# YACHTING











# **CUSTOM BRIDGE PANELS** aesthetic, ergonomic & quality

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RADIO ZEELAND DMP

### **YACHTING**

For decades, Radio Zeeland DMP has proven its value on challenging projects. As the perfect project partner we are able to assist you in developing and engineering the right concept for the best solution, optimally tailored to the desires and wishes of the customer.

We can deliver products from a simple control panel to a completely pre-fabricated bridge console with all data acquisition elements and remote control stations, from a 20 meter pleasure craft to a 141 meter hyper yacht, we offer the solutions for which the standard equipment manufacturers will have to pass. The design is in close collaboration with the owner, taking into consideration the specific wishes and demands, but also the overall design language of the ship. The result is a matching solution that enhances the experience onboard.

Due to the high level of customization of our products and projects we maintain a very strict manner of quoting, engineering, producing and commissioning of the offered equipment. Depending on the project we follow underneath mentioned work flow.

We use seven different phases, from Concept, Production engineering and design, Production, FAT (Factory Acceptance Test), Installation and Commissioning until Sea trials.

When we start a project, we create a check list with all information of the complete system, including 2D sketches of delivery. This has to be signed off as agreed. Thereafter, we make drawings that have to be approved by the customer. In the third phase, the equipment and parts are pre-tested and programmed before the assembly. After that, the Factory Acceptance Test commences, so that de customer can check the complete functionality of the scope of supply (depending on availability of 3rd party equipment). When the consumer agrees, we are ready for installation, commissioning and sea trials, where the full final check of the scope of supply is conducted. An explanation of the Radio Zeeland DMP equipment is given to the ship's captain and engineer.

For us, your project is unique and requires a similar unique approach. Custom built solutions means going beyond the standard elements to achieve your perfect wheelhouse experience. Please browse further to inform yourself with the possibilities.



### **Foil Panels**

The Radio Zeeland DMP foil bridge panels consist of a metal support structure with a polyester film surface finish. Our designs allow your bridge to blend in smoothly with your highly personal interior design. Where others only mount navigational equipment, Radio Zeeland DMP goes to the next level by fully integrating all equipment, navigation and communication systems in a stunning looking foil panel.

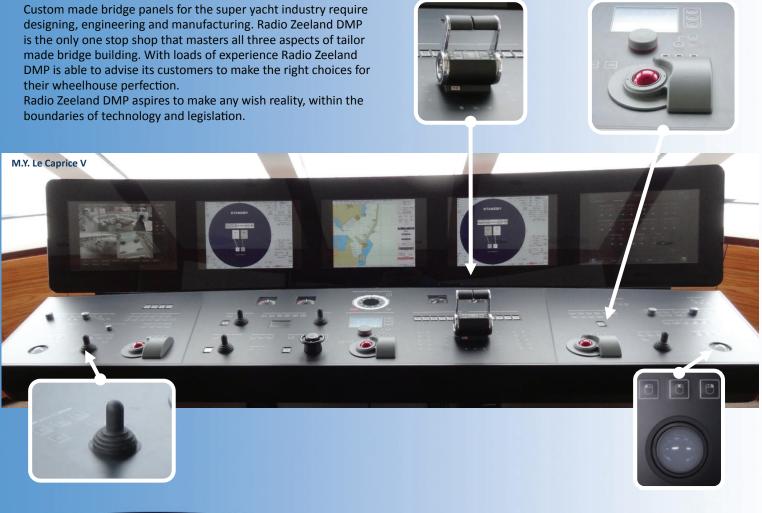
### Custom

### Design

Visualization, interaction and aesthetics go hand in hand when designing tailor made bridge panels.

Radio Zeeland DMP foil panels provide perfect situation awareness and control feedback by means of LED annunciation.

Panel design, layout and dimming include all elements and are adapted to the overall panel look-and-feel. All functions can be visualized as desired.



### **Full integration**

Radio Zeeland DMP strives to create panels in whatever way the customer demands. The integration of external equipment into the foil panels is an expertise we are known by. Buttons, joysticks, trackballs, throttle levers or gauges can all be processed behind one smooth foil, depending on equipment and classification.

Radio Zeeland DMP consults suppliers of the soon to be integrated equipment, to ensure warranties and the reliability of this product.





### Integration type

Radio Zeeland DMP acknowledges different levels of integration. External equipment, dials, trackballs and pushbuttons can all be fully integrated, losing those hideous fronts or frame's to combine for one smooth panel.

