Top quality from NorSap in Norway.

In NorSap we have focused at high quality products since the company started in 1969.

High quality customer service is also vital to us. We have a wide standard product range, but our inhouse R&D/engineering capacity also mean that we can adapt to specified wishes and requirements from customers.

In this catalogue you can see both our wide product range for helmsman and operator chairs used in all kind of ships, rigs, ROV’s etc. and also the products we sell to the pleasure boat industry.

We manufacture and sell from Kristiansand in the very south of Norway, we have an excellent international dealer network and we have active owners who can make quick decisions.

We look forward to be in contact with you or that you have a look at www.norsap.com
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NorSap 800 Series
The popular choice of operator chairs.

NorSap 800 series is the lightest chair model from NorSap and a popular choice for smaller operator bases and vessels due to the small space it occupies.

Functions
- Fixed or height adjustable column
- Adjustable footrest, with vertical adjustment
- Extra footrest loop
- Adjustable armrests, tiltable
- Adjustable backrest and seatrest
- Storage net on the backrest
- The foot rest and armrests folds up
- Chair swivels 360°
- Available in fixed seating
- Glide rails provide horizontal adjustment

Optional
- 2 point seat belt
- Heated seat
- Lumbar support
- Additional seat cover
- Deck rail mounting
- Personal upholstery combination and embroidery. See page 26.
### Article number and description

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Sitting height measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200</td>
<td>NorSap 800 with gas dampened height adjustable column</td>
<td>70 - 87 cm</td>
</tr>
<tr>
<td>6205</td>
<td>NorSap 800 with gas dampened height adjustable column, - Delivered with out foot rest front loop</td>
<td>70 - 87 cm</td>
</tr>
<tr>
<td>6170</td>
<td>NorSap 800 with gas dampened height adjustable column, no foot rest</td>
<td>50 - 60 cm</td>
</tr>
<tr>
<td>6171</td>
<td>NorSap 800 with gas dampened height adjustable column, no foot rest 46 - 56 cm</td>
<td>62 - 79 cm</td>
</tr>
<tr>
<td>6100</td>
<td>NorSap 800 with manual height adjustable column</td>
<td>87 cm</td>
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<tr>
<td>6101</td>
<td>NorSap 800 with fixed height column</td>
<td>87 cm</td>
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<tr>
<td>6110</td>
<td>NorSap 800 fixed seat top, fixed height column</td>
<td>43 cm</td>
</tr>
<tr>
<td>6105</td>
<td>NorSap 800 fixed height column, no foot rest</td>
<td>87 cm</td>
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</table>

5-star legged chair (free-standing office chair, optionally fixed to the deck)

<table>
<thead>
<tr>
<th>Article number</th>
<th>Description</th>
<th>Sitting height measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>6130</td>
<td>NorSap 800 Office with gas dampened height adjustable column</td>
<td>72 - 89 cm</td>
</tr>
<tr>
<td>6150</td>
<td>NorSap 800 Office with gas dam. height adj. column, no foot rest</td>
<td>52 - 62 cm</td>
</tr>
<tr>
<td>6140</td>
<td>NorSap 800 Office with fixed column</td>
<td>56 cm</td>
</tr>
<tr>
<td>6141</td>
<td>NorSap 800 Office with fixed column, no foot rest</td>
<td>66 cm</td>
</tr>
</tbody>
</table>

### Extra equipment

- 6283 Additional seatcover in fabric
- 6284 Additional water repellent seatcover in artificial leather
- 6461 2 Points seat belt

### Deck rail

Please see page 18 - 21 for further details.

All sitting heights measures without load – a variation of 2-5 cm may occur depending on the load due to contraction of gas-struts, springs and upholstery. Does not apply the fixed height models. All fixed height columns can be cut to desired sitting height. The / indicates min. max. cutting height. If nothing else is agreed, the chair will be delivered with black leather upholstery.
NorSap 1000 Series
Mounted on a strong Ø100 mm aluminum column.

NorSap 1000 is a solid and comfortable chair with possibilities to integrate controlling equipment in the arm rests. The chair has several adjustable features to ensure comfortable seating.

Functions
- Fixed or height adjustable column
- Adjustable foot rest, with vertical adjustment
- Adjustable armrests, rise/tiltable
- Adjustable backrest and seatrest
- Storage net on the backrest
- The foot rest and armrests folds up
- Chair swivels 360°
- Glide rails provide horizontal adjustment

Optional
- Ability to have equipment fitted in armrest. See page 29.
- 2 or 4 point seatbelt
- Heated seat
- Lumbar support
- Additional seat cover
- Deck rail mounting
- Personal upholstery combination and embroidery. See page 26.

