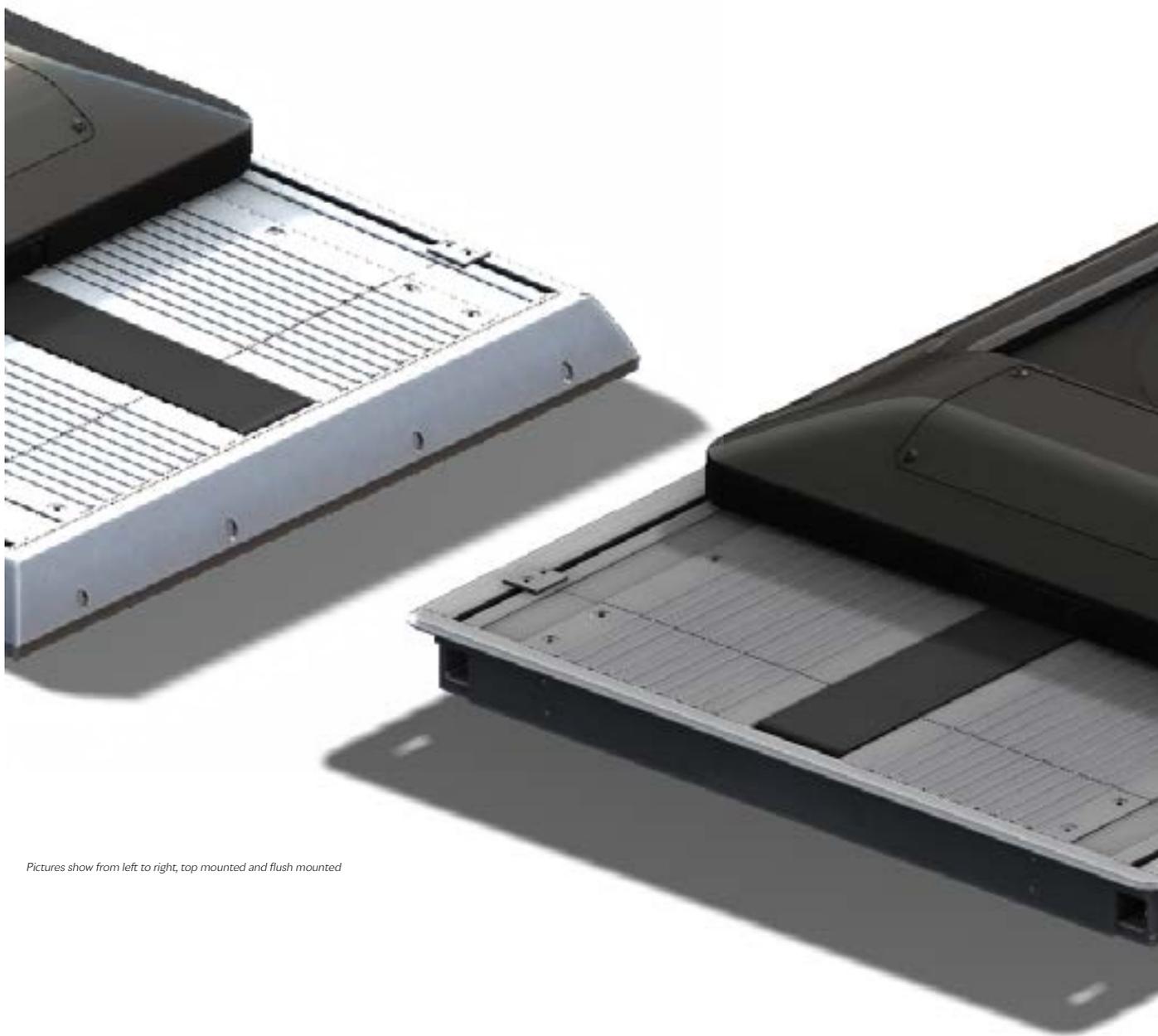


User manual  
**Deck rails**  
ACTIVE | IMPULSE



*Pictures show from left to right, top mounted and flush mounted*

**NORSAP**

**NORSAP models**

- 6693 FLUSH mounted ACTIVE
- 6694 TOP mounted ACTIVE
- 6695 FLUSH mounted IMPULSE
- 6696 TOP mounted IMPULSE

Standard lengths

1500, 2000, 2500,  
3000 mm

Contact NORSAP for custom lengths

## INTRODUCTION

NORSAP is the recognized leader in the design and production of helmsman and operator seats for the maritime market.