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M.Y. Galactica Star - HeesenYachts

M.Y. Galactica Star - HeesenYachts

If this level of finish is not required, Radio Zeeland DMP can offer to integrate equipment in other ways as well, keeping the original equipment in tact.



### **Applicable outside**

The foil panels are applicable outside. To be used as wing, helm, or fly bridge station, the panels need to be able to endure harsh environments.

Equipment mounted through the foil are integrated with an ingress protection rate of 67 or higher to ensure that the electronics will be protected even during temporary submerging.





### **Colored foil panels**

Wheelhouse control and display panels are bound to match the interior design of the vessel. Therefore the RZ foil panels are available in any RAL color.

Next to flat colored foils, it is also possible to apply foil with textures and patterns, like carbon, wood grain, or even brushed stainless steel.





### Hatches

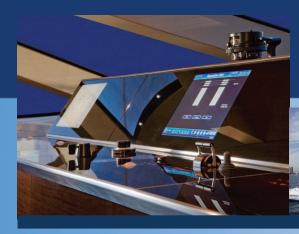
Radio Zeeland DMP has developed a unique hatch system. The foil surface is continued on the hatch itself, which results in a perfectly blended in hatch system.

Charts and not often used or emergency equipment can be integrated out of sight, by means of the Radio Zeeland DMP hatch system. The hatch lid slides vertically into the control panel, so that equipment behind the hatch remains accessible. The hatch can also be provided as a hinging hatch.

Different sizes, and depths are possible depending on the space in the console.







## **GLASS PANELS**

### **Glass Panels**

The Radio Zeeland DMP glass bridge panels consist of a metal support structure with a glass surface finish. Our designs allow your bridge panels to blend in smoothly with your highly personal interior design. Where others only mount navigational equipment, Radio Zeeland DMP goes to the next level by fully integrating all equipment, navigation and communication systems in a stunning looking glass plate.





### **Unique characteristics**

Glass available in <u>any RAL-color</u>, Possibility to add in <u>hinged or slide in hatches</u>, Panels available in <u>any shape</u>, size up to 3m in width, Equipment fully <u>intergrated behind the glass plate</u>, Applicable on <u>wing and helm stations</u>, IP-67 protected, Minimum reflective glass <u>to reduce reflection</u>, <u>On demand implementation</u> of any other elements. 75% less reflective glass than current industrial standard



### Hatches

Radio Zeeland DMP has developed a unique hatch system.

The glass surface is continued on the hatch itself, which results in a perfectly blended in hatch system.

Maps and not often used or emergency equipment can be integrated out of sight, by means of the Radio Zeeland DMP hatch system. The hatch lid slides vertically into the control panvel, so that equipment behind the hatch remains accessible.

The hatch can also be provided as a hinging hatch.

Different sizes, and depths are possible depending on the space in the console.



### Design

Visualization, interaction and aesthetics go hand in hand when designing tailor made bridge panels.

Radio Zeeland DMP glass panels provide perfect situation awareness and control feedback by means of LED annunciation. Panel design, layout and dimming include all elements and are adapted to the overall panel look-and-feel. All functions can be visualized as desired.





### **Full integration**

Radio Zeeland DMP strives to create panels in whatever way the customer demands. The integration of external equipment into the glass panels is an expertise we are known by. Buttons, joysticks, trackballs, throttle levers or gauges can all be processed behind one glass sheet, depending on equipment and classification.

Radio Zeeland DMP consults suppliers of the soon to be integrated equipment, to ensure warranties and the reliability of this product.

### **Integration types**

Radio Zeeland DMP acknowledges different levels of integration. External equipment, dials, trackballs and pushbuttons can all be fully integrated, losing those hideous fronts or frame's to combine for one smooth panel. If this level of finish is not required, Radio Zeeland DMP can offer to integrate equipment in other ways as well, keeping the original equipment in tact.

### **Applicable outside**

Radio Zeeland DMP glass panels are applicable outside. To be used as wing, helm, or fly bridge station, these panels need to be able to endure harsh environments. Equipment mounted through the glass surface are integrated with an ingress protection rate of 67 or higher to make sure the electronics will be protected even during temporary submerging.





### Classifications

Radio Zeeland DMP is able to produce compliant to all classification societies, such as Lloyds, ABS and Rina. We can either produce navigational equipment for non classified vessels or vessels with the highest notations such as SOLAS, Large Yacht Code and Passenger Yacht Code.