More info on the web...
<table>
<thead>
<tr>
<th>Article number and description</th>
<th>Sitting height measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flanged mounted chairs (to be mounted on deck or deck rail)</td>
<td></td>
</tr>
<tr>
<td>6010-SO/-HV NorSap 1000 with gas dampened height adjustable column</td>
<td>69 - 90 cm</td>
</tr>
<tr>
<td>6020-SO/-HV NorSap 1000 with gas dampened height adjustable column</td>
<td>63 - 77 cm</td>
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<tr>
<td>6000-SO/-HV NorSap 1000 with fixed column</td>
<td>88 cm</td>
</tr>
<tr>
<td>6005 NorSap 1000 with fixed column, no foot rest</td>
<td>38 cm</td>
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</tbody>
</table>

Charcoal gray powder coated with structure as standard, SO after the article number gives black powder coating, HV gives white powder coating.

| 5-star legged chairs (free-standing office chair, optionally fixed to the deck) | |
| 6025 NorSap 1000 Office with gas dampened height adjustable column | 71 - 92 cm |
| 6027 NorSap 1000 Office with gas dampened height adjustable column | 65 - 79 cm |
| 6015 NorSap 1000 Office with fixed column | 80 cm |
| 6016 NorSap 1000 Office with fixed column, no foot rest | 40 cm |

| Suspension column | |
| 6028SO NorSap 1000 seat top with suspension undercarriage - with glide rails | 41 - 46 cm |

| Seat top only | |
| R-0009 NorSap 1000 seat top only - with glide rails | 15 cm |

**Extra equipment for the arm rests**

Please see page 29 for a selected overview of the possibilities customizing the armrests.

**Deck rail**

Please see page 18 - 21 for further details.

**Seat cover**

| 6041 Water repellent seat cover | |
| 6050 Fabric seat cover - durable | |

All sitting heights measures without load - a variation of 2-5 cm may occur depending on the load due to contraction of gas-struts, springs and upholstery. Does not apply the fixed height models. All fixed height columns can be cut to desired sitting height. The / indicates min. max cutting height. If nothing else is agreed, the chair will be delivered with black leather upholstery.

Working diameter of the chair folded Ø640. Expanded, Ø1200. Weight 40 Kg.
NorSap 1500 Series
The most used and tested chair with excellent seating comfort.
NorSap 1500 is perfect for use in rugged environments where you are in need of high quality and comfortable seating. Possible to integrate controlling equipment in the armrests.

Functions
- Fixed or dampened height adjustable column
- Adjustable foot rest, with vertical adjustment and flip up
- Adjustable armrests, rise and tiltable
- Adjustable backrest and seat
- Storage net on the backrest
- The seat, foot rest and armrests folds up
- Chair swivels 360°
- Glide rails provide horizontal adjustment

Optional
- Ability to have equipment fitted in armrest (page 28.)
- 2 or 4 point seat belt
- Heated seat
- Lumbar support
- Additional seatcover
- Deck rail mounting
- Personal upholstery combination and embroidery. See page 26.
#### Article number and description

- **Flanged based chairs (to be mounted on deck or deck rail)**
  - 6500-SO/HV NorSap 1500 with gas dampened adjustable column 72 - 92 cm
  - 6510-SO/HV NorSap 1500 with gas dampened adjustable column 67 - 80 cm
  - 6511 NorSap 1500 with electrically adjustable column 72 - 92 cm
  - 6520-SO/HV NorSap 1500 with gas dampened adjustable column 63 - 73 cm
  - 6400-SO NorSap 1500 with fixed column 88 cm
  - 6520-SO/HV NorSap 1500 with gas dampened adjustable column 63 - 73 cm
  - 6405 NorSap 1500 with fixed column, no foot rest 41 cm

Charcoal gray powder coated with structure as standard, SO after the article number gives black powder coating, HV gives white powder coating.

