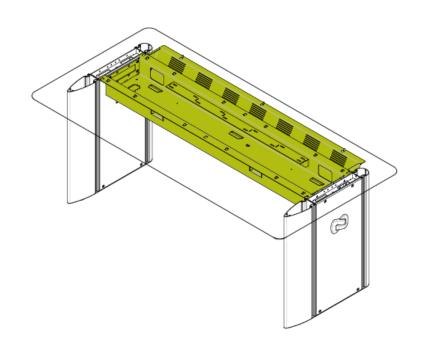




3 Technical features of ADVANTIS Evolution

Central structure

Beam with door + WiRail system and space for connections at the back. Total dimensions: 463 mm deep and 105 mm high. A U-shaped central space for accessories and wiring with a usable space 235 mm deep and 101 mm high. Easy frontal access through a metallic pivoting door and auxiliary maintaining access at the back through a metallic tray. All beams include a support to integrate the WiRail system for the management of monitors. Available beam length: from 800 mm to 2200 mm. Steel components, central structure 2.5mm thick, back tray



1.2mm thick and 1.5,, for frontal pivoting door. Cold rolled steel according to UNE EN 10130: 1999, painted with micro textured high quality epoxy powder according to UNE 48-098-90; UNE 48-031-80; UNE 48-026-80; UNE 48-032-80; UNE 48-032-80; UNE 48-032-80; UNE 48-183-84 and UNE 48-169-92 and subjected to strict tests of durability and aesthetic finish according to ISO 7253 and DIN 50021, made in laboratories accredited by ENAC.



Fall protection and aperture adjustment movement for doors using low profile friction hinges integrated in the access door. Hinges belong to the Southco ST series: Made of zinc and steel, minimal cycle operation of 20,000 cycles, maximum static load: 1000 N. Retention security System in doors using **neodymium magnets** to reach a maximum force of 90N per magnet.

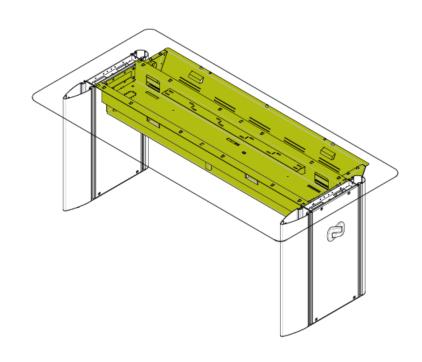






Aluminium conduit: 45x45 aluminium conduit for the installation of connectors and universal mechanisms, alloy 6060 according to UNE 38-337-82 with superficial anodized surface that comply with the requirements of the Quality Mark EWAA / EURAS (QUALANOD), subjected to durability testing of aesthetic finish according to ASTM B-136 and CE marking.

Beam with door, KVM housing + WiRail system and space for connections at the back. Total dimensions: 520mm deep and 196 mm high. U-shaped central space for accessories and wiring with a usable space 235 mm deep and 101 mm high. Easy frontal access through a metallic pivoting door and auxiliary maintaining access at the back through a pivoting door without movement restraint. Space designated for computers and KVM under the central structure. Usable space: 307mm deep and 80mm high. All beams include a support to



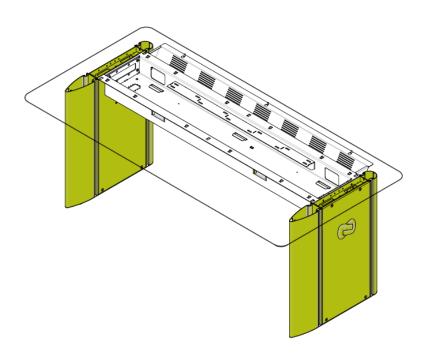
integrate the WiRail system for the management of monitors. Available beam length: from 800 mm to 2200 mm. **Steel** components, central structure 2.5mm thick, back tray 1.2mm thick and 1.5,, for frontal pivoting door. Cold rolled steel according to UNE EN 10130: 1999, painted with micro textured high quality epoxy powder according to UNE 48-098-90; UNE 48-031-80; UNE 48-026-80; UNE 48-024-80; UNE 48-032-80; UNE 48-183-84 and UNE 48-169-92 and subjected to strict tests of durability and aesthetic finish according to ISO 7253 and DIN 50021, made in laboratories accredited by ENAC.





Sides

ADVANTIS Evolution side system facilitates the channelling of the wiring from the raised floor to the beam and can provide different pathways for data integrated energy and via accessories and 19" spaces inside the same lateral using an adapter for housing connection accessories similar to Patch Panel or rackable elements that distribution improve the **ADVANTIS** centralization of data. **Evolution** laterals facilitate management and maintenance of the system using easy to handle recordable



doors which completely free the access to the technical sector. Outer lids also serve as corporate space since they distinctively integrate the company's image or logo without altering the products design.

