

INSTALLATION INSTRUCTIONS AND OWNERS MANUAL

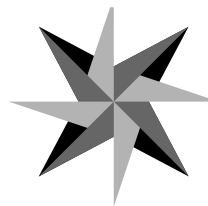
Part # ISCH18000, Rev 2, 08/2013

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ch2200
ch2300
mt3
osprey
pro-trim
single s
twin s
sl-3

HYBRID ENGINE CONTROLS
CH18000 SERIES



SEASTAR
SOLUTIONS®

*Before you do it your way,
please try it our way.*

HYBRID ENGINE CONTROLS

CH18000 SERIES

NOTICE

Installer: these instructions contain important safety information and must be forwarded to the boat owner.

These SeaStar Solutions Controls provide both shift and throttle operation for inboards and inboard/outboards.

The throttle is an electrical output signal and the shift is a typical marine control cable.

In addition to this control, the following components are required for a complete control system:

- One (1) control cable. Check for routing and length. SeaStar Solutions Xtreme™ cables are recommended.
- One (1) Engine Shift Connection Kit. Specific to manufacturer.
- One (1) Connection kit part number 190008, used to mount the shift cable is included.

| CONTROL FEATURES | SIDE MOUNT | TOP MOUNT |
|---|------------|-----------|
| Single Lever Shift and Throttle Operation | Yes | Yes |
| Neutral Throttle Warm-Up | Yes | Yes |
| Neutral Throttle Interlock | Yes | N/A |
| Neutral Safety Switch (to prevent starting in gear) | No | No |
| Friction Adjust Screw (to prevent throttle “creep”) | Yes | Yes |
| CONTROL OPTIONS | | |
| Trim & Tilt Switch | Option | Option |

**Trim harness is supplied with control heads that have a trim switch option.*

NOTICE

Cable installation and connections must be made in accordance with the motor manufacturer's instructions.

To insure best performance, free operation of all linkages and the remote control is essential. Follow the manufacturer's recommended procedures for adjustment and lubrication.

All specifications and features are subject to change without notice.

WARNING

Before starting installation read these instructions and engine makers instructions thoroughly. Failure to follow either of these instructions or incorrect assembly can result in loss of control and cause property damage, injury, or death.

WARNING

DO NOT substitute parts from other manufacturers, they may cause a safety hazard for which SeaStar Solutions cannot accept responsibility.

NOTICE

SeaStar Solutions highly recommends the installation and usage of an engine shut off switch as a important emergency safety feature for boats. This switch should be connected by a cord to the boat driver. Should the driver be thrown from the helm position, the engine will automatically shut off.

This shut off switch is not a standard part of this control. It can, however, be obtained from most marine dealers and distributors.

⚠ WARNING

This device should not be used as a navigational aid to prevent collision, grounding, boat damage or personal injury. When the boat is moving, water depth may change too quickly to allow time for you to react. Always operate the boat at very slow speeds if you suspect shallow water or submerged objects.

⚠ WARNING

This product contains lead, a chemical known to the State of California to cause cancer, birth defects, and other reproductive harm.

Operation

SIDE MOUNT CONTROL.

NEUTRAL INTERLOCK BUTTON.

To prevent bumping the side mount control out of neutral, the button must be depressed and held to shift into forward or reverse.

ENGINE TRIM SWITCH.

Used to move the engine UP or DOWN to level the boat while underway.

NEUTRAL THROTTLE WARM-UP BUTTON.

This feature provides a "Throttle Only" option to operate the engine throttle without going into gear.

OPERATION.

- When the Control Hand Lever is in Neutral, depress both the Neutral Interlock and Neutral Throttle Warm-up buttons at the same time.*
- While holding the buttons, move the lever forward to throttle up the engine.
- When the handle is returned to the Neutral position, the buttons will reset automatically.
- Once the buttons reset, the Control Hand Lever will work both shift and throttle functions.

** The depression of both buttons is only required on Side Mount Controls.*

TRAILER TILT SWITCH.

Used to raise the drive for trailering the boat.