## **OUTDOOR PANELS**



### **Radio Zeeland DMP outdoor Panels**

The Radio Zeeland DMP outdoor panels are available in glass and foil variants. The glass and foil techniques are similar to the indoor techniques, though because of the extreme environment out at sea, these panels have to endure a lot more than its indoor sibling. Integrated equipment will be mounted in such a way that water is unable to leak through.

**Control panels which match the design of your vessel!** Radio Zeeland DMP outdoor panels combine an intuitive control system with great looks, for your custom designed vessel.

### **Possibilities**

We can create wing panels, complete helm stations and fly bridge panels. Outdoor panels can be custom made for any possible place or function on the vessel. The type of integration for these panels mainly rest on the choice of the client. Radio Zeeland DMP will always do its utmost to comply to customer demands.

3<sup>rd</sup>party equipment, constructions, or any other personal demands are all implementable with Radio Zeeland DMP panels. All our outdoor panels are IP-67 protected.

Any panel shape, size or color is available.

### System engineering

Radio Zeeland DMP produces more than just a panel with buttons or joysticks. With years of experience in system engineering, we are able to provide entire navigational systems, including software engineering, mechanical engineering, and communications between external and Radio Zeeland DMP equipment. With having all this knowledge and expertise in house, Radio Zeeland DMP relieves its customers from backbreaking problems.







**Courtesy of Cory Silken** 

S.Y. Hanuman

### From idea to reality

Radio Zeeland DMP has made numerous designs. The idea is to keep aesthetics and appearance top priority whilst creating a user friendly system. Our customers formulates requirements, which our design team will translate into a proposal. Our customers are the beneficiary of our field experience, with which we are able to give adequate advice about the required layouts and systems. With this concept your control or display panels will be engineered and built to finally enrich your vessel.





### **Safety panels**

The monitoring of a large vessel is a difficult task on its own. Providing an orderly overview over the entire vessel is an essential task. To provide overview over the position and nature of any alarm, there is no better tool than the Radio Zeeland DMP safety panel.

Safety or otherwise called mimic panels can also be used to monitor navigation lighting, bilges, or pumps.

The layout drawings of the vessel are used to highlight the position of the alarms generated throughout the vessel. During the alarm, the position of the calamity will light op on the overview, providing instant awareness of the situation.

The panels are made with electroluminescent materials which assures a full illumination of deck plans and other views. Providing a perfect and clear readability of the ships mimics.

### **Glass or foil**

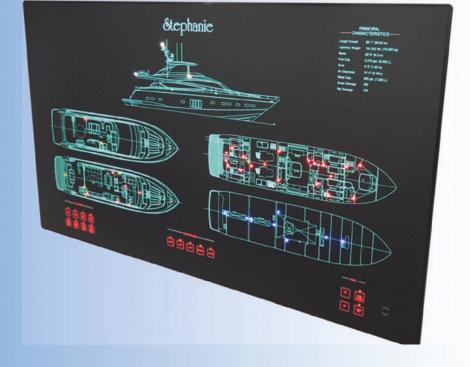
The Radio Zeeland DMP safety panels are available in both glass and foil version. The choice between glass and foil is a matter of taste. When the option between glass or foil bridge panels was created, Radio Zeeland DMP developed a glass safety panel, to go with both type of panels.

As with the glass and foil control panels, safety panels are available in all RAL colors.

### Controls

With the Radio Zeeland DMP safety panels it is possible to add buttons under the foil or glass top layer. No buttons will have to be inserted through foil or glass, keeping the panel's smooth surface.

For example controls for navigational lighting, panel dimming and pumps can be integrated in your safety panel.





### **Shapes and sizes**

As with the Radio Zeeland DMP control panels, safety panels are available in any shape or size. The shape of the panel is cut out, where after the foil or glass print is made.

## CONSOLES



### **Radio Zeeland DMP Consoles**

The Radio Zeeland DMP consoles are designed in such a way that the yard and the end user gain the most advantages of it. All equipment is placed to achieve the highest service friendliness. Drawers and hatches are integrated to store and hide various kinds of equipment and charts.

The Radio Zeeland DMP wheelhouse console structures are built for the integration of navigation and communication equipment and provide a solid base structure for mounting the Radio Zeeland DMP control and displays panels.