- **5-star legged chairs (free-standing office chair, optionally fixed to the deck - See extra equipment)**
  - 6535 NorSap 1500 Office with gas dampened adjustable column 75 - 94 cm
  - 6530 NorSap 1500 Office with gas dampened adjustable column 69 - 82 cm
  - 6525 NorSap 1500 Office with gas dampened adjustable column 65 - 75 cm
  - 6411 NorSap 1500 Office with fixed column 88 cm
  - 6410 NorSap 1500 Office with fixed column, no foot rest 41 cm

- **Seat top only**
  - R-0010 NorSap 1500 seat top only - with glide rails
  - 6465 Adapter plate for mounting the seat top on a flat base

#### Extra equipment for the arm rests

Please see page 28 for a selected overview of the possibilities of customizing of the armrests.

#### Deck rail

Please see pages 18 - 23 for further details.

#### Seat covers

- 6451 Water repellent seat cover
- 6470 Fabric seat cover - durable

All sitting heights measures without load - a variation of 2-5 cm may occur depending on the load due to contraction of gas-struts, springs and upholstery. Does not apply the fixed height models. All fixed height columns can be cut to desired sitting height. The / indicates min. max cutting height. If nothing else is stated, the chair will be delivered with black leather upholstery.
NorSap 1700 Series
Same quality and comfort as the NorSap 1500, but with larger armrests.
The two top covers of the armrest fronts are easily adapted as a mounting frame for your required equipment.

Functions
- Dampened height adjustable column
- Adjustable footrest, with vertical adjustment and flip up
- Adjustable arm rests, rise and tiltable
- Adjustable backrest and seat
- Storage net on the backrest
- The seat, foot rest and armrests folds up
- Chair swivels 360°*

Optional
- Ability to have equipment fitted in armrest
- 2 or 4 point seat belt
- Heated seat
- Lumbar support
- Additional seatcover
- Deck rail mounting
- Personal upholstery combination and embroidery. See page 26.
- Junction box for cables at rear

More info on the web...
Article number and description | Sitting height measurements
---|---
6700  NorSap 1700 with gas dampened height adjustable column | 72 - 90 cm
6710  NorSap 1700 with gas dampened height adjustable column | 67 - 80 cm
6720  NorSap 1700 with gas dampened height adjustable column | 63 - 73 cm
6730  NorSap 1700 with fixed height column | 88 cm
6725  NorSap 1700 with fixed height column, no foot rest | 41 cm

Extra equipment
- 6474  Additional seat cover in fabric, no arm rest cover
- 6475  Additional water repellent seat cover in artificial leather, no arm rest cover

Deck rail
Please see pages 20 - 23 for further details.

All sitting heights measures without load - a variation of 2-5 cm may occur depending on the load due to contraction of gas-struts, springs and upholstery. Does not apply the fixed height models. All fixed height columns can be cut to desired sitting height. The / indicates min. max cutting height. If nothing else is agreed, the chair will be delivered with black leather upholstery.
NorSap 2000 Series
A modern looking helmsman chair.

NorSap 2000 combines a modern design with the most possibilities for seating adjustments. The chair provides very comfortable seating and gives an exclusive touch in a high-end bridge arrangement.

**Functions**
- Dampened height adjustable column
- Adjustable foot rest, with vertical adjustment and flip up
- Adjustable arm rests, back/forward, up/down & tilt
- Adjustable back rest and seat
- Back rest can be put in an almost horizontal position
- Chair swirl is mounted on a ball bearing plate and swivels 360°

**Optional**
- Ability to have equipment fitted in armrest
- 2 or 4 point seat belt
- Heated seat
- Lumbar support
- Deck rail mounting
- Personal upholstery combination and embroidery
- The foot rest is as standard fixed to seating frame. Alternatively it can be fixed to the column
Article number and description                        Sitting height measurements
NorSap 2000 - Standard NorSap charcoal gray colored flanged chairs
6630  NorSap 2000 with gas dampened height adjustable column  63 - 83 cm
6631  NorSap 2000 with electrical adjustment                  63 - 83 cm
6632  NorSap 2000 with gas dampened height adjustable column  73 - 92 cm
6633  NorSap 2000 with electrical adjustment                  73 - 92 cm
6634  NorSap 2000 with electrical adjustment, no foot rest   43 - 52 cm
6635  NorSap 2000 with gas dampened height adj. column, no foot rest  43 - 50 cm
R-0080 NorSap 2000 seat top only                           

NorSap 2000 Yacht - Black powder coated/laquered flanged chairs
6640  NorSap 2000 Yacht with gas dampened height adjustable column  63 - 83 cm
6641  NorSap 2000 Yacht with electrical adjustment            63 - 83 cm
6642  NorSap 2000 Yacht with gas dampened height adjustable column  73 - 92 cm
6643  NorSap 2000 Yacht with electrical adjustment            73 - 92 cm

NorSap 2000 - 5-star Legged Office Chairs
6644  NorSap 2000 Office gas dampened height adjustable column  65 - 85 cm
6645  NorSap 2000 Office gas dampened height adjustable column  75 - 94 cm
6646  NorSap 2000 Office gas damp. height adj. column, no foot rest  45 - 54 cm

Extra equipment

The NorSap 2000 can use some of the armrest equipment as the NorSap 1500, see page 28

Deck rail
Please see pages 18 - 23 for further details.