TOP MOUNT CONTROL.

ENGINE TRIM SWITCH.

Used to move the engine UP or DOWN to level the boat while underway.

NEUTRAL THROTTLE WARM-UP BUTTON.

This feature provides a “Throttle Only” option to operate the engine throttle without going into gear.

OPERATION.

- When the Control Hand Lever is in Neutral, depress the button at the base of the handle.
- While holding the button, move the lever forward to throttle up the engine.
- When the handle is returned to the Neutral position, the button will reset automatically.
- Once the button resets, the Control Hand Lever will work both shift and throttle functions.

TRAILER TILT SWITCH.

Used to raise the drive for trailering the boat.



Installation

LOCATION OF CONTROL.

STEP 1. Allow adequate clearance for hand lever swing (forward and reverse positions, see page 8).

STEP 2. Allow adequate clearance under the console or in the gunwale for the cables AND **allow a minimum of 36" from the cable nest connection with no restraint.** When supporting the cables beyond 36", do not tie or clamp tightly.

STEP 3. After a suitable location for the control is determined, use the separate mounting template to make the cut-out. The templates are supplied with the control and on pages 10 and 11.

STEP 4. Closely follow the instructions provided on the template. Cut and drill the mounting holes required.

On all models, the cover will have to be removed to expose the mounting holes.

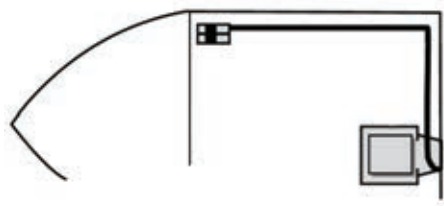
MEASURING THE CABLES.

Measure the cable routing path from the control head connection to the engine connection.

INBOARDS AND STERN DRIVES.

Measure from the control connection—along an unobstructed cable routing—to the shift connection. Round this dimension **UP** to the next whole foot and order the required cable part number.

(Last two digits of the SeaStar Solutions cable number equal the length of the cable in feet.)



SHIFT & THROTTLE CABLE CONNECTION-CONTROL END.

- **PUSH/PULL** refer to the direction of cable motion to shift into “forward.”

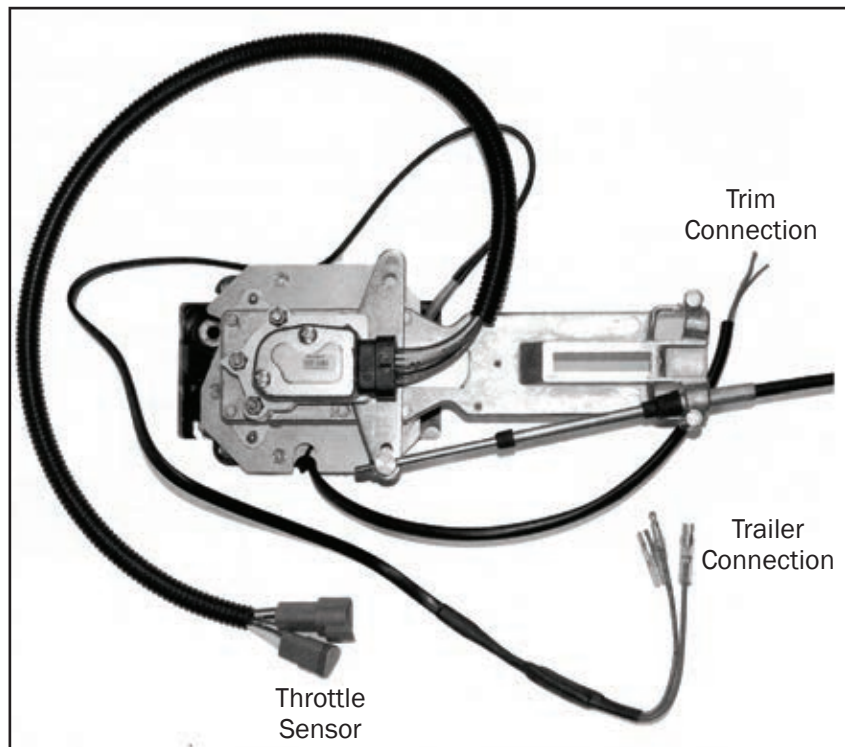
- Refer to the appropriate manufacturer’s manual for shift direction and adjustments.