### **Installation time**

Because the entire console is produced indoors at our factory, installation time is dramatically decreased. After the console is built, the entire structure can be placed into the wheelhouse, resulting in short installation time on site. This dramatically reduces the amount of effort during the last months of the build for all involved parties. Panels are easily installed on the console as they are perfectly aligned to one another.

After installing the console, control and display panels, the console provides a solid base for any kind of exterior finish.



### Materials

Our consoles are made out of sheet metal.

Upon the customers requirement we can apply any finish to the sheet metal console. Anodized or powder coated surface finishes can make the structure suitable to stay in sight, preventing further need of processing.

The console can also be used as a base structure for the interior panels, to let the console smoothly blend in with the rest of the wheelhouse interior.





### **Ventilation ducts**

Ventilation ducts create a perfect flow of cool air throughout the console to provide sufficient cooling of the equipment. These ventilation ducts can simply be connected to the ships air-conditioning system.

### Racks

Racks are made to slide or pivot out of the console, to achieve good serviceability and to increase the amount of space inside the console during service.

### **Leveling facilities**

Leveling facilities are installed under each console, to level out and fixate the consol once it is placed onboard.

### **Terminal strips**

Terminal strips are connected to the cables that run out of the console. All cables are bundled so that only one cable cluster runs out of the console. With use to the terminal strips, swift installation is made possible.



## SMALL BOAT CONSOLE





### **Small Console**

Radio Zeeland DMP has developed a standard solution for navigation on small vessels or small yachts. The system consists of a control and display panel with two 15" displays. Of course any desired system or computer can be connected to the displays. One of the 15" screens can be used for navigation and the other for alarm monitoring, making it a perfect solution for small yachts or vessels.

### **Control panel**

The following controls are implemented in the standard control panel:

- Lighting controls,
- Trim / horn and anchor controls,
- Bow thruster controls,
- Autopilot,
- Navnet keyboard,
- Tracker ball with left and right mouse button,
- Panel dimming controls,
- Engine start and stop,
- Control head.

### **Display panel**

The standard display panel consists out of two 15" monitors, of which one is fitted with touch screen controls. Both screens are optically bonded bonded behind one glass surface with special techniques to increase readability of the screens. The screens have a XGA-resolution.





### **RZ** Imperium optional

The small boat console can be fitted with RZ Imperium monitoring 64 or 128. This is an alarm monitoring system, fully customizable by the customer. Specially designed templates can be used to create the software pages you want for your monitoring. It is also possible to add pages and fully customize the layout of this page. Gauges, title bars and vessel name can be added. The gauges can be connected to specific I/O-devices. Subsequently the user can add colors and fonts to the gauges to create the desired look. RZ Imperium monitoring is a fully redundant system by the use of 2 PC's. These monitoring pages can be displayed on one screen, leaving the possibility to use the other screen for navigation and charts.



### **Display panels**

High quality maritime displays are the heart of our visualizations. These are suited for the highest resolutions and are available in various dimensions. All can be perfectly mounted behind one glass sheet. Our displays will ensure you of a clear view of all necessary data. Bases upon their design techniques, material and software knowledge, our experienced design team searches for a balance between creative solutions and realistic choices. All to meet your vision of a perfect dashboard.



### **Control panels**

Visualization, interaction and aesthetics go hand in hand when designing your panels. Radio Zeeland DMP panels provide perfect situation awareness and control feedback by means of LED annunciation. These LED's light up as soon as the command is followed up. Panel design, layout and dimming include all elements and are adapted to the overall panel look-and-feel. All functions can be visualized as desired.





## MONITORING

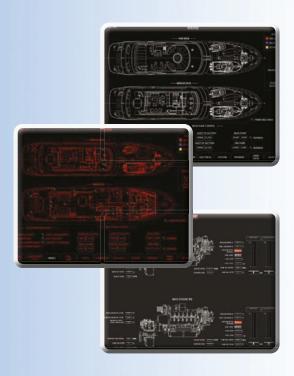


### **Radio Zeeland DMP Monitoring**

Radio Zeeland DMP monitoring provides software solutions for any alarm and monitoring system. We design and engineer software for some of the most complex systems of the worlds most prestigious yachts. With Radio Zeeland DMP alarm monitoring systems your custom yacht will have a customized system that meets all demands.

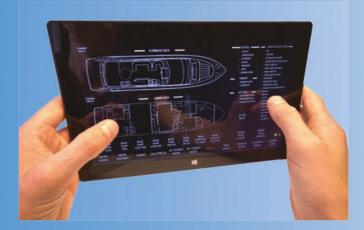
### Night view mode

The monitoring pages can be set to night view mode causing all texts, drawings and gauges to turn into any other desired color. The most common night view colors are Blue and Red, but any other color is possible.