All sitting heights measures without load - a variation of 2-5 cm may occur depending on the load due to contraction of gas-struts, springs and upholstery. Does not apply the fixed height models. All fixed height columns can be cut to desired sitting height. The / indicates min. max cutting height. If nothing else is agreed, the chair will be delivered with black leather upholstery.
NorSap MX System
A modular based platform which results in a variety of combination possibilities.

- System is based on interchangeable modules that can be combined to suit your requirements.
- Thoroughly tested mechanical solutions.
- Easy access to installed equipment.
- Developed to fulfil the requirements of maritime standards of operator chairs. Focusing on ergonomics, line of sight, security, function and mechanical durability.
- Electrical and manual adjustment of the seat and other parts affecting the operator. Individual adjustment to meet the strongest demands of ergonomics for the operator.

More info on the web...
Options

- Electrically or manually turn, or no turn at all.
- Electrically rise and lower of the chairs column, or fixed height.
- Electrically or manually rise and lower of foot rest, or no foot rest.
- Standard, glass infused or a wider foot rest plate, with or without foot switches.
- Electrically adjustment of the seat and other parts affected by the operator.
- Custom built frame casing and armrest.
- Additional monitor, keyboard or customer specified instrument holders.
- Integrated control panel for adjusting the chairs electrical functions.
Modular armrests

The armrest front can either be based on previously developed solutions by NorSap or your own specified design.

The armrests below are some of the solutions already developed. Only the cover lid needs modification to suit your equipment. The lid is manufactured in 3 mm aluminum. Cut-outs for dials, buttons, joystick and thrusters are easily done.

The back part of the modular armrests contains also a fold out note pad table combined with a cup holder. For more alternatives for the back part, please visit norsap.com. The front parts of the modular arm rests are angle adjustable - combined with the eight way adjustable seat this ensures an optimal ergonomically working environment.

**STANDARD+**
- DEL-3707H - Right
- DEL-3707V - Left
  *Does not include back-part (DEL-3677H or V)

**LARGE**
- DEL-3678H - Right
- DEL-3678V - Left
  *Does not include back-part (DEL-3677H or V)

**XL**
- DEL-3826 - Right
- DEL-3827 - Left
  *Does not include back-part (DEL-3677H or V)

**XXL**
- DEL-3706H - Right
- DEL-3706V - Left
  *Does not include back-part (DEL-3677H or V)

**XXL+**
- DEL-3706H + DEL-3844
- DEL-3706V + DEL-3844
  *Does not include back-part (DEL-3677H or V)
NorSap offers bridge components like monitor desk and overhead display. Manufactured in aluminum and with black powder coating. Easy access to equipment in the base and a keyboard holder in each compartment.

- Ergonomic design.
- Alternative flush mounting of equipment.
- Passive ventilation.
- Made in aluminum with stainless steel fasteners.
- Excellent service access to base and top module during and after installation.
- Easy installation on bridge. Available flat packed or assembled.
- Ruggedized to meet harsh marine environments.
- 3D Views provided for approval prior to final fabrication.

Workspace ergonomics:
- Screens positioned and angled for user comfort.
- Table height columns available in standing, seated and electric sit/stand versions.

For segments:
Navigation, Communication, Safety and ship operation, Navy, Engine control room, Cargo control room, Simulators, Hospitals, Cabins.
Basic deck rails

Smart deck rails with low height and an elegant design which gives credit to the existing deck. Still at a favourable cost.

- Easy to fit
- Comes with release handle to be mounted on seat top.
- Concealed wiring (does not apply to the NorSap 800 chairs)
- Can be delivered in customized lengths
- Can be combined with two carriage wagons
- Manufactured in combination of stainless steel and aluminium.
- For rougher use we recommend the Standard deck rails.