- Cables and wiring should be pre-installed on control before final mounting is made.

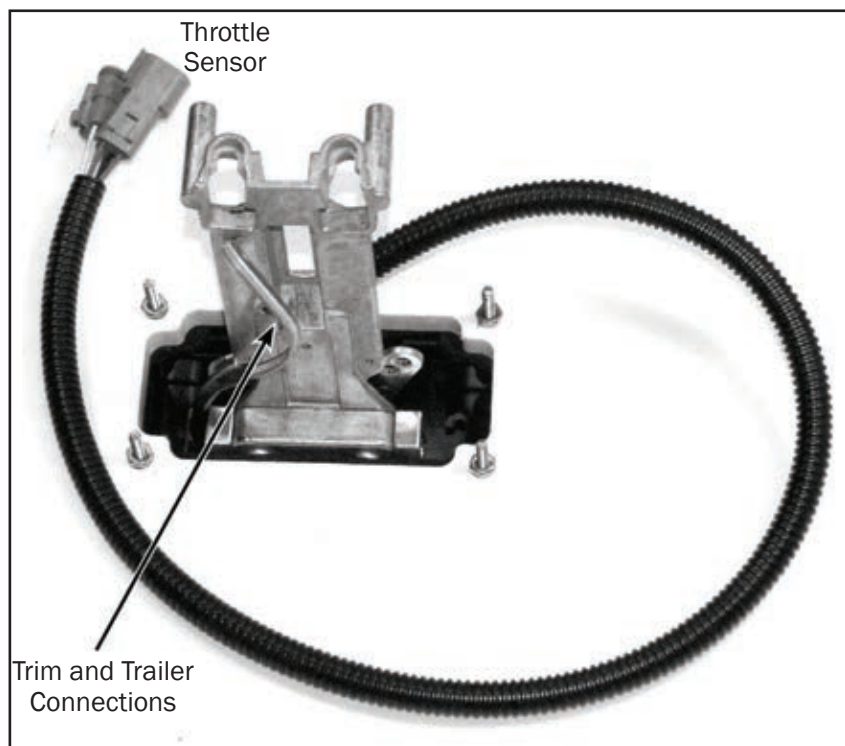
SHIFT & THROTTLE CABLE CONNECTION-ENGINE END.

See engine or stern drive instructions for shift cable connection.

SIDE MOUNT CABLING.



TOP MOUNT CABLING.



ELECTRICAL CONNECTIONS.

TRIM AND TILT.

Refer to the wiring diagrams (below) for the correct “Trim” and “Tilt” switch connections and wire accordingly.

Abbreviations:

DN = Down

UP = Up

Color Key:

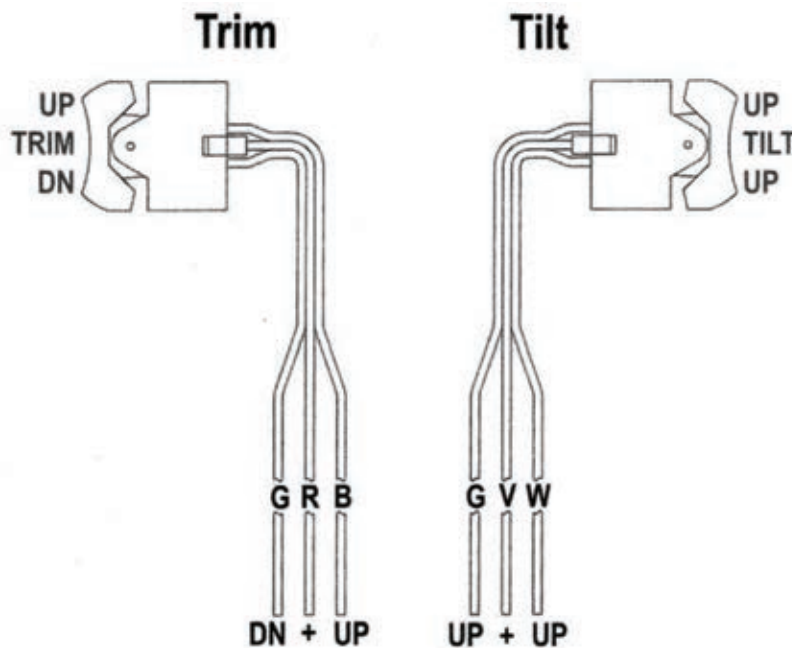
B = Blue

G = Green

V = Violet

R = Red

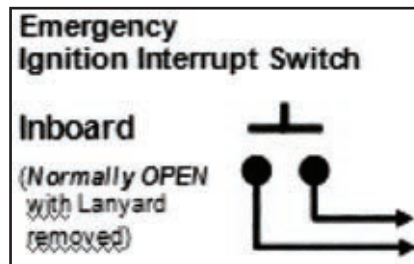
W = White



Note for Tilt:

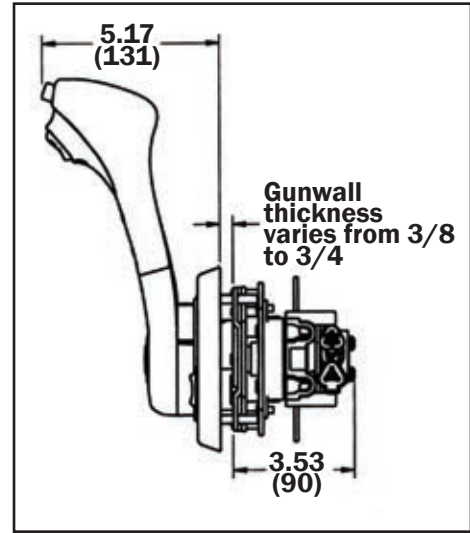
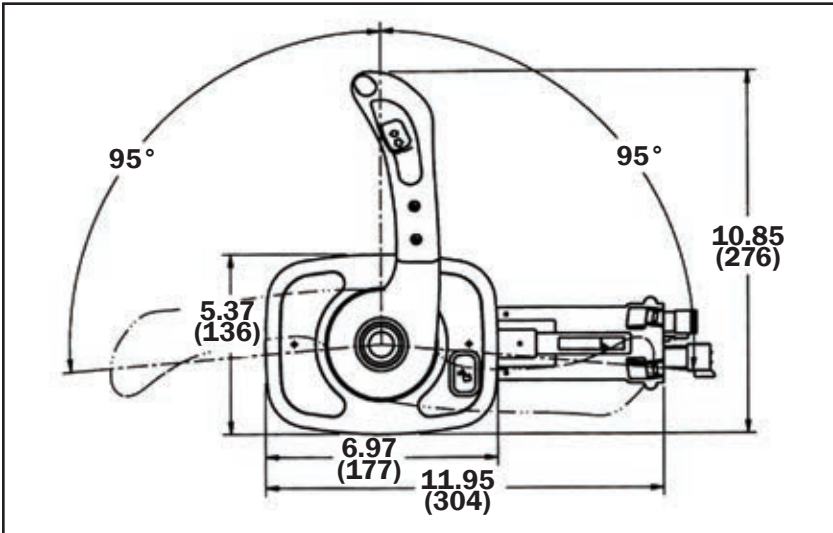
1. Connect White and Green together.
2. Connect Violet to power.
3. Not all engines are wired the same, especially older engines. Check with the engine manufacturer for wiring specifications.
4. Use either the upper or lower Tilt switch to bring Tilt UP. To bring Tilt DOWN, use Trim DOWN switch.

EMERGENCY IGNITION CUT-OFF SWITCH (OPTIONAL).

