

LOWRANCE

SIMRAD

# Outboard pilot, Hydraulic pack Installation Guide

ENGLISH



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## Technical specifications

1

|                            |   |
|----------------------------|---|
| <b>NAC-1</b>               |   |
| Operating temperature      | -25°C to +55°C (13°F to 131°F)                  |
| Protection                 | Splashproof, IPx5                               |
| Weight                     | 0.6 kg (1.3 lbs)                                |
| Power supply               | 9-16 V DC                                       |
| Load                       | 140 mA + drive unit load                        |
| Performance                | Drive: 8 A cont., 16 A for 1 s                  |
| <b>Pump-1</b>              |   |
| Operating temperature      | -15°C to +75°C (5°F to 167°F)                   |
| Protection                 | Splashproof, IPx5                               |
| Weight                     | 2.2 kg (4.9 lbs)                                |
| Load                       | 5 A at 8 bar (116 psi), 7 A at 24 bar (350 psi) |
| Performance                | 0.8 l/min at 24 bar (350 psi)                   |
| <b>GS25/Point-1</b>        |   |
| Operating temperature      | -25°C to +60°C (13°F to 140°F)                  |
| Protection                 | Watertight, IPx7                                |
| Weight                     | 0.14 kg (0.31 lbs)                              |
| Power supply               | 9-16 V DC                                       |
| Load                       | <100 mA @ 12 V DC                               |
| Performance                | Heading: +/- 3°, Horiz. accuracy: 3 m (9.8 ft)  |
| <b>Standby/Auto button</b> |   |
| Operating temperature      | -25°C to +55°C (13°F to 131°F)                  |
| Protection                 | Splashproof, IPx5                               |
| Weight                     | 0.04 kg (0.09 lbs) (including cable)            |
| <b>RC42N</b>               |   |
| Operating temperature      | 0°C to +55°C (32°F to 131°F)                    |
| Protection                 | IP56  |
| Weight                     | 0.4 kg (0.9 lbs)                                |
| Power supply and interface | 8-16 V via NMEA 2000                            |
| Power consumption          | 1.4 W   |
| Accuracy                   | ± 3 degrees after calibration                   |
| Compass safe distance      | 0.5 m (1.7')                                    |

## PLANNING: Tools needed

2

- Use to mount Pump-1, NAC-1 and heading sensor.
- Drill holes for screws, larger dimensions for hoses.
- Wrenches that fit the hoses.
- Cup or can for oil spill.
- Tape.
- Tools to connect power cables at battery.
- Gloves (disposable type).

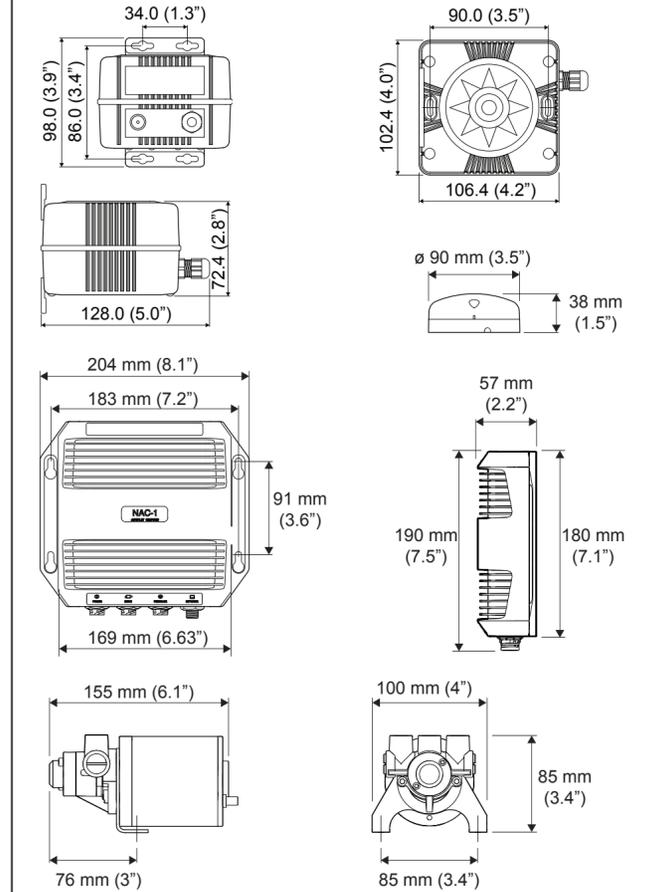
## PLANNING: Cable lengths

3

- Refer to Wiring diagram (point 15) to find the various cable lengths.