NorSap 1500 on top mounted Basic deck rails. Photo by P.O. Dybvik
### Article numbers | Description
---|---
6676-1000 | 1000 mm long top mounted Basic Deck Rail for the NorSap 800 series
6676-1500 | 1500 mm
6676-2000 | 2000 mm
6676-2500 | 2500 mm
6676-3000 | 3000 mm

6677-1000 | 1000 mm long flush mounted Basic Deck Rail for the NorSap 800 series
6677-1500 | 1500 mm
6677-2000 | 2000 mm
6677-2500 | 2500 mm
6677-3000 | 3000 mm

6652-1000 | 1000 mm long top mounted Basic Deck Rail for the NorSap 1000 series
6652-1500 | 1500 mm
6652-2000 | 2000 mm
6652-2500 | 2500 mm
6652-3000 | 3000 mm

6653-1000 | 1000 mm long flush mounted Basic Deck Rail for the NorSap 1000 series
6653-1500 | 1500 mm
6653-2000 | 2000 mm
6653-2500 | 2500 mm
6653-3000 | 3000 mm

6650-1000 | 1000 mm long top mounted Basic Deck Rail for the NorSap 1500 and 2000 series
6650-1500 | 1500 mm
6650-2000 | 2000 mm
6650-2500 | 2500 mm
6650-3000 | 3000 mm

6651-1000 | 1000 mm long flush mounted Basic Deck Rail for the NorSap 1500 and 2000 series
6651-1500 | 1500 mm
6651-2000 | 2000 mm
6651-2500 | 2500 mm
6651-3000 | 3000 mm

BLACK = physical measurements of the product
RED = recommended mounting measures
GREEN = recommended measures of the cut out of the deck when flush option.
All measurements in MM.
Standard deck rails – manually operated

High quality deck rails designed for all kind of environments. Can be released and locked from sitting position.

Image: NorSap 1500 on flush mounted deck rails. Photo by P.O. Dybvik.
Stable and solid deck rails

- Manufactured of anodized aluminium with rubber coated center plate
- Comes with release handle to be mounted on seat top
- Top mounted or flush implementation in deck
- Can be delivered in customized lengths
- Can be combined with two carriage wagons

The wide electrically deckrails fits the following models NorSap 1500, 1700, 2000, 2500, 3500 and MX series, the narrow version is for the NorSap 800 and 1000.

<table>
<thead>
<tr>
<th>Article number and Description</th>
<th>6250-1100UL</th>
<th>6250-1500UL</th>
<th>6250-2000UL</th>
<th>6250-2500UL</th>
<th>6250-3000UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100 mm long top mounted narrow Deck Rail for the 800/1000 series</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
</tr>
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<tr>
<th>Article number and Description</th>
<th>6251-1000UL</th>
<th>6251-1500UL</th>
<th>6251-2000UL</th>
<th>6251-2500UL</th>
<th>6251-3000UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100 mm long flush mounted narrow Deck Rail for the 800/1000 series</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>6350-1500UL</th>
<th>6350-2000UL</th>
<th>6350-2500UL</th>
<th>6350-3000UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100 mm long top mounted wide Deck Rail</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
</tr>
</tbody>
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<table>
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<th>6351-1000UL</th>
<th>6351-1500UL</th>
<th>6351-2000UL</th>
<th>6351-2500UL</th>
<th>6351-3000UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100 mm long flush mounted wide Deck Rail</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
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</tbody>
</table>

<table>
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<tr>
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<th>6354-1100UL</th>
<th>6354-1500UL</th>
<th>6354-2000UL</th>
<th>6354-2500UL</th>
<th>6354-3000UL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100 mm long top mounted wide Deck Rail with slot and cable conveyer</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
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</tbody>
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<tr>
<th>Article number and Description</th>
<th>6355-1100UL</th>
<th>6355-1500UL</th>
<th>6355-2000UL</th>
<th>6355-2500UL</th>
<th>6355-3000UL</th>
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</thead>
<tbody>
<tr>
<td>1100 mm long flush mounted wide Deck Rail with slot and cable conveyer</td>
<td>1100 mm</td>
<td>1500 mm</td>
<td>2000 mm</td>
<td>2500 mm</td>
<td>3000 mm</td>
</tr>
</tbody>
</table>

BLACK = physical measurements of the product
RED = recommended mounting measures
GREEN = recommended measures of the cut out of the deck when flush option.
All measurements in MM.

norsap.com

Wide top mounted deck rail
– With manual release handle from seated position.
Standard deck rails – electrically operated

High quality deck rails designed for all kind of environments. An electrically operated deck rail increases the comfort and has integrated cable guiding.
Comfortable base adjustment

- Manufactured of anodized aluminium with rubber coated center plate
- Easy to fit
- Has a slot for cables in the center of the deck rail
- Optionally delivered with flexible cable channel for additional cables

Electrically driven deck rails - adjust your chairs position without having to leave the seat.
The wide electrically driven deck rails fits the following models NorSap 1500, 1700, 2000, 2500, 3500 and CIS series only.