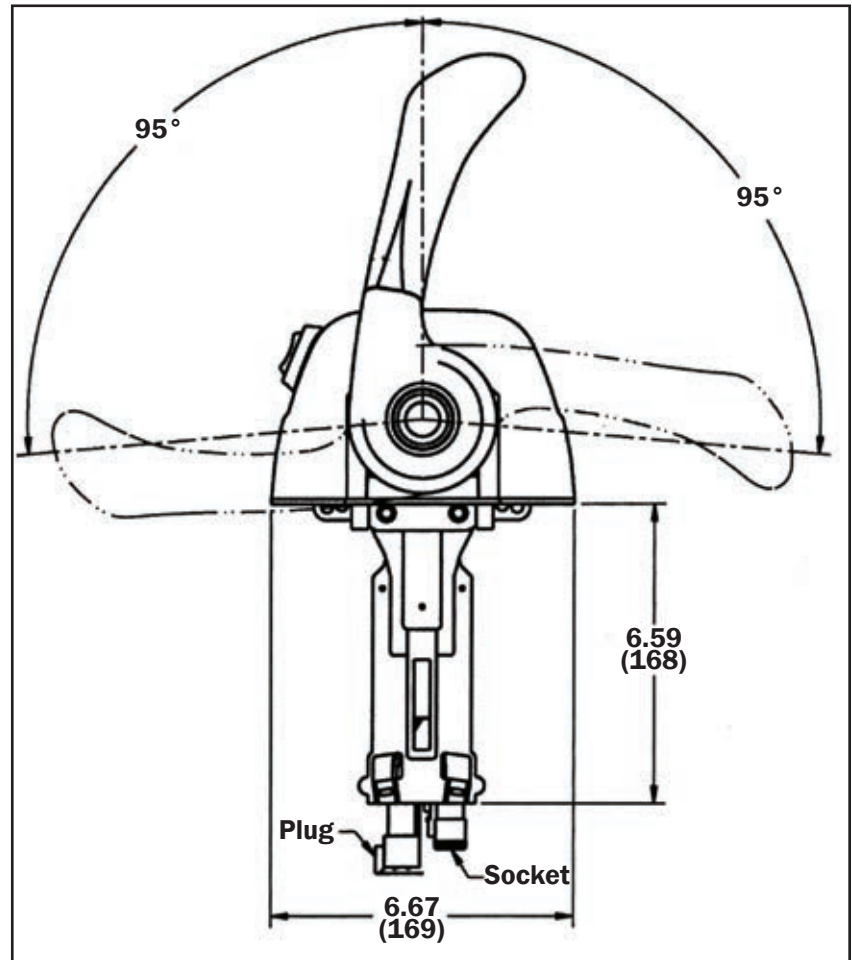
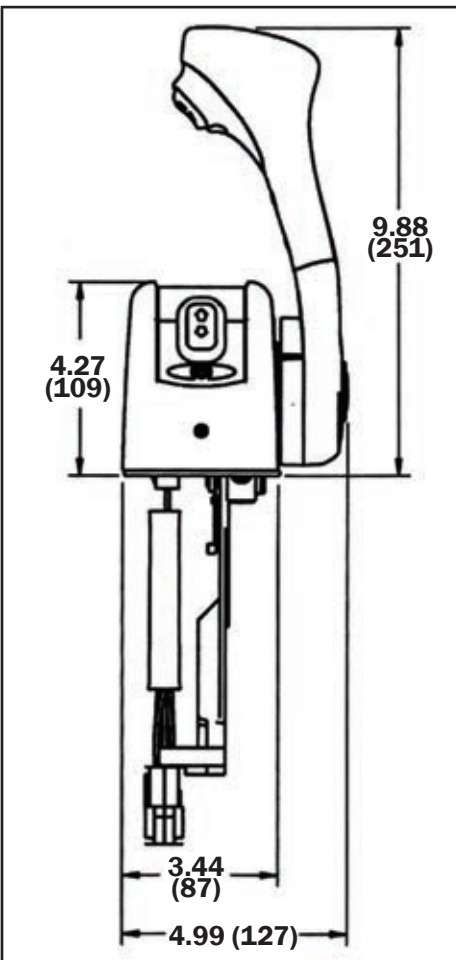


General Control Dimensions

SIDE MOUNT DIMENSIONS.