Because of the wide variety of lateral models it is not possible to provide general measures for this section (see price list to consult general measures of each product). Three main type of components can be distinguished in ADVANTIS Evolution structural laterals: **Cold laminated steel** for the lateral structures in accordance to norm UNE EN 10130-1999, painted with micro textured high quality epoxy powder according to UNE 48-098-90; UNE 48-031-80; UNE 48-026-80; UNE 48-024-80; UNE 48-032-80; UNE 48-032-80; UNE 48-034-80; UN



48-183-84 and UNE 48-169-92 and subjected to strict tests of durability and aesthetic finish according to ISO 7253 and DIN 50021, manufactured in laboratories accredited by ENAC. Aluminium vertical profiles at the ends as a structural part and characteristic design of ADVANTIS Evolution. The design has the shape of half a plane wing, made of aluminium alloy 6106 (variant of 6063 with more resistance) with state T5 for lightweight construction and treatment surface painted with micro textured epoxy powder subjected to stringent tests according to norms DIN 50939, ISO 2813, ISO 2360, ISO 2409, ISO 2815, ISO 1520 and ASTM D 2794 to ensure its quality and durability over time as well as fulfilling the requirements of the Qualicoat quality mark. Class E1 agglomerate side covers with low doses







of formaldehyde in accordance to norm EN 120 and silica according to norm ISO 3340, subjected to stringent tests following norms EN 323; EN 319; EN 310, EN 317, EN 322 and EN 311. Surface finish with high-pressure laminate **HPL POST FORMABLE**, which is subjected to stringent tests according to norm EN 438. The manufacture of our agglomerated board successfully passed AENOR's audit Chain of Custody (CoC).

Accessories

ADVANTIS Evolution has a number of accessories to facilitate and improve connectivity and manipulate the wiring. Trays to organize incoming wiring from the raised floor through the cable connections enabled in the structure itself towards the vertebral beam. These trays serve as divisions for possible electrification lines and feature a recessed surface for retaining cables and improving their conduits.

Besides by using an adapter, you can add a 19" space to include patch panels, which substantially enhance network management and a profile included in the frame for the placement of electrification borders.



On request it is possible to make a **ground wire** as a precaution and safety measure, to prevent the passage of electric current to the user in case of failure in the isolation of active conductors.

Lighting Systems



ADVANTIS Evolution includes a unique system of integral lighting using LED's technology designed to meet safety requirements and functionality. The sides exterior include two vertical lines inside the anodized aluminium profile with a diffuser and equipped with SMD 3528 LED's, focusing the light towards the outer side, integrating GESAB's logo with the exterior removable lid. Manufactured with ABS finish. The LED technology used in the Nexus Gate is done by using LEDs Flexible **SMD 3528** encapsulated strings, FPC adhesive series of high brightness, with a light intensity of 2400 (mcd), an emission flow of 7 (lm) and an angle of 120 °. The connection is 12V, 14.4-19.2, power consumption from 1200 to 1700 mA and a lifetime of 60,000 to 80,000 hours

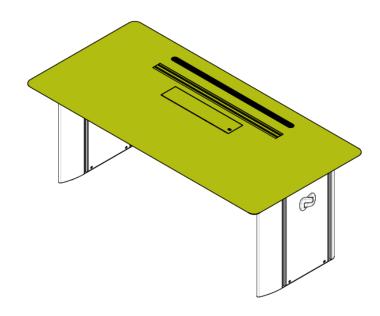




Workstations

Surface on which the operator performs all the functions of interaction with the control platform. The workstation can integrate a cover (recordable or pivoting) that leaves the personal connection area visible.

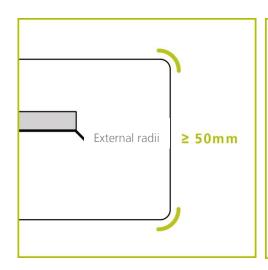
The back area is reserved for the monitor's articulated supports that can be distributed according to the configuration that best suits the display needs of each post as well as cable management for each monitor passing to the vertebral beam through a grommet integrated on the same surface

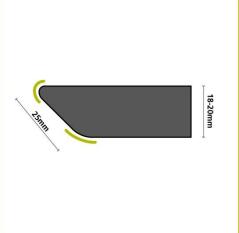


with brush to hide cables and prevent the entry of dirt inside the vertebral beam.

High-quality work surfaces for tables manufactured with 18mm thick white with black core phenolic compact and FH surfaces. High-pressure laminate (HPL) manufactured according to EN 438; composed of cellulose impregnated with thermosetting resins and pressed under high pressure and temperature. Its inner core is of a standard black colour. On request, you can ask for "F quality" MaxCompact which is Euroclass B-s2, d0 fire behaviour.

The finishes for work stations are designed taking into account the recommendations of different studies and





reflected in the document "HEALTH + GESAB".

In order to avoid microtrauma, the work stations are bevelled and have rounded edges in all their contact areas, eliminating any kind of ridge or sharp angle.



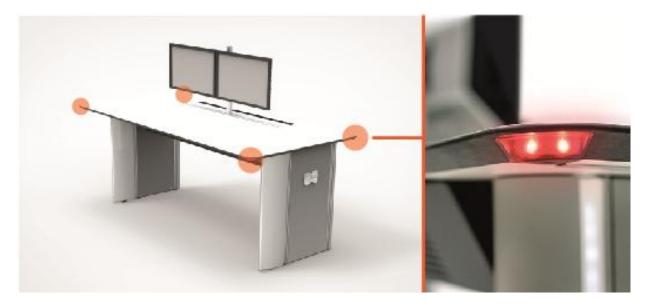




PRL Security

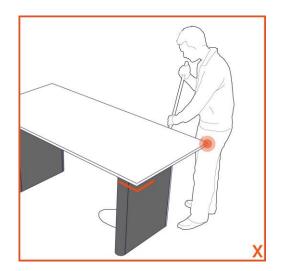
Lighting system and OSH space.

At the end of each console or line, OSH security systems have been installed using lighting LEDs. Work stations incorporate a specific compartment at their ends to house a translucent polycarbonate injection receptor which keeps encapsulated SMD 3528 LEDs inside. This system has several functional and safety features, it is red and identifies the console ledges. As the lights of a car make it visible in the dark and can tell the driver if a door is not closed, the lights built incorporated in the console identify the edges of the table, following the same values of passive safety.