For the electrically operated deck rail a power supply of 24V 20A DC is required, not included.
One power supply per traverse engine is required. Art. No.: 6910 - 24V Universal AC input / Full range (115V/230V)

<table>
<thead>
<tr>
<th>Article number and Description</th>
<th>Width (mm)</th>
</tr>
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<tbody>
<tr>
<td>6670-1100UL Top Mounted</td>
<td>1100</td>
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<tr>
<td>6670-1500UL 1500 mm</td>
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<td>6670-2500UL 2500 mm</td>
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<tr>
<td>6670-3000UL 3000 mm</td>
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<tr>
<td>6671-1100UL Flush Mounted</td>
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<td>6672-2500UL 2500 mm</td>
<td>2500</td>
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<tr>
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<tr>
<td>6673-1100UL Flush Mounted</td>
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<td>6673-1500UL 1500 mm</td>
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<tr>
<td>6673-2000UL 2000 mm</td>
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<tr>
<td>6673-2500UL 2500 mm</td>
<td>2500</td>
</tr>
<tr>
<td>6673-3000UL 3000 mm</td>
<td>3000</td>
</tr>
</tbody>
</table>

For electrically operated deck rails an additional power supply of 24V 20A DC is required, not included.
6910 24V Universal AC input / Full range (115V/230V)

BLACK = physical measurements of the product
RED  = recommended mounting measures
GREEN = recommended measures of the cut out of the deck when flush option.
All measurements in MM.
	norsap.com
MX Deck Rails - electrically operated

High quality deck rails designed for all kind of environments. An electrically operated deck rail increases the comfort and has integrated cable guiding. MX deck rails have more space to allow a larger number of cables.

More info on the web...
Heavy equipped

- Manufactured of anodized aluminium with a center slot for cables
- Electrically operated
- Large space for cables

The deck rails are fitted with electrical adjustment, slot and conveyer for cables. Deck rails for the NorSap 2500 and 3500 series are not suitable for manual travel due to the larger chair models. The deck rails is controlled thru a control panel in the chairs armrest. Alternatively the control of the deck rail can be integrated in the customers PLS system or other custom controlling equipment.

The deep MX electrical deck rails fits the following models NorSap 2500, 3500 and MX series only.

<table>
<thead>
<tr>
<th>Article number and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6675-1500 1500 mm electrically driven MX deck rail</td>
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<tr>
<td>6675-2000 2000 mm</td>
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<tr>
<td>6675-2500 2500 mm</td>
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<tr>
<td>6675-3000 3000 mm</td>
</tr>
</tbody>
</table>

For electrically operated deck rails an additional power supply of 24V 20A DC is required, not included.

6910 24V Universal AC input / Full range (115V/230V)
Upholstery, embroidery and colors

You may choose from our standard colors and upholstery combinations.
You may also choose which color the contrast seam is sawn in,
giving you the possibility to personalize the look of the chair.

NorSap operates with standard leather, velour and fabric colors.
All materials suited for the maritime working environment.

Leather / Perforated Leather
Recommended for normal use. Flame retardant.
Perforated leather has article no.: 6011 (center field only)

Velour
In excess of 50,000 cycles Martindale.
Recommended for hard use. Flame retardant.

Fabric
In excess of 500,000 cycles Martindale.
Recommended for extreme use.

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<table>
<thead>
<tr>
<th>Standard leather colors</th>
<th>Standard fabric colors</th>
<th>Standard velour colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEIGE</td>
<td>RED</td>
<td>GREEN</td>
</tr>
</tbody>
</table>

(Printed colors may differ from actual color)
The illustration shows what areas that are selectable. Only the NorSap 2000 and NorSap 3500 chairs have more than one pattern combination.

When ordering upholstery for the 3500 or 2000, please refer to the A, B, C or D pattern.

