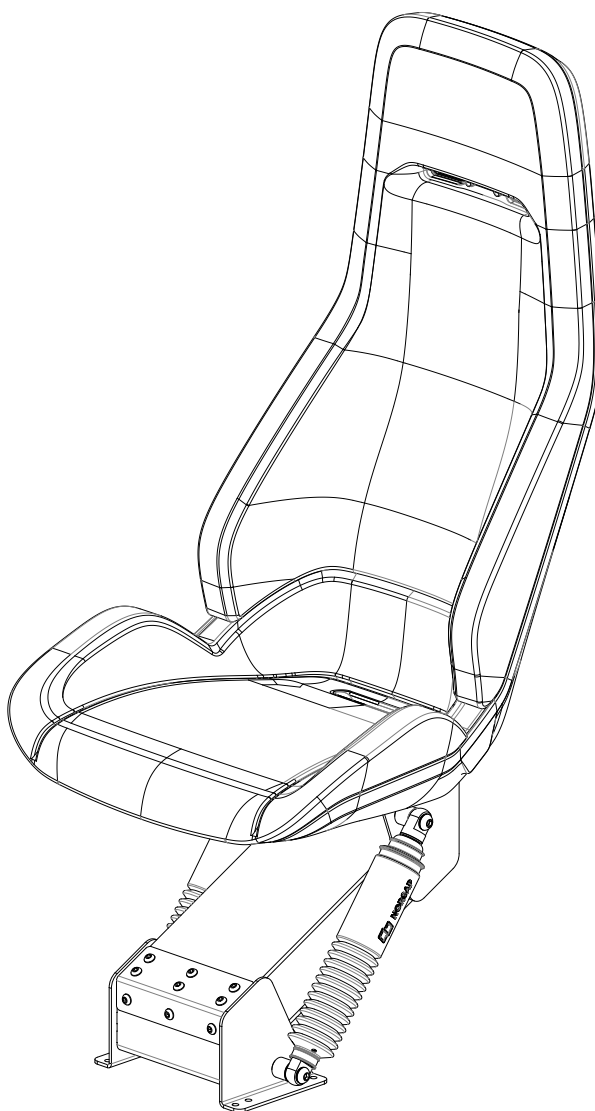


User manual

Norsap 150



1020 - Norsap 150

Norsap models:
1000

1010
1015
1020
1025

Column type:
Seat only

Explore - Outdoors
Explore - Indoors
Ultimate - Outdoors
Ultimate - Indoors



INTRODUCTION

Norsap is the recognized leader in designing and producing helmsman and operator seats for the maritime market.

This manual will help you make the most out of your Norsap chair.

If you have questions regarding your Norsap chair, please contact our head office for further assistance.

CARE AND MAINTENANCE OF LEATHER

As a natural product, leather is durable and hardwearing, but all leather products require cleaning and protection. By following these instructions, you will ensure a long and lasting leather quality. Never place leather furniture closer than 20-30 cm to a radiator or in direct sunlight.

LEATHER CLEANING

Cleaning removes everyday dirt and stains from your leather. Without proper cleaning, the leather will over a period of time leave grease spots or discolorations. To avoid this, clean with Soft Cleaner regularly. We advise once a month.

LEATHER PROTECTION

Protect your leather to guarantee that the

original quality of the leather will be maintained. Use Leather Protection Cream; we advise 2-4 times a year. This will protect against spots and preserve the leather's softness.

CARE AND MAINTENANCE OF FABRIC

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

MAINTENANCE OF MOVING PARTS

Glide parts of the chair can be lubricated with a silicone-based lubricant. If the chair is on a deck rail, it is important that the deck rails railway is NOT lubricated.

DISCLAIMER

NORSAP IS NOT RESPONSIBLE FOR ANY DAMAGES TO YOUR EQUIPMENT OR INJURIES AS A RESULT OF A FAULTY CHAIR OR SHOCK ABSORBING UNIT. DO NOT DRIVE BEYOND YOUR EXPERIENCE AND COMFORT LEVEL. DO NOT EXCEED THE MAX WEIGHT OR PEAK ACCELERATION.

SAFETY

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

Do not drive beyond your experience or comfort level or exceed the max weight and peak acceleration.