The LED technology is available through **SMD 3528** Flexible LED, high-luminosity adhesive FPC series, with a light intensity of 2400 (mcd), an emission flow of 7 (lm) and an angle of 120 °. The connection is 12V, 14.4-19.2, power consumption from 1200 to 1700 mA and a lifetime of 60,000 to 80,000 hours







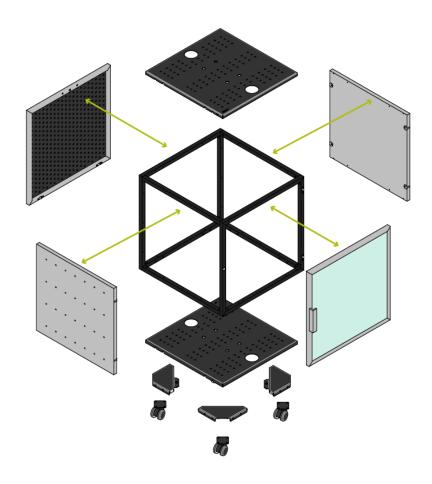


Technical Bucks

ADVANTIS Evolution Technical Bucks are designed to suit the most demanding technical requirements by increasing dimensional flexibility and creating unlimited different shapes and sizes thanks to modular structural aluminium profile system and the intermediate ATS module configurations. This modular design proves to be an essential storage tool for computers without having to worry about storage or design limitations.

All closed compartments are made of a 20x20 square extruded aluminium structure, finished in textured micro NOIR 200 SABLE epoxy paint.

For the laterals, we offer high-quality 20mm thick agglomerated covers, finished in aluminium-coloured



melamine. On request, you can ask for additional materials to embellish the ends of the compartments. On the top we incorporate a plated steel 1.5mm thick tray, finished with textured Epoxy micro paint NOIR 200 SABLE.

Doors

Compartments have 2 types of doors, both with 20x20 aluminium square sections with natural anodized finish, with a 4mm acid-etched or steel perforated plate crystal 1.5mm thick with textured Epoxy micro paint NOIR 200 SABLE finish. (Quality norms were previously described). Tempered glass front doors and translucent acid finish according to specific norms.

The pivoting doors in both the front and rear of the console incorporate stainless steel hinges integrated in the same aluminium frame.





Levellers and grommet

The levellers for closed compartments are made of polyamide (PA 6) and rigid **PVC** grommets according to UNE 23737 and CE marking, or **aluminium** alloy 6060, according to UNE 38-337-82 (on request).

Degree of IP protection

The closed compartments line ADVANTIS offers have been designed keeping the UNE 20324 Degrees of protection in mind, provided by enclosures (IP Code). This rule is the Spanish version of European Standard EN 60529 and IEC International Standard 60529.

The IP code is a coding system to indicate the degrees of protection provided by an enclosure against the access to hazardous parts, the penetration of solid foreign bodies, water penetration and in order to provide additional information attached to that protection.

The 1st digit indicates the equipment's level of protection against the entry of solid foreign objects. This value ranges from 0 (not protected) to 6 (totally protected against dust)

The 2nd number indicates the computer protection against the entry of water with harmful effects. This value ranges from 0 (not protected) to 8 (continuous immersion)

ADVANTIS closed compartments and bucks have an IP protection of 20.

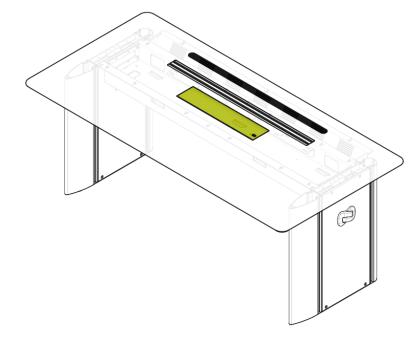
Personal Area

The exclusive **personal area** is an optional space to be used as an auxiliary connection area or a personal

connection area for the user. Comfortable, flexible. Everything at your fingertips, without ever stopping the control.

Its design also allows the user to channel the working area's wiring towards the vertebral beam, unifying design, functionality and benefits for the operator.

There are two versions for personal covers. The recordable personal cover allows the entrance and exit of cables from the workstation to the Beam's interior, where the cover is manually removed from the console without any type of mechanism. The second available option performs the



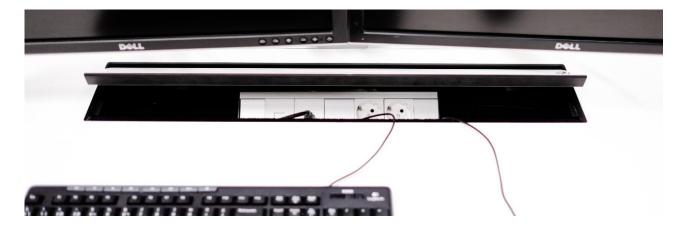
same function but in this case the lid incorporates friction hinges with position control allowing the cover to be pivoted in order to access the interior of the beam and allowing a more convenient lock when rotating to any position. Additionally it is possible to incorporate energy strips under both models of personal covers. Both models are manufactured with 18mm thick phenolic compact, with the same colour as the workstation, with



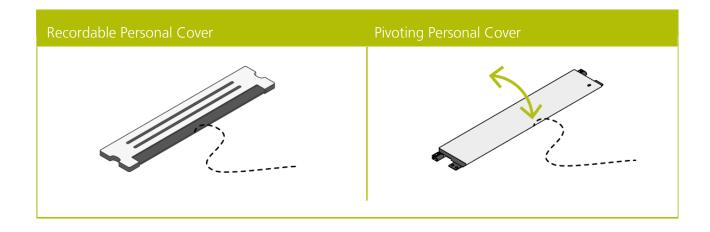




black core and FH surface. High-pressure laminate (HPL) manufactured according to EN 438; composed of cellulose impregnated with thermosetting resins and pressed under high pressure and temperature. Its inner core is of a standard black colour. On request, you can ask for "F quality" MaxCompact which is Euroclass B-s2, d0 fire behaviour.