If nothing else is agreed the chair will be delivered all in black leather.
1500 Series Armrest Equipment

5901H (right) / 5901V (left)
Armrest with casing for Kamewa joystick. *Joystick not supplied

5902H (right) / 5902V (left)
Armrest with plate for mouse trackball. (Holes: 55 x 55 mm). *Joystick not supplied

5903H (right) / 5903V (left)
Armrest with fittings for trackball from Kelvin Hughes. *Joystick not supplied

5904H (right) / 5904V (left)
Armrest with casing Ø60 mm for small joystick. *Joystick not supplied

5905
Armrest with fittings for removable and adjustable keyboard table. Complete set (two arm rests)

6803H
Right hand note pad board. Flips up and away when not in use. To be combined with i.e. a cup holder (6801) as shown on illustration.

5906H (right) / 5906V (left)
Armrest with casing for four (4) mouse trackballs. *Joystick not supplied

5907H (right) / 5907V (left) W=200 mm
5912H (right) / 5912V (left) W=250 mm
Armrest fitting for combining mouse trackball and joystick. *Joystick not supplied

5908H (right) / 5908V (left)
Armrest with casing Ø60 for small joystick and mouse trackball pad. *Joystick not supplied

5909H (right) / 5909V (left)
Armrest with casing Ø100 mm for joystick. *Joystick not supplied

5910H (right) / 5910V (left)
Armrest with casing Ø100 for joystick and mouse trackball pad. *Joystick not supplied

5911H (right) / 5911V (left)
Armrest with mounting block. (Holes: 34,6 x 20 mm)

6801H (right) / 6801V (left)
A cup holder (Ø90 mm). *coffee not supplied

5955H (right) / 5955V (left)
ECO 600 Joystick holder *joystick not supplied

5950H (right) / 5950V (left)
Extra wide arm rest with 135 x 135 mm holder. *Joystick not supplied

5954H (right) / 5954V (left)
Extra wide arm rest with height adjustable controller box. 180 x 140 x 190 mm. *Joystick not supplied

5952H (right) / 5952V (left)
Extra wide arm rest with monitor holder combined Ø60 joystick holder. *Joystick not supplied
1000 Series Armrests Equipment

5801H (right) / 5801V (left)
Armrest with casing for Kamewa joystick.
*Joystick not supplied

5802H (right) / 5802V (left)
Armrest with plate for mouse trackball.

5804H (right) / 5804V (left)
Armrest with casing Ø60 for small joystick.
*Joystick not supplied

5805 (both armrests)
Armrests with fittings for adjustable keyboard table.

6803H
Right hand note pad board.
To be combined with i.e. a cup holder (5813H/V). Can also be a stand alone arm rest.

5809H (right) / 5809V (left)
Armrest with casing for four (4) mouse trackballs.

5810H (right)/5810V (left) W=200 mm
5811H (right)/5811V (left) W=250 mm
Armrest fitting for combining mouse trackball and joystick. W=width

5808H (right) / 5808V (left)
Armrest with casing Ø100 for joystick and mouse trackball pad.

5807H (right) / 5807V (left)
Armrest with casing Ø100 for joystick as shown but without trackball pad. *Joystick not supplied

5812H (right) / 5812V (left)
Armrest with mounting block. (Holes: 35 x 20 mm)

5813H (right) / 5813V (left)
A cup holder.

5816H (right) / 5816V (left)
ECO 600 Joystick holder
*Joystick not supplied

5806H (right) / 5806V (left)
Armrest with casing Ø60 for small joystick and mouse trackball pad.
*Joystick not supplied

R-0073 Fix-it set for the 5-star legged Office chairs from NorSap.
The 2080 flange is mounted on the floor, and a locking mechanism makes the chair fixed to a position. Multiple flanges can be used. The chair is fixed in two easy steps, push and twist. And its loosened in the same simple way.

Visit norsap.com/chairs
Try out the interactive chair builder.

– You may choose from a complete list of chairs and extra equipment. Columns and deck rails vividly displayed interactively for your convenient.
Examples of extra equipment

**Additional Seat Covers**
NorSap 1000 chairs seat covers
6041 Seat Cover Water Repellent
6050 Seat Cover Fabric
NorSap 1500 chairs seat covers
6451 Seat Cover Water-Repellent
6470 Seat Cover Fabric

**Monitor Holder**
6668 / 6669 A height, angle and distance adjustable monitor holder with VESA mounting.

**Monitor Holder**
6664V(left) / 6664H (right) T=200 mm
6665V(left) / 6665H (right) T=250 mm
Adjustable monitor arm. Lower/rise, back/forth left/right and tilt possibilities. T equals the horizontal length adjust ability.