This manual will help you make the most out of your NORSAP product.

If you have any questions regarding your NORSAP product, please contact our head office for further assistance.

## SAFETY

Be sure to keep hands and fingers out of moving parts and areas when operating the product.

## ACTIVE RAIL

ACTIVE is a manual operated rail with a release handle, to intergrate or mount on your NORSAP chair.

Depending on the chair model, the release handle can be intergrated in the armrest, swivel or a bolt on release handle on the chair.

The release handle has two positions, locked or free, to position the chair and wagon in the most comfortable working position.

## IMPULSE RAIL

IMPULSE is an electrically driven rail for your NORSAP chair.

Depending on the chair model, the rail can be operated by membrane keyboard intergrated under the left armrest cushion in the Medium armrest, or by two buttons located on the lower half of the Small+ armrest.

## ACTIVE | IMPULSE RAIL

The Active and Impulse deck rails is a stronger, more elegant and a better rail system for all kind of environments.

**ACTIVE, a manual operated deck rail** and the **IMPULSE, an electrically operated deck rail.** Has the option for integrated cable guiding which holds an extremely large number of cables, without building much in height or under floor in the flush version.

Produced in high quality aluminium, delivered top- or flush mounted. And can be operated used with NORSAP 1500, 1600, 1700, 1800 and 4000 chairs

Adapter plates can be ordered separately.



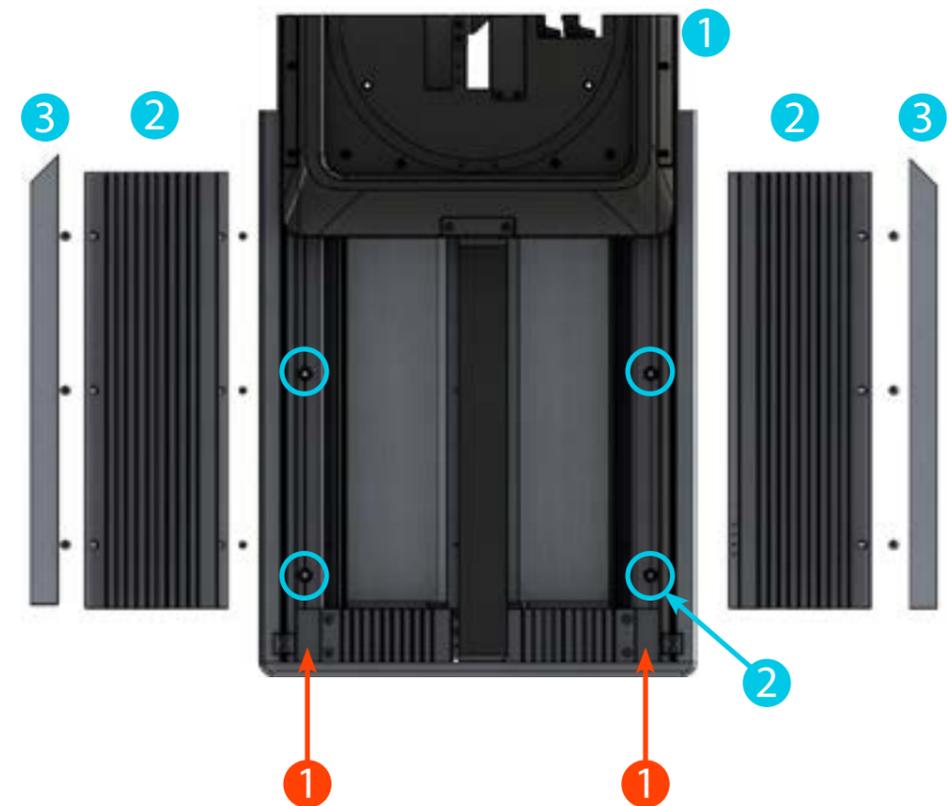
NORSAP membrane keyboard

## INSTALLATION

A strong and level foundation is required to secure the installation of any NORSAP deck rail.