Percentile explanation

| Population Percentile | Male [kg] | Female [kg] |
|-----------------------|-----------|-------------|
| 5th | 61.6 | 49.6 |
| 50th | 83.5 | 65.9 |
| 95th | 112.8 | 88.6 |

Max weight and peak acceleration reduction

| Shock absorbing unit | Max combined user and seat weight [kg] | Peak acceleration reduction up to [%] |
|----------------------|--|---------------------------------------|
| Explore unit | 122.5 | 47 |
| Ultimate unit | 150 | 46 |

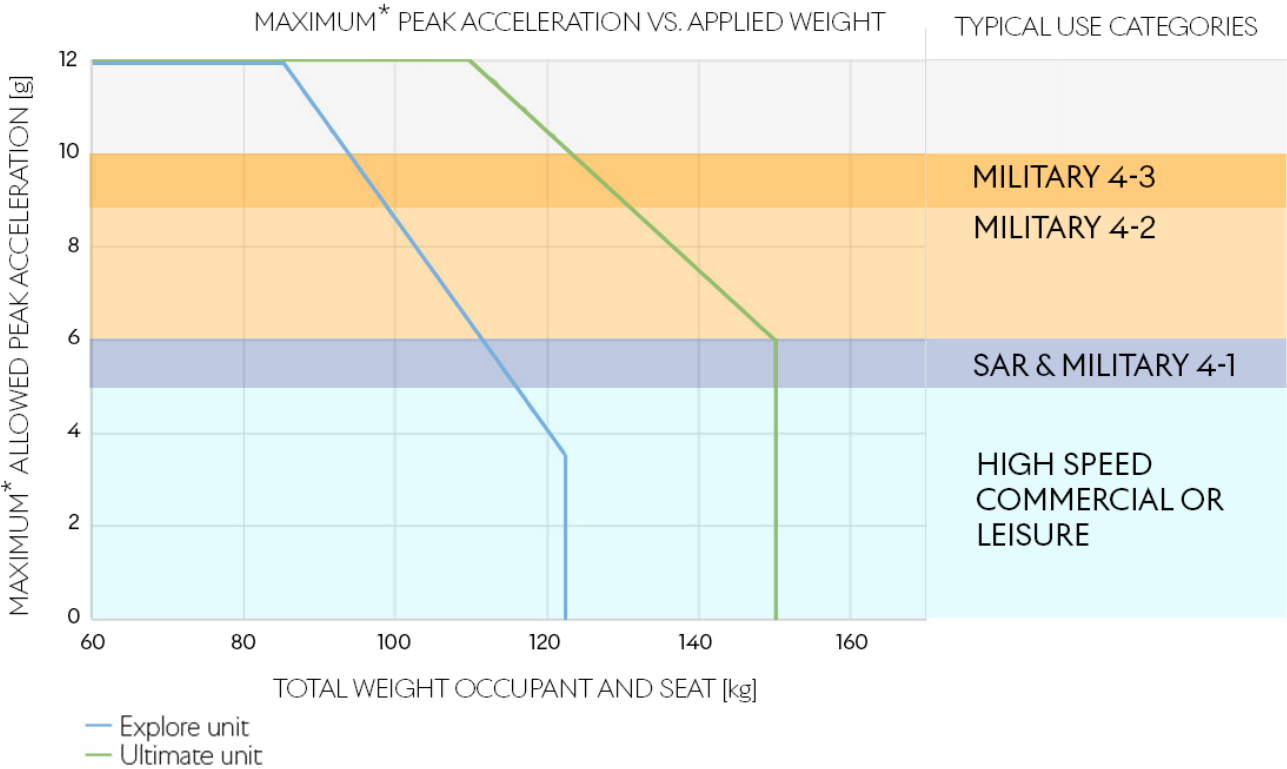
MAXIMUM ALLOWED ACCELERATIONS

General information about acceleration: Duration, acceleration level and mass directly affect the energy involved in an impact.