**Communication**
Integrated loud-speaker and microphone in the headrest.
6487 Microphone
6486 Loudspeaker 8 Ω
6489 Microphone mounting bracket

**Foot Rest for Shuttle service boats**
6215 Double Foot Rest (1500/2000 series) Ø150 mm.
6214 Double Foot Rest (1000 series) Ø100 mm.
6209 Double Foot Rest (800 series) Ø80 mm.

**Foot Rest Loop NS1500**
6215
6030 Foot Rest Loop NS1000

**Seat Belts**
6460 4 Point Seat Belt
6461 2 Point Seat Belt

**Examples of extra equipment**
A height, angle and distance adjustable monitor holder with VESA mounting.

**Foot Rest for Shuttle service boats**
6215 Double Foot Rest (1500/2000 series) Ø150 mm.
6214 Double Foot Rest (1000 series) Ø100 mm.
6209 Double Foot Rest (800 series) Ø80 mm.

**Foot Rest**
6340 Foot Rest Loop NS1500
6030 Foot Rest Loop NS1000

**Communication**
Integrated loud-speaker and microphone in the headrest.
6487 Microphone
6486 Loudspeaker 8 Ω
6489 Microphone mounting bracket

6905 Document holder, to be mounted on the back of the back rest.
6800 Binoculars Holder, to be mounted on the back of the back rest.
R-0077 Wheel set for 5 star legged chairs.

**Examples of extra equipment**

**Foot Rest Loop NS1500**
6215
6030 Foot Rest Loop NS1000

**Seat Belts**
6460 4 Point Seat Belt
6461 2 Point Seat Belt

*not suitable on all models.
Fixed table columns with 300mm diameter base and top flange offer strength and stability at a low weight. Anodized tube with standard white base and top flanges, or polished aluminum tube with mirror polished base.

<table>
<thead>
<tr>
<th>Article Number and Description / Color/Material</th>
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<tbody>
<tr>
<td>7020 Ø80 mm column, Ø300 mm flange / Grey powder coated aluminium flange</td>
</tr>
<tr>
<td>7020BL Ø80 mm column, Ø300 mm flange / Chrome stainless steel covered aluminum flange, polished aluminum tube</td>
</tr>
<tr>
<td>7020SI Ø80 mm column, Ø300 mm flange / Silver lacquered aluminum flange</td>
</tr>
<tr>
<td>7020SM Ø80 mm column, Ø230 mm flange / Grey powder coated smaller aluminium flange</td>
</tr>
<tr>
<td>7025 Ø65 mm column, Ø300 mm flange / Grey powder coated aluminium flange</td>
</tr>
<tr>
<td>7025BL Ø65 mm column, Ø300 mm flange / Chrome stainless steel coated aluminium flange, polished aluminum tube</td>
</tr>
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<td>7030 Ø65 mm column, Ø230 mm flange / Grey powder coated smaller aluminium flange</td>
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<td>7030SI Ø65 mm column, Ø230 mm flange / Silver lacquered smaller aluminium flange</td>
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State desired height from deck to top of upper flange when ordering. If nothing is stated, it will be delivered as standard 700 mm.

NorSap has a second brochure containing products for the pleasure boat and smaller boat market. You might find other solutions for your vessel.
NorSap has over 40 years of experience in the marine market, is economically solid and because of this we can be a long term partner.

NorSap has increased the focus and resources related to product development to keep up the market leader position for helmsman chairs.

The owners of NorSap have a long term view of the ownership and are willing to do necessary investments to keep up the no. 1 position.

NorSap is not bureaucratic and the owners are active in the daily business so that fast decisions can be made when necessary.

In NorSap we produce a lot of the parts ourselves, have a highly skilled working force and have long experience. All mounting is done at NorSap. Totally this gives confidence that the supplied products are of excellent quality.

NorSap has a construction department which makes it possible in short time to customize solutions when this is needed.

NorSap has advanced machinery for prototype production so that you as a customer can see a vital part “live” when this is needed.

NorSap has very limited problems with sold products, but if so; these are handled fast and professional to help the end user in a best possible way.

Excellent international dealer network.

Totally we like to think that this means we are a high quality supplier you believe in and want to have a long term relation to.