Optionally you can integrate socket adaptors under the pivoting recordable door. The terminal strips are formed by aluminium channels connecting voice, data and multimedia, and the K45 system facilitates installation since the mechanisms are set-up using direct clipping without tools. For more details on electrification and channelling consoles see Section 6.







4 Organization System for Monitors

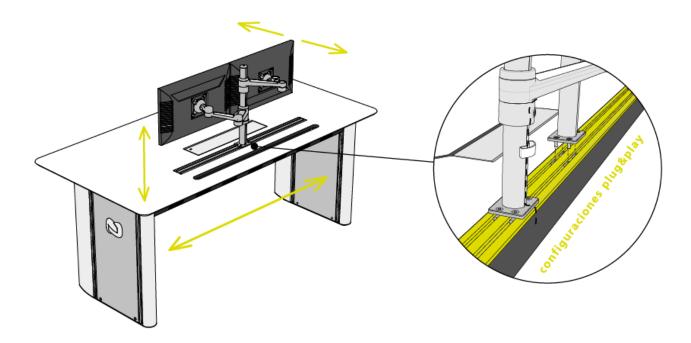
Alternatives for the adaptation of articulated arms on each project have been designed for **ADVANTIS Evolution**, offering the optimal solution for specific needs regarding adaptability, installation, management and ergonomics in each console.

The new organization systems for monitors perfect the integration of articulated arms, facilitating wiring management and the connection to monitors, increasing the chances of adjustment for the arms themselves and thus generating improved operator ergonomics.

Organisation systems for monitors are solutions designed by GESAB and can integrate any articulated arm in the market.

WI-RAIL SYSTEM

Total horizontal control system for articulated arms by an extruded aluminium high profile, with high-resistance dual rail 43x60mm track and adaptable length, fully coplanar with the working surface including anodized treatment for the easy movement of the pole. The aluminium profile is directly assembled into the beam and this in turn incorporates clamping ribs of high resistance.



The union of the pole base to the profile is done using four fastening points with sliding nuts once the profile has been set up. The system enables the easy reconfiguration of each position, quickly and conveniently. The aluminium alloy and treatment is: EN AW-6060/6063-T5.

For projects with Double Side / Trading, the combination of WI-RAIL system with ViewLite articulated arms are ideal for saving space generated due to asymmetric design (see page 20).

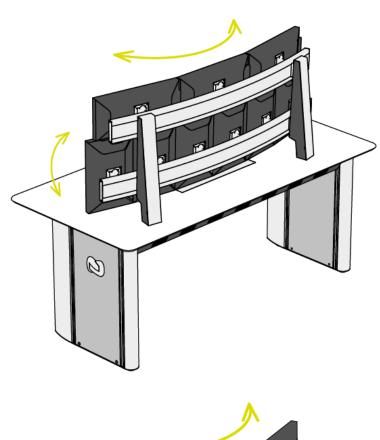


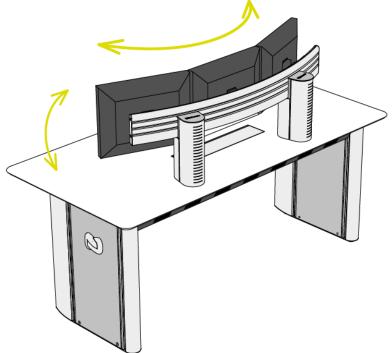


Standard and GESAB AccessRail system

The AccessRail system designed by GESAB provides optimal organization for configurations with a high density of monitors and where cable management is critical. Thanks to the profile system designed by GESAB we can integrate the anchoring monitor system in the same element, allowing mobility in all the profile's length, while the wiring of the monitors is efficiently managed, hiding the monitor cables and leading them inside the structure or computer bucks. The vertical clamping columns are available for configurations of 1 or 2 levels. The aluminium alloy and treatment is: EN AW-6060/6063-T5. Steel plated vertical column. Features previously described.

Optionally, we also have the standard AccessRail version, with similar features regarding its monitor regulation and configuration options, but without the improvement of the hidden wiring management that is included in GESAB's AccessRail version.



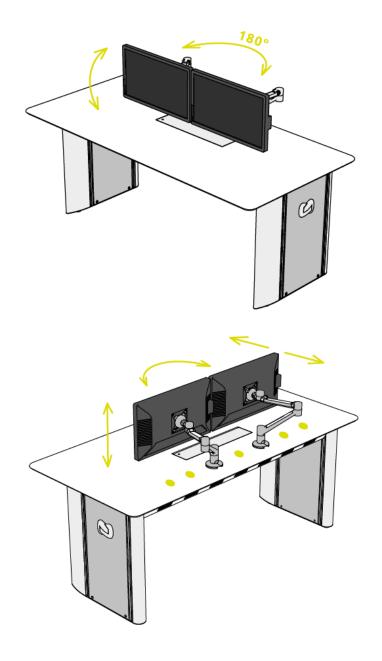






Standard system

The WI-STANDAR system is installed using a Bold fixing screw from the articulated arm itself. In this case you do not need to regulate the whole set's length, as this is replaced by different previously defined fixing points. The WI-STANDAR system keeps the conduit and connection improvements thanks to an integrated grommet in the surface and the direct access to the connection area and the beam's wiring trays. This system has a fixed position and therefore does not increase the possibilities of regulating it.