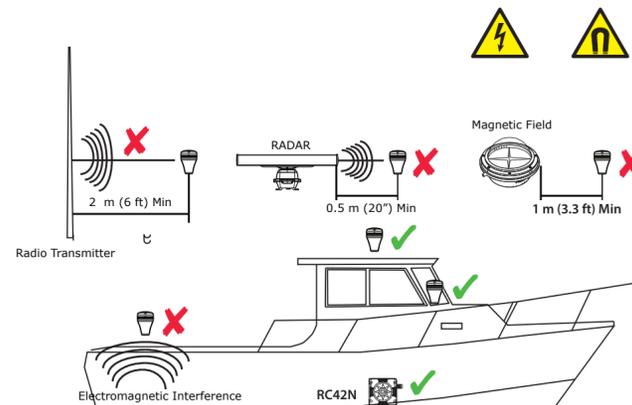
## PLANNING: Dimensions

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## PLANNING: GS25/Point-1, Mounting location

5



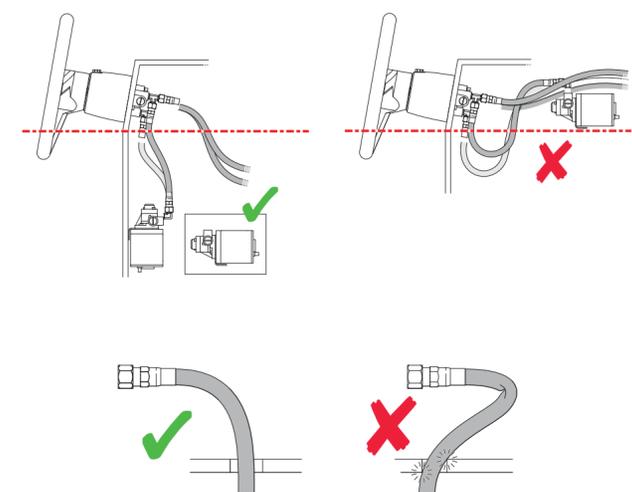
**GS25/Point-1**  
The antenna contains a magnetic heading sensor and should not be mounted within 1 meter (3.3 ft) of any potential magnetic source.

**RC42N**  
Select a location that provides a solid mounting place free from vibration, min. 1 meter (3.3 ft) away from any potential magnetic source, and as close to the vessel's centre of roll and pitch as possible, i.e. close to the water line.

- Potential sources for magnetic/electromagnetic interference include:
- Electrical Motors/Magnets/Moving Metal items
  - Outboard Engines
  - High current electrical sources such as main power cables, batteries, distribution panels etc.

## PLANNING: Pump-1, Mounting location

6



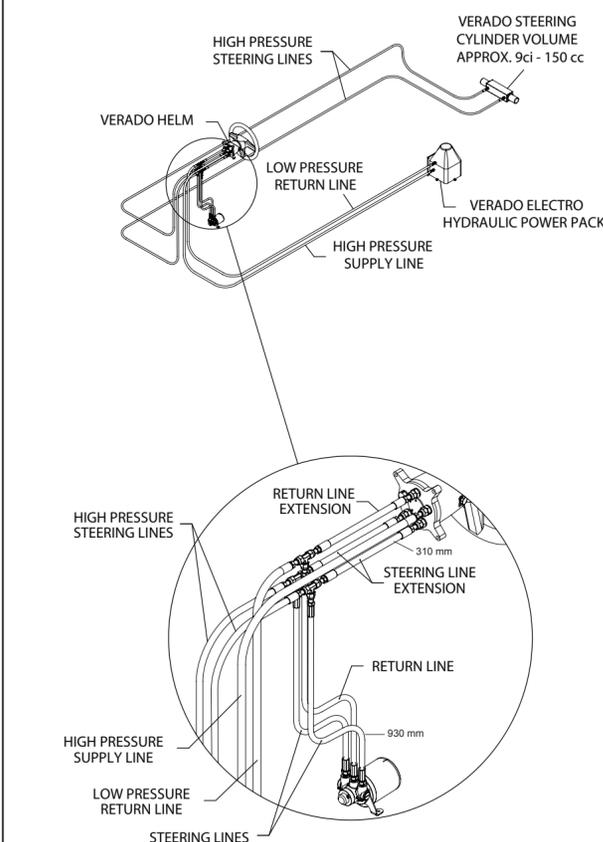
## Compatibility information

The hydraulic kit comes with 1/4 NPT 9/16 UNF fittings for nylon tube or flexible hoses which make them ideally suited for the following steering systems:

- Teleflex SeaStar HC5345, HC5347, HC5348, HC5358.
- Teleflex BayStar HC4600, HC4645, HC4647, HC4648, HC4658.
- Hynautic K6 Steering Rams.
- Also rams from Vetus, Uflex, Lecomble and Schmitt can be used.

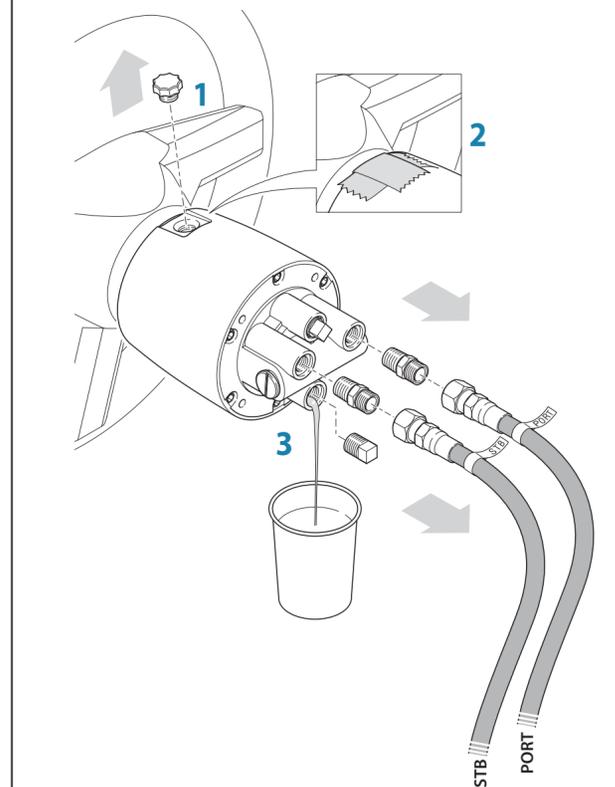
## Installing with optional 000-11772-001 Verado fitting kit for Pump-1

7



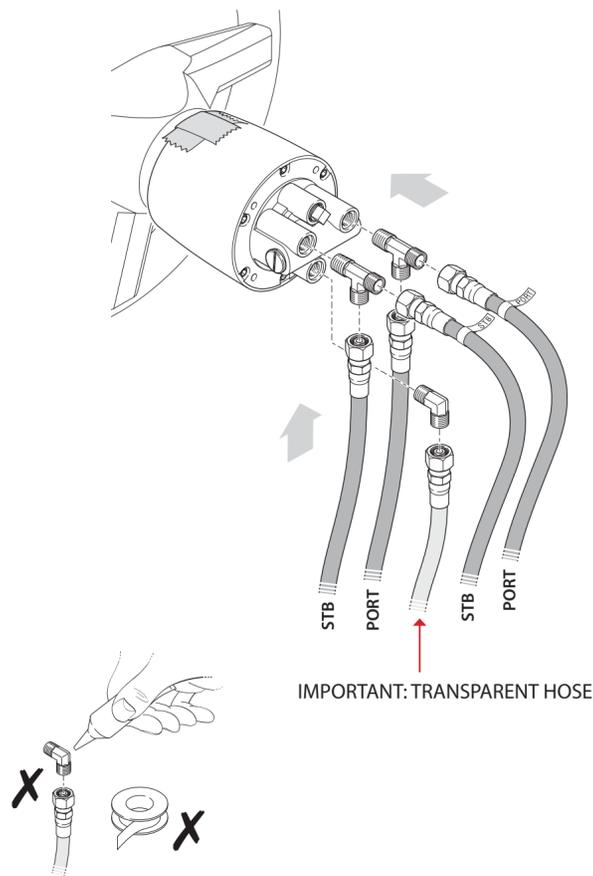
## MOUNTING: Disconnecting the hoses from helm pump