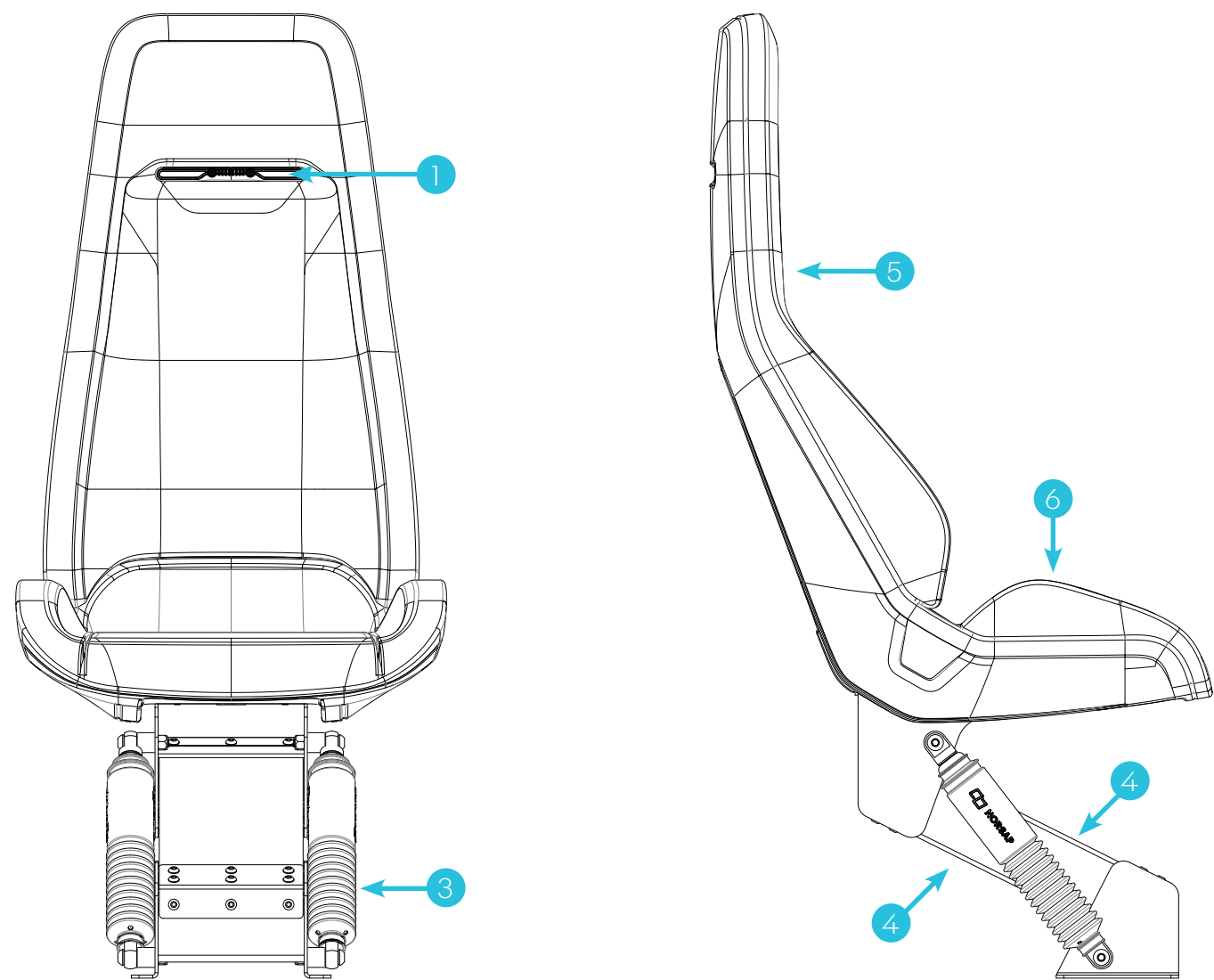
Example: A hammer strike involves very high accelerations upon impact, but it has a very short duration and low mass. A heavy boat slamming down on the water will have lower accelerations but much longer duration. More energy is involved in the boat impact, even though accelerations are lower. This is because the boat's mass is a lot larger, and that the duration of impact is longer.

Accelerations experienced in a boat will vary with boat size, weight, and type. Therefore, a due evaluation of boat type, use pattern/weather conditions and user weight is needed when selecting spring/damper configuration.

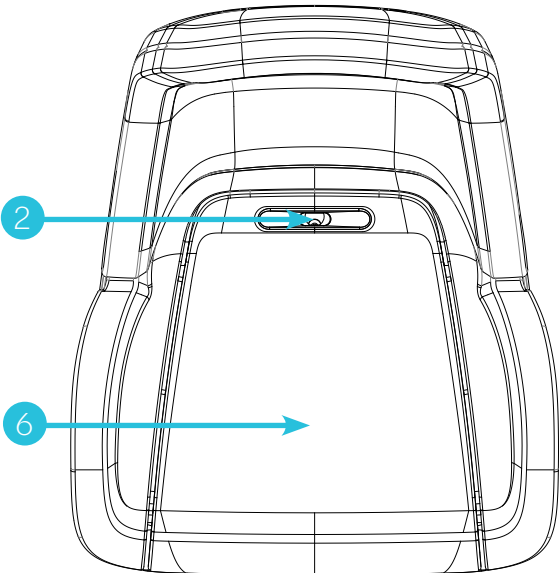
The graph below is based on impact durations registered from measurements done during live testing.