5 Articulated supports for monitors.

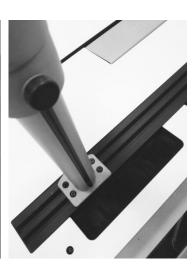
In high-performance environments, the requirements of each operator vary depending on his daily tasks. Ergonomics, flexibility and adaptability are unavoidable elements in the operator's job. This is ensured by professional systems.

GESAB has a wide range of options that adapt to any need related to monitor management, either related to visual and physical ergonomics, installation and maintenance of computers as well as the configuration of work stations.

In order to ensure that the product meets most requirements according to the project, we offer articulated arms with different references and which lead the market.







Teamwork allows us to generate perfect pairs, a close collaboration between the engineers at GESAB and the engineers working for our ergonomics partners, which have given ADVANTIS a new dimension in the arrangement of all display ergonomic systems. Experience, knowledge and the strive for innovation has given both teams the chance to create something imaginable up to now, the perfect adaptation for the world of display.

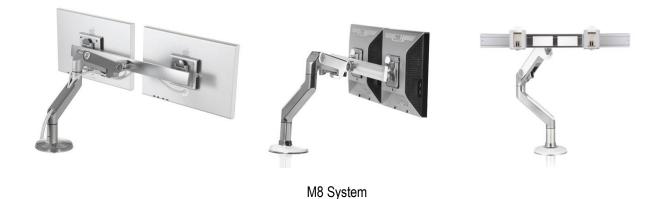






M8 is the perfect fusion of style and strength. Through its unique design, M8 can hold monitors of up to 19 Kg, or dual configurations of up to 18 Kg. Combining a sturdy design with an elegant appearance, M8 is the perfect solution for those work stations that need heavier monitors or multiple monitors.

Its versatility enables it to work with light and small displays only weighing 3.6 Kg. This is especially important for work stations that have one monitor but may require more in the future. M8 has an easy to adjust counterweight inside to provide the correct amount of tension.



Thanks to its high capacity load, M8 can easily handle a dual configuration, using a compatible, optional support for two monitors. With a discreet integrated leveller, we can align the 2 monitors perfectly. The monitors mounted on the support can be simultaneously adjusted, allowing the user to easily modify the entire configuration, improving the ergonomic conditions of the work station.

Specifications

- Modular design: interchangeable pieces and elements that adapt to any application.
- Integrated anti-theft system:
- Capacity for dine tuning, ensuring the perfect alignment for both horizontal monitors.
- Blocking mechanism of 180A protecting walls and panels.
- Integrated management for hiding wiring, improving organization and aesthetics.







M8 details

Features

- Interchangeable fixing options for anchoring.
- Integrated wiring management to hide the cables inside.
- Supports up to 19 Kg.
- Capacity for two monitors of up to 61 cm wide.
- 27.9 cm high adjustment.
- 55.9 cm depth adjustment.
- Weight: 6.8 Kg.
- Finish options: brushed aluminium with white or silvery trims. Contains 62% of recycled material. 99 % recyclable.
- Helps in the acquisition of LEED, CI, NC and EB credits.
- 10 years warranty for 24/7 use.

ViewLite is a scalable solution for monitor supports. The VL system offers simple and versatile configurations, without the need to interfere with existing equipment and without the need to add new components, providing unprecedented flexibility. It supports up to 4 monitors per pole, from a simple one-arm configuration to up to 8 monitors with only two poles.



ViewLite system





Specifications

- Adjustable depth without pre-set levels higher than 450mm
- Rotation 360°, inclination: +90°/-55°, turn: 360°
- VESA: compatible with MIS-D 75 x 75/100 x 100mm
- System Plug & Play VESA Quick Release with safety lock
- Anti-rotation adjustable lock for the monitor
- Maximum weight capacity: 8kg/monitor
- Monitors of up to 24"/24"W
- Integrated wiring management



ViewLite details

Features

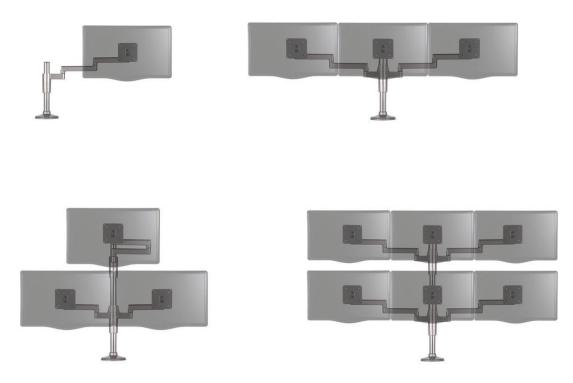
- Extendible 450mm pole.
- Supports up to 4 monitors with one pole.
- Save the computer's central space
- Tripped organization system
- Allows the use of dynamic ViewLite+ model
- Enables re-configurations on site, without interfering with the existing equipment.
- Individualised configuration option
- 5 years warranty for 24/7 use.

M/FLEX is the most scalable solution for the support of monitors. The M/Flex system offers simple and versatile configurations, without the need to interfere with existing equipment and without the need to add new





components, providing unprecedented flexibility. It supports up to 6 monitors, from a simple one-arm configuration to up to 12 monitors with only two connected poles.



M-Flex system

Specifications

- Surface, vertical or costume mounting options depending on the needs of each user.
- Possibility of adding elements to the poles without altering the configuration.
- Up to a total of five pole heights.
- Adaptable to one or two rows.
- The user can have up to 3 monitors per row.
- The integration design of the pole enables the user to simply add more elements to the set.
- Simple support system turns into double support system.
- Double support system can turn into triple support system.
- New configurations can be added, without removing the poles or the system.