8



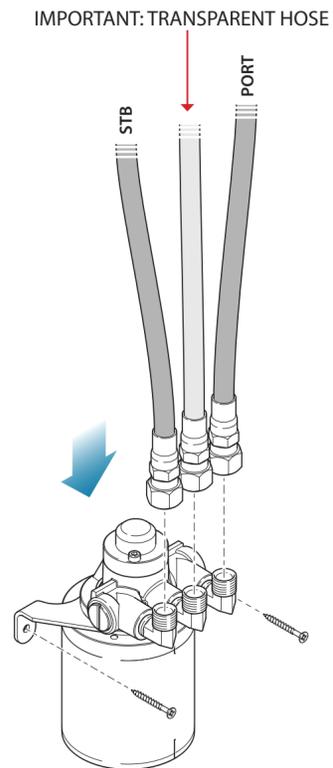
**MOUNTING: Connect hoses to helm pump**

9



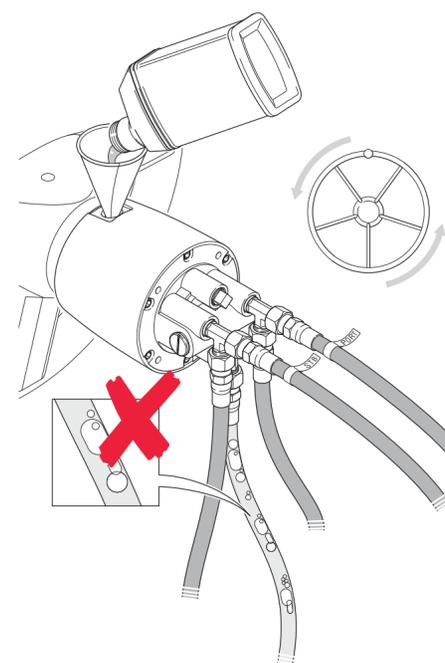
**MOUNTING: Pump-1, Connect hoses**

10



**MOUNTING: Bleeding**

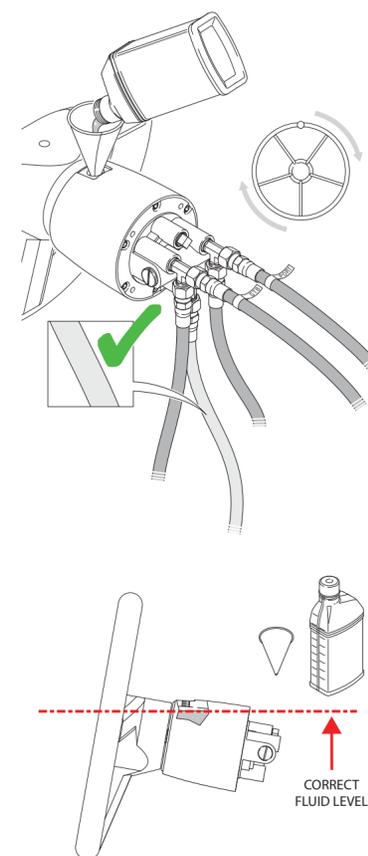
11



Turn wheel gently in both directions, and refill oil.  
 Repeat turning and refilling oil until the oil level is stable and no air bubbles left in the transparent tube, and the outboard engine responds firmly.  
 If air bubbles still remain in the system, follow the bleeding procedure described for the outboard cylinder.

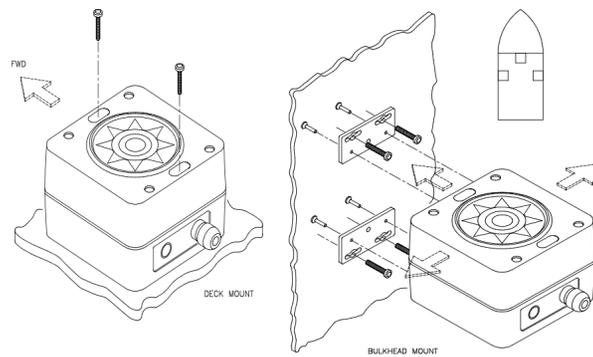
**MOUNTING: Pump-1, Refill oil and bleed system**