### **Full Custom:**

Alarm and monitoring systems are custom in nature, as every vessel is Different. Radio Zeeland DMP has a software engineering team to fully customize your monitoring pages. Specials can be developed and engineered to your preferences, creating your highly personal system.



### Monitoring tablet:

Radio Zeeland DMP even offers the possibility to deliver a tablet with the entire monitoring system installed. The tablet can be used to monitor alarms in the wheelhouse, engineers cabin, crews mess or any other desired location, so captains and head engineers can monitor the vessel from any place onboard, provided that there is a Wi-Fi connection.

### Freedom:

A bracket for the tablet can be built in to any location aboard to create a secure place for the tablet where it can be charged at the same time.

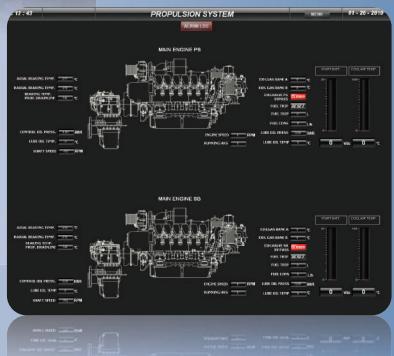


### **Historical trending**

All analog data is stored on the local PC's every 2 minutes to ensure no valuable data is lost. It can be viewed in the software or opened in a spreadsheet program.

### UMS/ Watch alarm

Radio Zeeland DMP has valuable experience with Unmanned Machinery Space systems.



### **Turbo ring**

Our network is set up in a turbo ring, providing all PC's with a dependable connection. All PC's display the same information and have the same functionality. Data is acquired by the server and is distributed through TCP/IP. The Ethernet- switch enabled ring ensures a reliable network system.

### **Communication protocols**

Radio Zeeland DMP has years of experience in designing custom alarm and monitoring systems. These custom pages are based upon a number of communication protocols. Following are the most common protocols Radio Zeeland DMP works with. Other protocols than motioned below are possible.

- MODBUS (TCP)
- CAN BUS (J1939)
- NMEA
- Proprietary languages

### **System diagnostics**

The AMS system provides extensive network information, which can be of great value when trouble shooting the network.



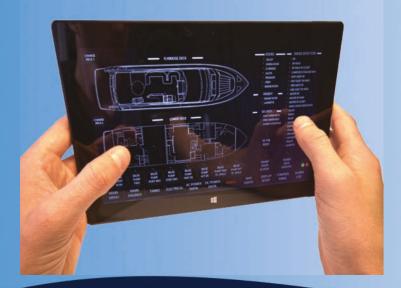
### **RZ Imperium 64 / 128**

Radio Zeeland DMP Imperium, is a brand new concept in vessel monitoring. The Imperium system uses a standard hardware package to create a monitoring system. The software pages of this system are fully customizable by its user. Imperium Vessel Monitoring is available in the 64 and 128 version. These numbers stand for the amount of in and outputs the system contains. Thus the RZ Imperium 64 is expandable to the RZ Imperium 128. With the use of two PC's the system is fully redundant, meaning that if one PC would fail, the other would take over all functions.

### Touch

The RZ Imperium system is also available in combination with a touch screen control. This way the system has the exact same functionality, without the need for a pointer device. The system can be installed on a windows 7 or 8 based platform, so it can also be installed on Windows Surface tablets, provided that it is connected to a WiFi network.





### Customizable

RZ Imperium 64 and 128 both have 6 predefined software pages (templates), being the engine, bilge, tank, electrical/generator/batter, navigation lights and alarm log- page.

Depending on the version 6 or 8 software pages can be fully customized to user preferences. The 6 predefined software pages or templates can be used when desired.

Gauges, numeric or analogue can be added and scaled, subsequently colors, size and position are easily defined with the customize tools. The RZ Imperium monitoring system allows it user to compose their own monitoring system for their vessel.

### **RZ Imperium 64**

#### Hardware:

- One (1) RZ Imperium junction box.

- 64 I/O points,

 1x SIGMA 1100 Engine monitor display (= 2x J1939),
 2x ModBUS IP input, up to 25 consecutive inputs or holding registers each. No conversion, - Redundant network switch,

- Breakers.