M-Flex details

Features

- Supports up to 6 monitors with one arm.
- Supports up to 12 monitors, fixed by two connected arms.
- Uses two arms for M2 and M8 monitors. Awarded design.
- Enables re-configurations on site, without interfering with the existing equipment.
- Individualised configuration option
- 15 years warranty.

Sustainability

All the products selected by GESAB meet our most demanding sustainability requirements, manufactured with high quality recycled materials, efficient packaging. We use less materials and energy in the production and the shipping of our products.

NOTE: In this section we have exclusively described the models selected for this technical specifications document. ADVANTIS Evolution adapts a wide range of solutions and systems for the organization of monitors with components, pieces and adaptations developed by GESAB.





Ergonomic benefits of articulated arms

Problems with traditional systems:





Figura 1. Deficiencies in the position of the monitor

- Right distance to the screen but wrong height, producing stress in the neck.
- Right height but wrong distance from the screen, producing visual strain and pain in the back and the neck.

The articulated arms for TFT/LCD monitors provide the correct distance and height, ensuring a correct position for work and optimising space.

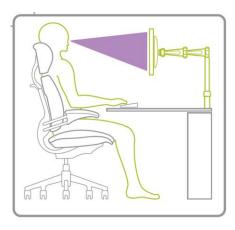


Figura 2. Correct posture using articulated arms





6 Console electrification and channelling

Both in the vertebral beam as in the ATS area of the technical bucks, aluminium channels are integrated for the connection of voice, data and multimedia. With the K45 system, installation is much faster, since the mechanisms are installed through direct clipping without the need for tools. The mechanisms of the K45 range are compatible with all connectors on the market and are made of self-extinguishing and halogen-free materials, guaranteeing the safety of people, equipment and information



Multibases:

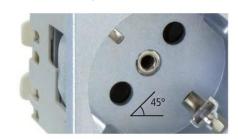
Multibases can be combined using the AC11 connection accessory.





High density of connections:

45° sockets allow for many connections to be made in a small space.



Shutter:

Protection



All of our bases have a protective shutter to avoid direct contact with active parts.

Selective security



They protect the SAI line, ensuring only IT equipment is connected.

Fast and screwed terminal connection:



Both rigid and flexible 2,5 mm2 cables are allowed.

42







All of our bases have a protective shutter to avoid direct contact with active parts.



Insert the connection block into the contacts on the base.



Push together until the connection block is completely inserted into the contacts.



Repeat the process with the next base(s) successively.

K45 VOICE AND DATA BOARDS

Flat plates:

Flat plates offer total integration into boxes and channels.



1 connector for various types of tubes:



K45 MULTIMEDIA PLATES (VDM)

New system for easier connections. Not welded.



Connected by screws





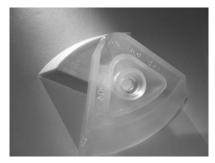




7 Traceability

To ensure the traceability of our product and to always provide a good service to our customers, all GESAB products are identified with a plaque displaying the model, year of manufacture and product reference code. In this way, if there is any fault with our product, we can act quickly and diligently.





The set of pre-established procedures, identification of parts and their marking, let us know the history, location and trajectory of our products throughout the manufacturing chain, supply and installation at any time.





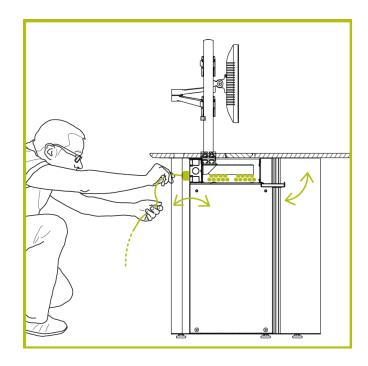


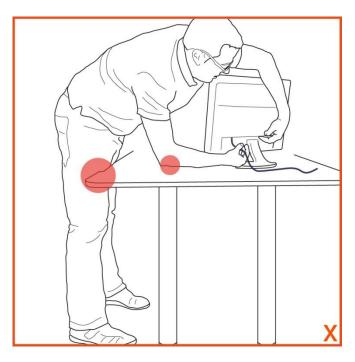
8 Product Ergonomics.

One of the most important aspects for operators is applied ergonomics, both in terms of products (consoles, display systems, chairs, equipment, etc.) and in its application and use. Therefore, GESAB defined and implemented specific solutions directed at health: use and safety in the workplace.

Ergonomics has been one of the main foundations for the design of the control platform ADVANTIS Evolution, not only ergonomics conceived as the correct position and space for the operator, but also as a concept integrated to the console's function itself. The ergonomics applied at ADVANTIS Evolution encompasses from the visual comfort of the operator, to the working posture of maintenance technicians.

Ergonomics in the sequence of use: From the early design phase this concept of ergonomics is applied, not exclusively focusing on improvements for the primary user, which in this case it is the operators that will use the console, but by improving the way of working of all users involved in using this platform control. The beam is very accessible from anywhere in the console and guarantees both installers and maintenance technicians a more efficient management of time and minimal impact on the performance of the console.