TOP MOUNT DIMENSIONS.

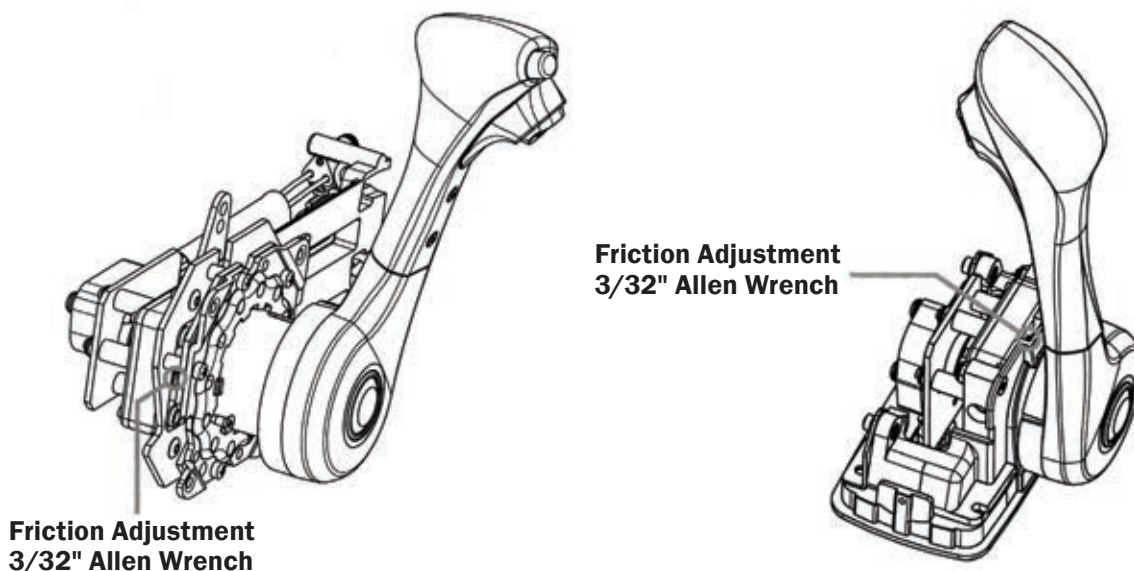


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Maintenance

FRICITION ADJUSTMENT SCREW.

Adjustment of this screw enables the friction in the throttle operating mechanism to be increased to prevent unwanted handle movement. To adjust, place the lever in the forward or reverse throttle position (just beyond the shift position). Remove the cover and adjust the friction adjustment screw: turning the screw clockwise increases the friction. Do not over-tighten.



Maintenance Notes

DANGER

1. After a few hours of operation and at frequent intervals thereafter, check all fasteners and the complete control system for security and integrity.

Loosening or loss of one or more fasteners may cause failure of the control system and could cause property damage, injury, or death.

2. Keep all moving parts free from build-up of salt and other foreign material. This will affect their operation and create control problems.

3. Periodically inspect for corrosion. Any parts affected by corrosion must be replaced. Any replacement hardware must be as originally supplied (i.e. similar material and locking features).