**The polarity of the wires is important when connecting the rail to power.**

(1) Start by position the wagon on either end of the rail. (2) Remove the cable tray covers with their countersunk screws. (3) Slide out the rail tracks. (4) Use holes under the rail tracks and secure the rail to the foundation or deck. Reverse this process, and slide the wagon to the opposite end. Start the process again on this side.



## CARE AND MAINTENANCE

Regular vacuuming. Occasional cleaning should be done with a reputable brand following the manufacturer's instructions.

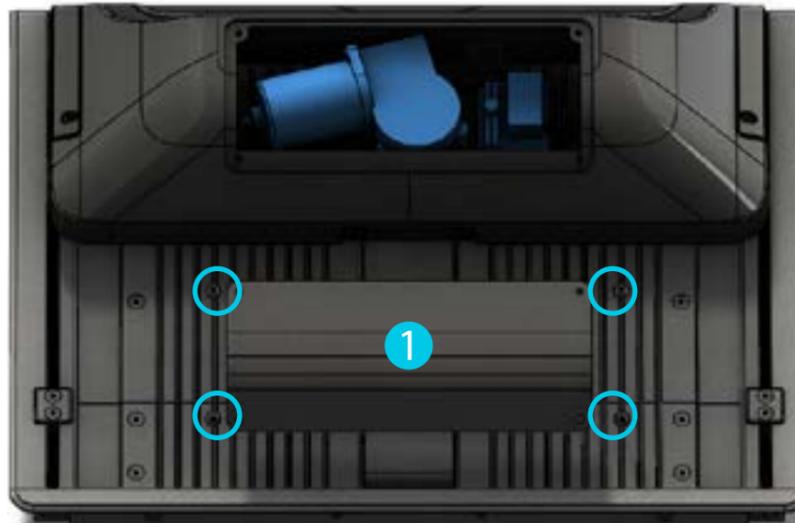
**(1) It is important that the deck rails rail tracks is NOT lubricated.**

## IMPULSE RAIL - ACCESSING AND ADJUSTING

To gain access to the 24V DC motor, electrical components and adjustments. (1) Remove the four screws holding the motor cover.

An error LED indicates if the motor exceeds the pre-defined power limit. In case of overheating, the thermal protection feature shuts down the control unit. This is also indicated by a flashing error LED.

We **do not recommend** any adjustments without consulting NORSAP before adjusting mechanical or electronic components.



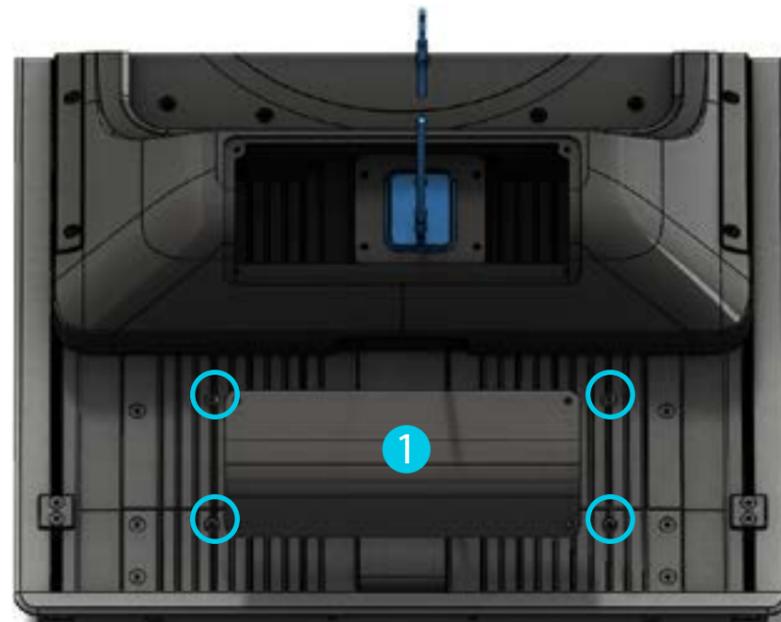
## ACTIVE RAIL - ACCESSING AND ADJUSTING

To gain access to the brake. (1) Remove the four screws which holds the brake cover.