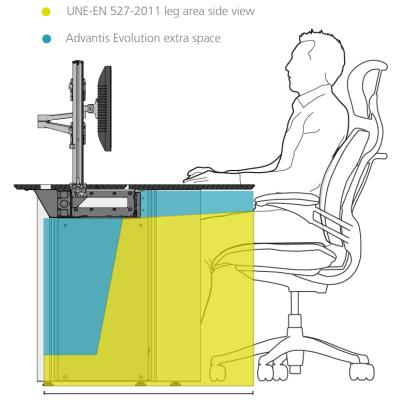






<u>Physical ergonomics (ISO-527-2011, ISO11064-3):</u> For the making of all ADVANTIS Evolution products, we have implemented all the following considerations regarding work stations:

- The size and distribution of the workbench is designed bearing in mind the fact that they greatly
 - condition the postures adopted by the worker during the task.
- The height of the work surface is adequate according to the situation of the worker's hands when developing the task and the level of effort and degree of visual attention that is required for these kind of positions working in a 24/7 regime.
- Also, to avoid forced postures during interaction with the desktop, ADVANTIS Evolution range enables objects, tools or devices to be handled within the employee's reach so that they are more accessible. The normal range area (main) is known as



Minimum 800 mm

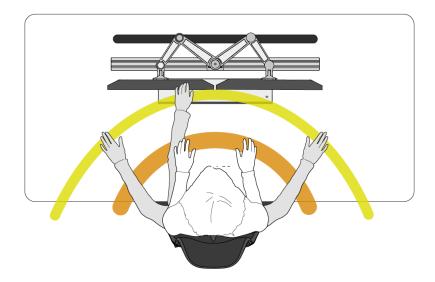
the area which the user can comfortably access with the arm bent at an angle of 90 °. However, the area of maximum range (secondary) is any area that we can cover with the arm's length. In this secondary area we find the personal connections, under a pivoting cover that hides the connections.







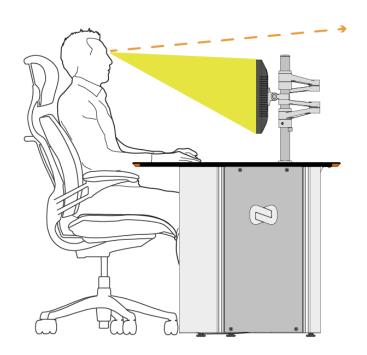
Horizontal Scope: In the following chart we can see the areas of main range (orange) and secondary range (green):



The width and length of the table or work station mainly depends on the number and size of items that are used during the task, i.e., the work station should be the right size for all the items within the area to be placed within the person's reach. The **ADVANTIS Evolution** line offers a wide range of solutions, depending on the organizational needs of the job and adapting the width, length and shape to each specific need.

<u>Visual ergonomics (ISO UNE-EN 9241)</u>: GESAB has a high range of articulated supports for the installation of TFT LCD monitors with format / VESA 75x75 / 100x100, which must be incorporated into the control consoles within

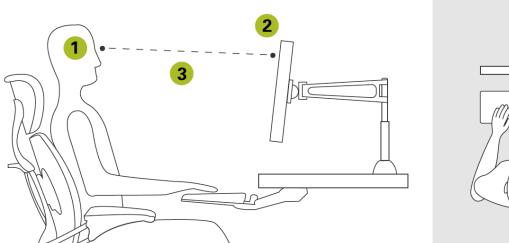
24/7 format environments. The integration of these supports ensure and facilitate the correct ergonomic position of the operator, minimizing the risk of injury in the short and long term by adopting overly rigid positions within the work environment. On the other hand hinged brackets facilitate the organization of all monitoring systems that the operator must manage within their own environment or workplace, ensuring proper disposal and savings in space.

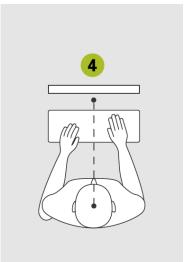






Basic Options in the positioning of monitors:



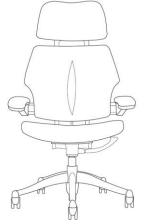


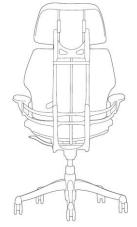
- **1. Height:** The top edge of the screen should be at eye height or slightly below.
- **2. Angle:** Tilt the top of the display back so that the screen surface is perpendicular to the user.
- **3. Distance:** The distance directly depends on the resolution and size of the monitor, but as a general guide they should be positioned at a distance equal to the length of the extended arm. It is imperative the contact of the back with the back of the chair to minimize the damage caused by bad sitting postures.
- **4. Alignment:** Monitors should be cantered with the centre of the body to minimize neck and torso rotation. In the case of having multiple monitors it is recommended to analyse their configuration to avoid repeated gestures.

Ergonomic seating.

It is very important to use ergonomic chairs for operating environments called 24x7 with conductive upholstery. Synthetic fabrics generate static charges, an element of risk that may result in

semi-circular lipoatrophy.











9 Health.

Health in the workplace, and even more in operators posts working 24x7 is a priority of our company. The studies and recommendations made on this issue reflect three main groups to consider:

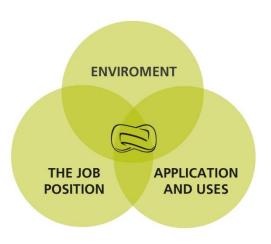
All these factors influence one of the most worrying diseases in current jobs, semi-circular lipoatrophy.

Although there is not clear understanding of the causes of this condition, we speak of three possible hypotheses to eliminate in order to eliminate or reduce the condition by controlling these risk factors in the workplace:

- Microtrauma: Produced by repeated pressure on the worker's body
- Electromagnetic fields: Influence of electromagnetism in people.
- Static electricity: Transmission of static electricity.

To eliminate these risks, ADVANTIS EVOLUTION series is designed based on the recommendations of different studies that we detail in each of the sections.

In order to avoid microtrauma, the work surfaces are made with bevelled 18mm phenolic compact (or 20mm) and with rounded edges in all its contact areas, eliminating any kind of ridge or sharp angle. To avoid possible electromagnetic transfer of metal parts, work surfaces are suspended on Isoblock Nylon PA6 25mm spacers, generating a security camera and at the same time, creating a flexible element that prevents the overpressure of any body part.