4. Periodically inspect control cables for cracks and other damage. If any is found the cable must be replaced.

5. If cable is stiff in operation, it is unsafe to use and must be replaced immediately.

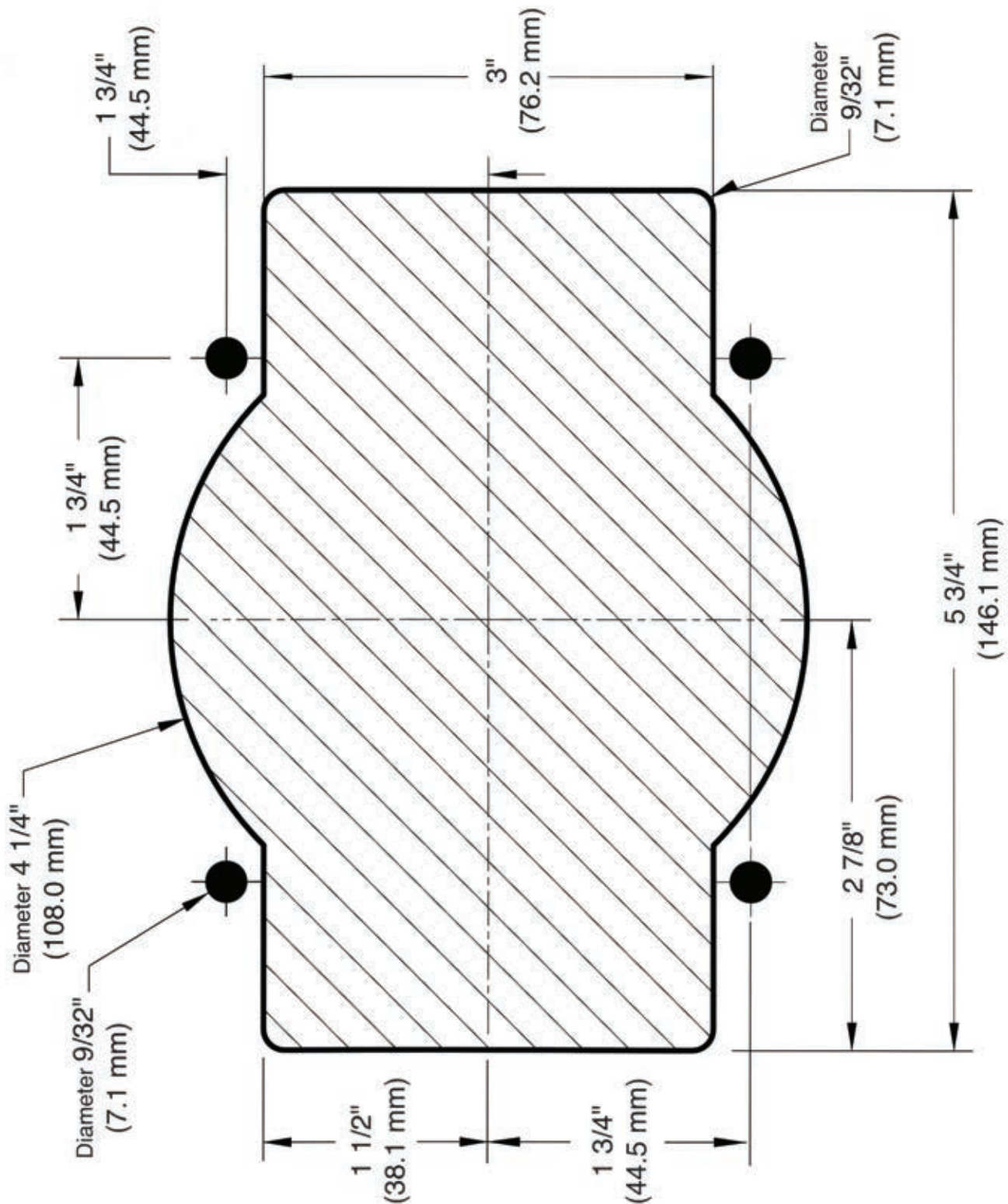
DANGER

DO NOT cover cracks with tape or other sealants. This will create a hazard in which the cable can fail suddenly without warning, resulting in property damage, injury, or death.

NOTICE

Boat builder and boat dealer, please supply these Installation Instructions and Owner's Manual with the delivery of boat. Boat owner keep these instructions with your boat for future reference. Boat owner consult with your boat builder, boat dealer, or SeaStar Solutions if you have any questions regarding these instructions.