Adjusting the tension for the brake wire, adjust it by turning the release handle side of the wire, until the desired adjustment is achieved. Be sure to check the braking before usage.

The release handle may vary, depending on the chair model.

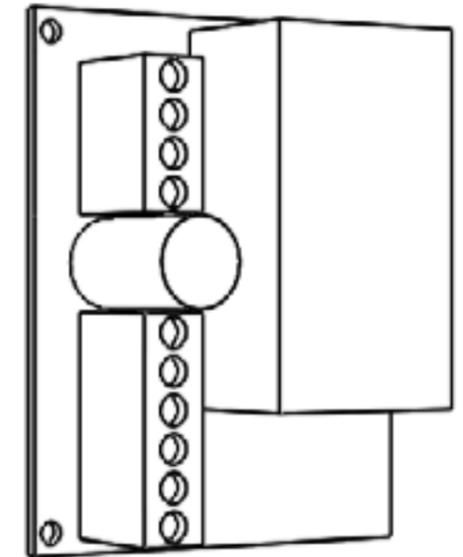
We **do not recommend** any adjustments without consulting NORSAP before adjusting mechanical components



## ELECTRONIC COMPONENTS

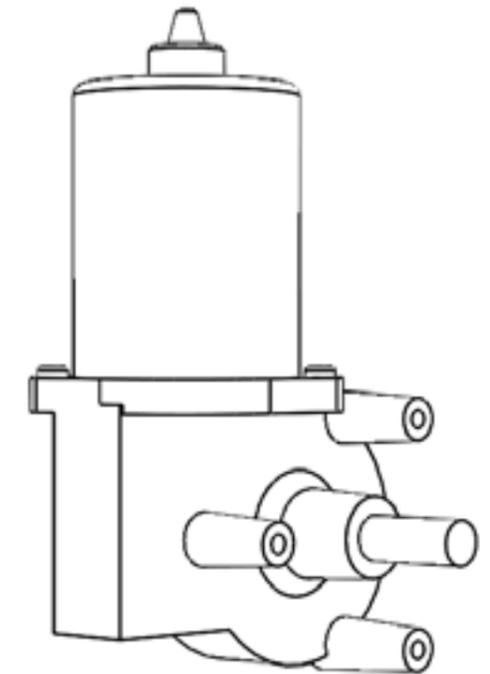
### Motor Driver - ELDEL-057

- Power supply: 12 - 35 V DC (ripple max. 30%)
- Max. power limit: 12 A cont. 20 A (30% ON / 70% OFF)
- Stand-by power: typically 10 mA
- Power limit
  - range 1; 1-5 A (start 1.5x)
  - range 2; 5-10 A (start 1.5x)
  - range 3; 10-20 A (start 1.5x)
- Thermal protection: 120°C
- Start ramp: adjustable 0 - 3 sec.
- Free deceleration: adjustable 0 - 3 sec.
- Operating frequency: 2 kHz
- Voltage loss: 0.6 V (Im 12A )
- Control inputs: "1" = 4-30 V DC, "0" = 0-1 V
- Error output NPN open-coll. 30 V 50 mA
- Operating temp.: -10...60°C
- Weight: app.105 g



### Motor Unit - ELDEL-055

- Rated voltage: UN [Volts]24
- No load speed: n0 [min-1] 65
- Rated torque: MN Nm] 5,00
- ON time: %
- ON: [min]
- Starting torque: MA [Nm] 73,00
- Transmission ratio: i 63/1
- Connection resistance:
  - 2 discs R [mΩ] 950,00
  - 4 discs R [mΩ] 730,00
- Connection inductance:
  - 2 discs L [mH] 0,96
  - 4 discs L [mH] 0,85
- Armatures moment of inertia: JR [kgm-2]-1 78,00
- Gear wheel material: plastic
- Hall IC:
  - Pulses/rev. drive shaft
  - Output channels
- Remarks: Ball bearing
- Level of protection: IP 40
- Weight: [kg] 1,200





**NORSAP**