OVERVIEW OF THE NORSAP 150 CHAIR

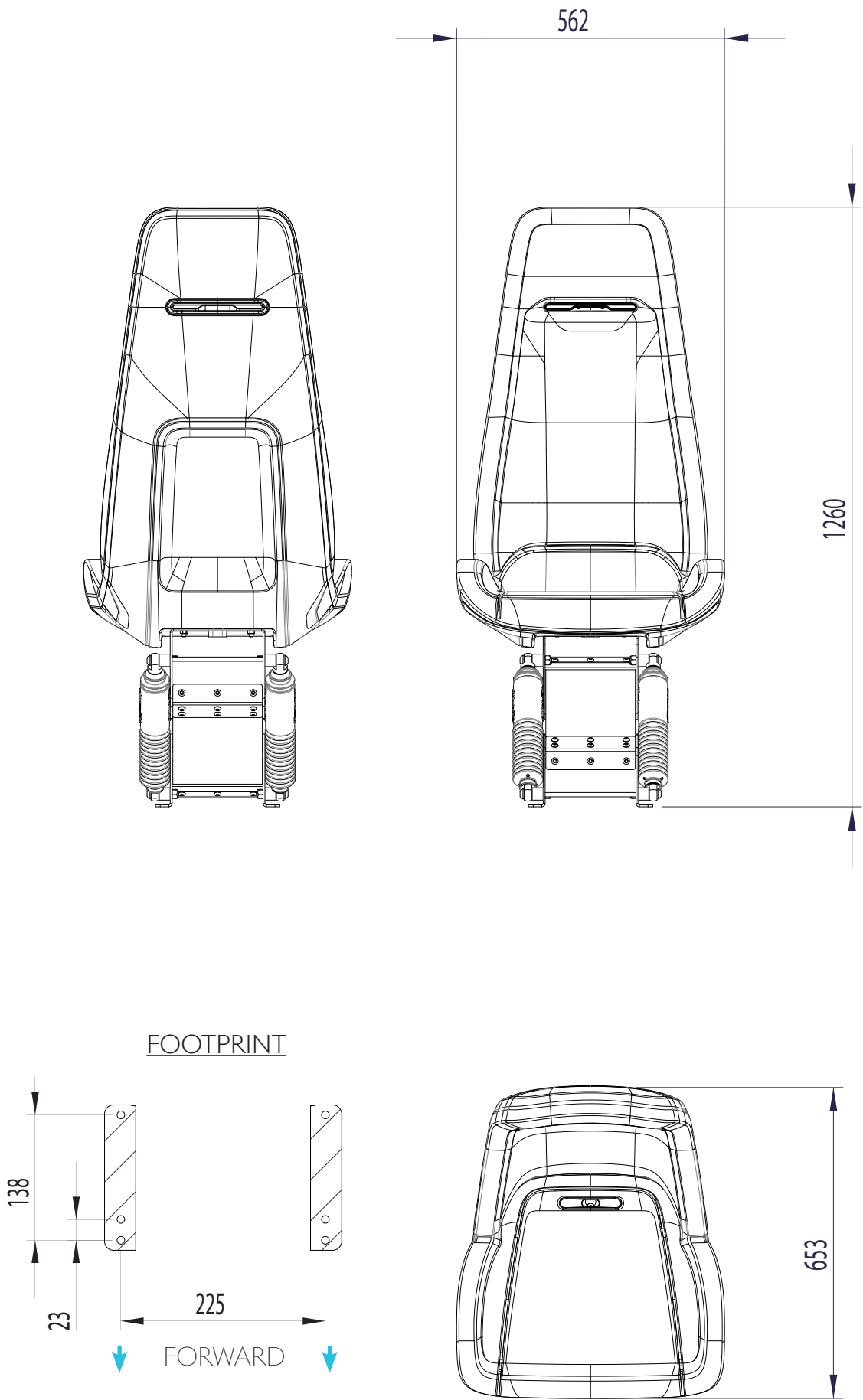


- 1 Seat belt slot
- 2 Drainage (only on outdoors)
- 3 Damper
- 4 Springs
- 5 Backrest cushion
- 6 Seat cushion



MOUNTING HOLES & MEASUREMENTS

A strong and level foundation is required to secure the installation of the base.



REPLACING SEAT PILLOWS

If your upholstery is damaged or worn, its recommended to replace the whole part.
To re-fit new leather (or other fabric) on existing cushions is not recommended.

| Item Name | Item No. |
|-----------------------------|----------|
| Norsap 150 Backrest Cushion | PUTE-153 |
| Norsap 150 Seat pan Pillow | PUTE-154 |

Changing the seat cushion, simply pull off the seat cushion from the back.

Replace the cushion with the new one, align and re-mount the cushion following the previous step backwards.

- 1
- To replace the backrest cushion, pull off the seat cushion from back. Unscrew the 2x M5 HEX screws securing the backrest cushion on the illustration below.
- 2
- Lift the backrest cushion up and off the hook on the top part of the backrest.

Replace the cushion with the new one, and re-mount the cushion following the previous steps back wards (3 and 4).



SHIPPING AND STORAGE SPECIFICATIONS

The chair should be shipped and stored in an upright condition.
No other materials should be shipped or stored on top of a the chair.

The chair should be shipped and stored at temperatures between -20°C and +40°C.
The chair should not be operated until its been acclimatized between 0°C and +30°C.
The chair should be kept in a clean, dry environment.

Upon receipt, we recommend that the shipping packaging be immediately examined for damage. Any dam-
age should be noted on the delivery receipt and a request for inspection by the transportation company
should be made.

If the chair appears to be damaged, a concealed bad order report should be immediately
filed with the transportation company.