12

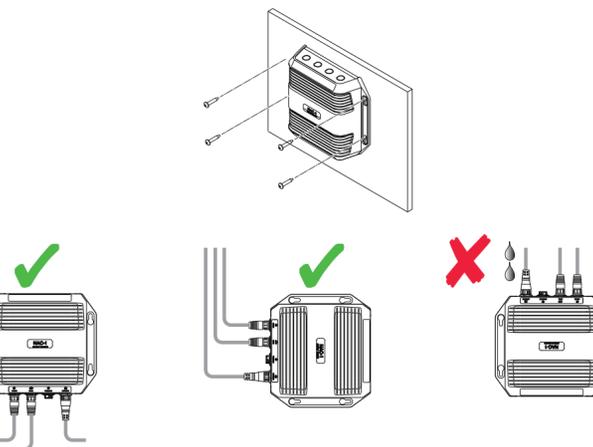


**MOUNTING: RC42N**

13

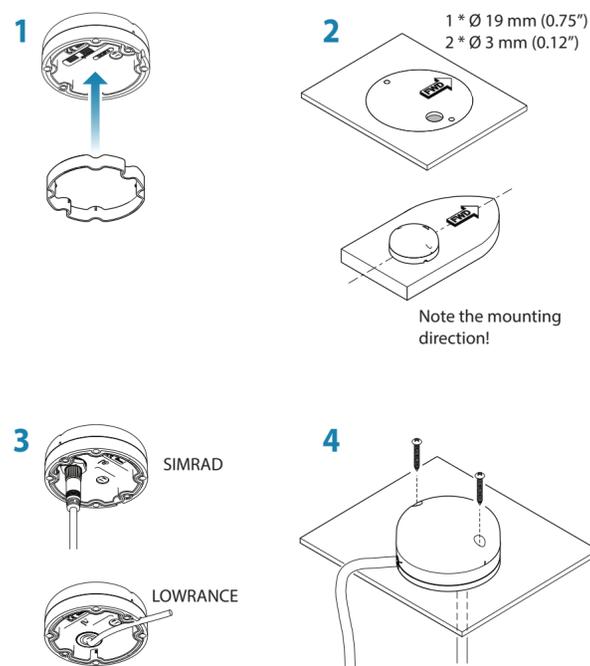


**MOUNTING: NAC-1**



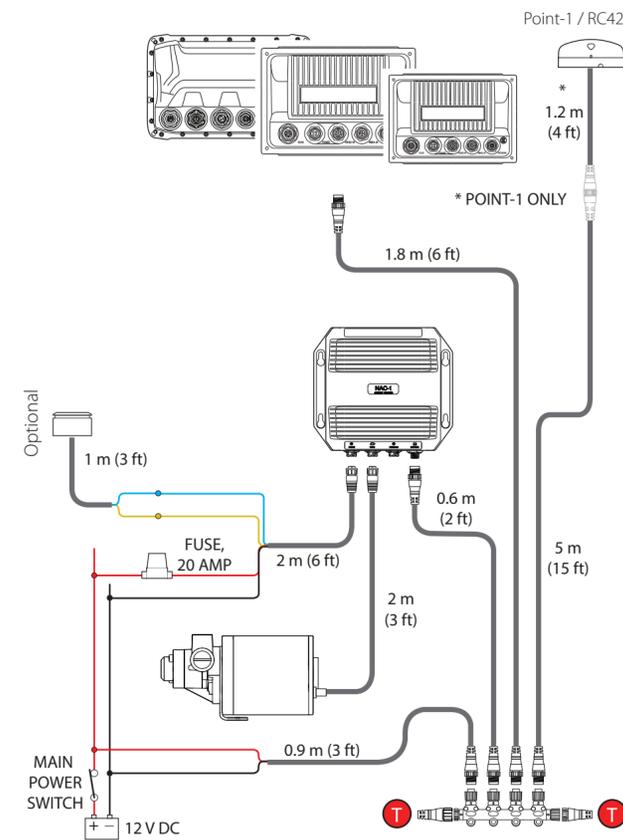
**MOUNTING: GS25/Point-1**

14



**WIRING: Wiring diagram**

15



**IMPORTANT: Check hoses for leaks**

16



**Configuration**

Refer to your Autopilot controller's documentation for setup instructions.

17