- One (1) i5 ruggedized marine PC,
- -One (1) 19" touch screen display, high brightness,
- One (1) RZ license dongle.

#### Software:

AMS software with six (6) pre-defined pages. Upon install the customer can select the pages he wants to add. He can also add 2 fully customisable (empty) pages. Pre-defined pages:

- Engine page
- Bilge page
- Tank page
- Electrical/generator/battery page
- Navigation lights page
- Alarm log

### **RZ Imperium 128**

#### Hardware:

- Two (2) RZ Imperium junction box.

- 64 I/O points,

 1x SIGMA 1100 Engine monitor display (= 2x J1939),
 2x ModBUS IP input, up to 25 consecutive inputs or holding registers each. No conversion, - Redundant network switch,

- Breakers.

- Two (2) i5 ruggedized marine PC,
- Two (2) 19" touch screen display, high brightness,
- One (1) RZ license dongle.

#### Software:

AMS software with six (6) pre-defined pages. Upon install the customer can select the pages he wants to add. He can also add 8 fully customisable (empty) pages. Pre-defined pages:

- Engine page
- Bilge page
- Tank page
- Electrical/generator/battery page
- Navigation lights page
- Alarm log

Software is suitable for displays with a 4:3, 5:4 and 16:9 aspect ratio.







### Options

#### Tablet:

- One (1) Windows Surface Pro 64Gb tablet,
- One (1) RZ Imperium tablet application,
- One (1) WiFi access point.

#### Type approved system:

- Type approved software, displays and computers.

#### Cellular module:

- Sends alarms signals towards programmed phone numbers.

## **GLASS DISPLAY PANELS**



### **Touch screen**

One or more displays can be fitted with projected capacitive touch screen controls if desired. Precious space on the dashboard can be saved by adding a touch screen, because there will be no more need for pointer devices.

### **Shapes**

To create a product that can be applied on every vessel, Radio Zeeland DMP allows its customers to choose the desired size and glass sheet. This glass sheet can for example contain round shapes, to be implemented in the wheelhouse interior. Behind this glass sheet, the monitors will be mounted and bonded.

This way, the desired custom display panel can be made, with a standard solution.

### **Glass display panels**

Radio Zeeland DMP has built many display panels over the years. The expertise to build a spot on display panel is something we are known by. Radio Zeeland DMP offers the possibility to have a semicustom display panel built for your vessel. The customer can choose between one, two or three displays, which we will built behind one glass surface.

The display size is chosen by the customer, as is the shape of the glass sheet. All displays will be optically bonded behind the glass, to enhance viewing angles and display readability.

### Sizes

The following display sizes are available with these display panels.

The sizes of the displays in a one, two or three monitor panel have to be the same.



### **Curved glass display panels**

Display panels can take in a lot of space in the wheelhouse. With multiple screeds lined up, the outer screens can be

to far away to sustain a good readability.

When the screens are slightly turned towards the operator, it can favor the readability. When applying a glass panel we have the option of a curved glass sheet, to make sure the operator has good sight on all monitors.











### **Displays**

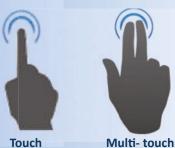
RADIO ZEELAND DMP has its own line of high brightness LED SLR(Sun Light Readable) displays, up to 1800 cd/m2 / NITS.

All displays are standard with :

- Multi / DUAL touch, projective capacative touch screen.
- Super high bright LED panels up to 1800 cd/m2 / NITS.
- AR (Anti Reflection) hard coated full glass front IP 66 waterproof, for helm or open flybridge use.
- Optical bonding technology enhanced glass for all displays
- MCS (Multi Control Selector) on front, full dimming/ OSD / ON&OFF.
- Capacitive source select switch in glass, VGA/DVI/HDMI/COMPOSITE
- Temperature regulated fan air control
- Available in 15 / 17 / 19 / 24 inch
- Flush- and Desktop mountable
- Packing includes Desktop bracket and rubber seal for IP 66 flush mounting
- Made in the Netherlands, Dutch design & Dutch Quality.

### **Touch screen**

All displays can be fitted with projected capacitive touch screen controls if desired. Precious space on the dashboard can be saved by adding a touch screen, because there will be no more need for pointer devices.