To eliminate possible **electromagnetic fields** caused by the wiring it is necessary to generate an electromagnetic shielding and connected to the ground.

The ADVANTIS NG system through the T-shaped spinal beam and closures by hinged covers, generates a metallic covering on all cables, minimizing the effect of electromagnetic fields and in turn it becomes ready the connection to the ground. The strategic positioning of the vertebral rear beam and distance separates the operator from possible contacts and transfers with the metal parts.

Static electricity is a preventable and controllable factor. The elimination of this effect involves the control of various parameters such as: relative humidity (between 45% and 65%) used materials (insulating and conductive), suitable grounding, wardrobe operators (it is recommended not to use clothes synthetic).







The environment: the place where the activity is carried out.

Materials: proper insulation, minimize or reduce static charges, use of acoustic materials, colours and finishes to eliminate stress environment. All this to the advantage of workers which will have an impact in effectiveness and efficiency.

Lightning: Lighting related studies ensure the correct lighting of the workspace and must be specific to each application or task.

Air conditioning: Control of the environment's relative humidity, which should always be above 45%, as well as the constant renewal of air, which should be greater than 35%.

Work stations: The elements that form the station

Consoles: Professional solutions specifically designed for operational environments. All high-performance environments require a great amount of technology and equipment, which must be located and managed correctly. The adequacy of the equipment as well as the substantial electrical and data wiring require specific treatment to eliminate possible injuries to the operator and minimize risks from electromagnetic fields that could be generated (risk of semi-circular lipoatrophy)

Visual solutions: In high performance environments, the requirements of each operator vary depending on his daily activities, ergonomics, flexibility and adaptability. These are essential elements for his post and all this is achieved thanks to professional systems.

Ergonomic seating. It is very important to use the so-called ergonomic chairs for 24/7 operating environments and in turn use natural and resistant upholstery. Synthetic fabrics generate static charges which is one of the risk elements to get semi-circular lipoatrophy.

Application and use: Correct products for each post and their suitable use.

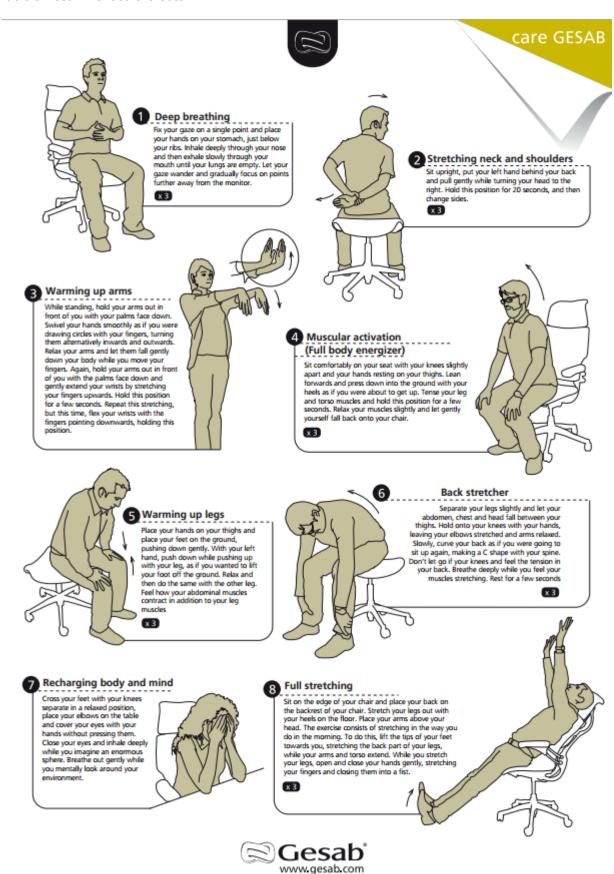
ADVANTIS Evolution's professional consoles for operating environments are designed based on the UNE-EN-527-1, ISO 11064-3 and ISO TC159, ensuring full compliance with their requirements and specifications and improved on aspects of risk according to studies and recommendations.

In addition and as an upgrade for users, GESAB has published an exercise guide for operators regarding high-performance environments, which we strongly recommend in order to avoid injury and improve health.





Table of recommended exercises







10 Reference materials and norms

All product designed by **GESAB** comply with current regulations on ergonomics, related UNE standards and norms published by prestigious institutions related to job design with visual display of data and control centres.

- UNE-EN 527-2011
- ISO 11064-3 / ISO TC159
- NTP 602: The ergonomically designed workstation with display screens.
- Law 31/1995 from November 8 on the Prevention of Occupational Risks.
- Royal Decree 39/1997 from January 17, approving the Regulations for Prevention Services.
- Royal Decree 486/1997, from April 14, through which the minimum requirements for health and safety in workplaces are established.
- Royal Decree 488/1997, from April 14, on minimum safety and health requirements for work with equipment that includes display screens.
- Royal Decree 1801/2003, from December 26 on general product safety.
- Norm UNE-EN ISO 11064 (parts 1, 2, 3, 4, 6 and 7). Ergonomic design for AENOR control centres.
- Technical Guide for the assessment and prevention of risks related to the use of computers with display screens. INSHT.
- Manual of technical standards for ergonomic job design with display screens. INSHT.
- Ergonomic checkpoint list: Ergonomic checkpoints. OIT.
- Recommendations guide for the design and selection of ergonomic office furniture. Instituto de Biomecánica de Valencia.





11 Quality Certificates and Approvals

Quality and environmental Certificates and Approvals





















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