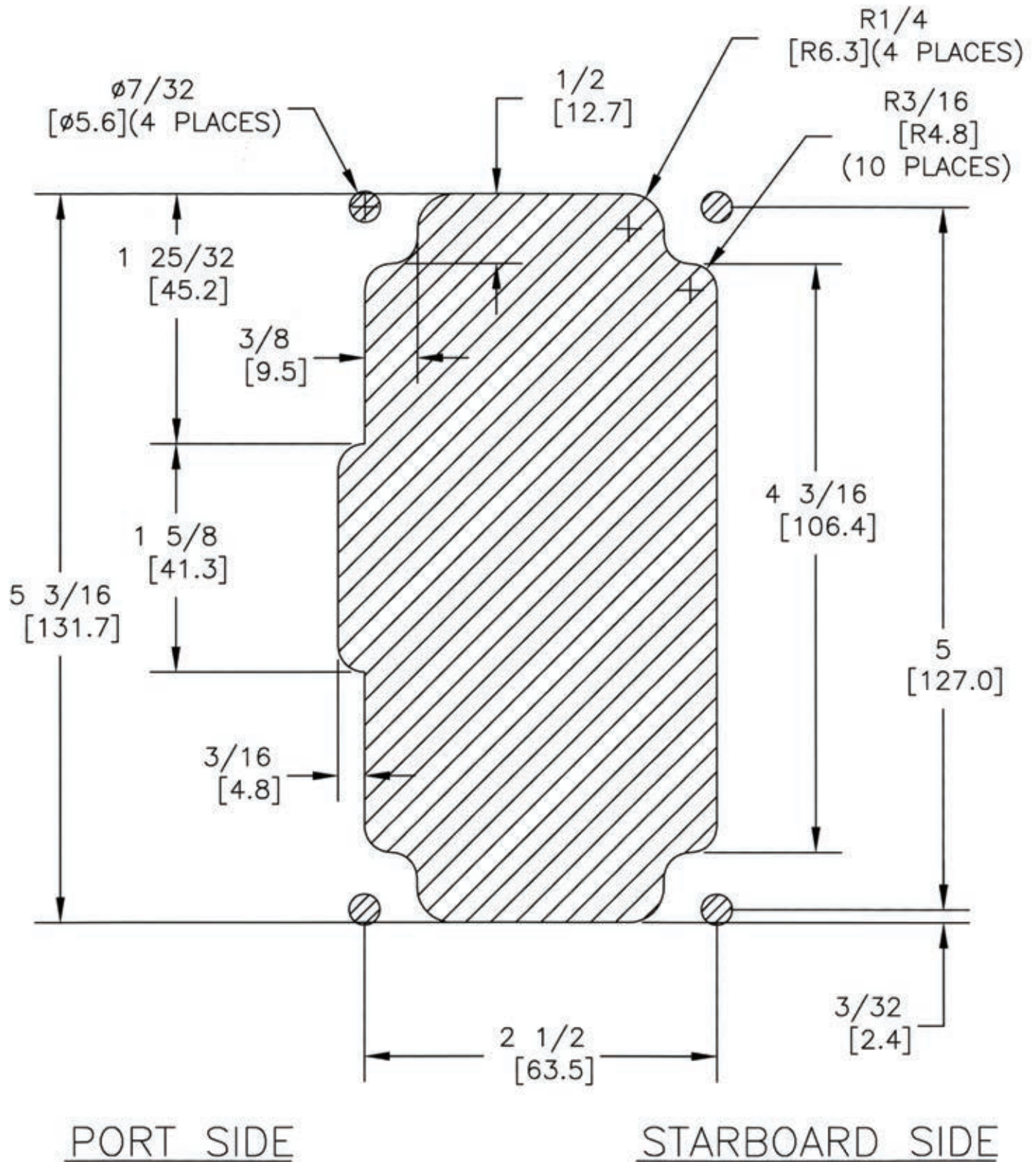
Mounting Template Side Mount Control



NOTICE

*This template is to scale and provided as an auxiliary template to the work template—**MT_CH18000**—which is included with this control.*

Mounting Template Top Mount Control



NOTICE

This template is to scale and provided as an auxiliary template to the work template—**MT_CH18000**—which is included with this control.



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