### **Technical specifications**

#### **15" High brightness displays**

Brightness Aspect Ratio / max resolution Contrast ratio Viewing angle LR / UD Power input Power consumption Operating temperature Full glass Front IP 66 Multi touchscreen MCS, Multi control selector, IP 66 Source select on front Standard inputs

#### 1800 cd/m<sup>2</sup> LED 4:3 / 1024x768 / XGA 700 160 / 140 9-34V 30 Watt -10 to 70C' AR coated glass, optical bondend Yes, projective capacitive Dimming / OSD (Engineering)/ ON/OFF capacitive switch on glass front VGA, DVI, HDMI, Composite video

1500 cd/m<sup>2</sup> LED

1000

160 / 140 9-34V

50 Watt

-10 to 65C'

5:4 / 1280x1024 / SXGA

AR coated glass, optical bondend

VGA, DVI, HDMI, Composite video

Dimming / OSD (Engineering)/ ON/OFF capacitive switch on glass front

Yes, projective capacitive

#### **17" High brightness displays**

#### Prightnoss

Brightness Aspect ratio / max. resolution Contrast ratio Viewing angle LR / UD Power input Power consumption Operating temperature Full glass Front IP 66 Multi touchscreen MCS, Multi control selector, IP 66 Source select on front Standard inputs

#### **19" High brightness displays**

#### Brightness

Aspect ratio / max. resolution Contrast ratio Viewing angle LR / UD Power input Power consumption Operating temperature Full glass Front IP 66 Multi touchscreen MCS, Multi control selector, IP 66 Source select on front Standard inputs 1500 cd/m<sup>2</sup> LED 5:4 / 1280x1024 / SXGA 2000 160 / 140 9-34V 35 Watt -0 to 50C' AR coated glass, optical bondend Yes, projective capacitive Dimming / OSD (Engineering)/ ON/OFF capacitive switch on glass front VGA, DVI, HDMI, Composite video

#### 24" High brightness displays

#### Parameter

Brightness Aspect ratio / max. resolution Contrast ratio Viewing angle LR / UD Power input Power consumption Operating temperature Full glass Front IP 66 Multi touchscreen MCS, Multi control selector, IP 66 Source select on front Standard inputs 1000 cd/m<sup>2</sup> LED 16:10 / 1920 x 1200 / WUXGA 1000 160 / 140 9-34V to be defind -0 to 50C' Black glass, optical bondend NO, non touchscreen Dimming / OSD (Engineering)/ ON/OFF capacitive switch on glass front VGA, DVI, HDMI, Composite video







## HIGH BRIGHT WATER COOLED DISPLAY 4000nits

Radio Zeeland DMP High Bright Display 19" / 22" / 26"

The 19, 22 and 26 inch high bright screens are designed to provide the customer with a clear, sharp and bright image under any condition, night or day. These screens come without external frames, making them suitable for integration into cabinets, panels or other constructions.



#### Brightness

With a minimum brightness of 0.05 cd/m<sup>2</sup> and a maximum brightness of 4000 cd/m<sup>2</sup> these screens are designed to provide optimal viewing comfort and image quality even during the darkest nights or the brightest days.



#### **Touch Screen**

Our high bright screens are also available with touch screen controls. The optional touch screen allows the user full control of any application without using an external mouse.



#### **Separated electronics**

Both the 19, 22 and 26 inch Water Cooled display have a separate module for all the electronics (backpack). This means that all electroics are mounted on the back cover of the screen.



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#### **3**<sup>rd</sup>**Party interface**

The 3<sup>rd</sup>party interface allows a custom interface to be used on the display. Whether you want buttons, touch screens or third party equipment to control your screen is up to you. Even communication over Ethernet is possible, making this display suitable for a variety of purposes.



#### **Mounting angle**

The Radio Zeeland DMP high bright screen is resistant to solar loading which makes it very suitable for outdoor use. These water cooled displays will not show black spots when exposed to direct sunlight, creating the possibility to mount them in a horizontal position. With this possibility the Radio Zeeland DMP High Bright Screen is the only one of its kind.







### **Technical specifications**

#### **Mechanical and environmental specifications**

		22"	Unit
Display Size diagonal	480	558	mm
Weight Screen	16 +/-	18 +/-	kg
Operating Temperature	-10 to +50	-10 to +50	°C
Storage Temperature	-20 to +60	-20 to +60	°C Max
Humidity	99(non condensing)	99(non condensing)	%

#### **Optical and picture specifications**

		22"	Unit
Active Area	376.32 x 301.056	473.76 x 296.10	Mm
Resolution	1280 x 1024	1680 x 1050	Pixel
Aspect Ratio	4:3	16:10	-
Contrast Ratio	400 - 900	600 - 1000	-
Brightness	0.1 - 4000	0.1 - 3000	cd/m2
Surface Treatment	Anti-Glare Coating	Anti-Glare Coating	-
Viewing angle	80° all directions	80° all directions	-
Backlighting	LED coolwhite	LED cool white	-

#### **Electrical specifications**

		22″	Unit
Input Voltage	90 - 264	90 - 264	VAC
Input Frequency	47 - 63	47 - 63	Hz
AC Current (max.)	3.0	3.0	А
Max. Power	650	650	W

#### Liquid Cooling System specifications

		22″	Unit
Coolant Temperature	12 - 22	12 - 22	°C
Coolant Flow	2.0	2.0	L/min
Operating Pressure	1.8 - max 3.0	1.8 - max 3.0	Bar

#### **Connection specifications**

 Video inputs
 Analogue, DVI, Composite, s-video

 Video connectors
 DVI-D, VGA, comp. video, s-video

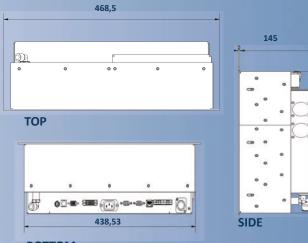
 Power input
 230 VAC

#### Othei

Alarm output User controls Relays contact potential free (freezing hazard) On/off, OSD menu's, brightness, navigator

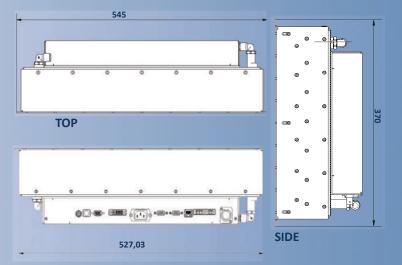
#### **Dimensions in mm:**

#### 19" High Bright Display



348,5

BOTTOM



#### 22" High Bright Display

BOTTOM

#### Scope of supply

- One (1) RZ DMP 19" or 22" High Bright Screen incl. electronics backpack.
- One (1) Flow Sensor, type Gems FT-110 with 3M. cable and backpack connector.
- One (1) Flow control valve, type Burkert or Belimo, depending on installation.
- One (1) Euro power cord with protective earth, 1.8m.
- One (1) DVI-D Video cable, 1.8m.
- One (1) VGA Video cable, 1.8m.
- One (1) USB-A to USB-B cable (incl. with touch screen version only), 1.8M.
- One (1) UTP patch cable with RJ45 connector on both ends, length 1.8M.
- One (1) Quick installation card.
- One (1) Owner's Manual.
- One (1) CD-ROM with touch screen drivers, manual, and utilities.

## **RADIO ZEELAND DMP PRODUCTS**

### **COMMERCIAL SHIPPING**

Radio Zeeland DMP has over forty years of experience in the commercial shipping industry. With our own development department we have made some truly unique, high quality products.

Our commercial shipping and standard products are:

- Rudder Angle Indicators
  - Echo Sounders
    - Wind stations
- Rate Of Turn Indicators
  - Fluxgate Compasses
    - Combi-Pilots
    - Auto Pilots
    - Path Pilots
- Compact Auto Pilots
- Intercom Systems
- Follow Up Steering Systems
- Engine Data Display Units
- Multifunctional LCD Display Units
  - Econometers
  - Height Indicators
    - GPS Receivers
  - GPS Compasses
  - Generic Control Panels
- Camera / Searchlight Control Panels
  - Trackball Panels
  - Joystick Panels
  - Various Sensors
  - RZ MultiHub Data Switches
  - Marine Early Detection Systems

### YACHTING

From console to control panels, Radio Zeeland DMP is able to provide a unique bridge for your vessel. The possibility to create a console and control panels with integrated navigation and communication equipment makes Radio Zeeland DMP the one stop shop.

Radio Zeeland DMP will be glad to provide you with:

- Foil Panels
- Glass Panels
- Outdoor Panels
- Safety Panels
- Consoles
- Small Boat Consoles
- Custom Monitoring systems
- RZ Imperium Monitoring
  - Glass Display Panels
    - RZ Displays

• High Bright Water Cooled Displays

## **CUSTOM BRIDGES**



## **QUALITY & AESTHETICS**

## **RADIO ZEELAND DMP PARTNERS**



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- www.radiozeeland.com

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#### Partner

