

HARKEN®

Harken Compact Panel Kit

HYACXPXB1J - Installation and User Manual



HYACXPXB1J

**Please read these instructions carefully before using or servicing the equipment.
This manual may be modified without notice. See: www.harken.com/manuals for updated versions.
PLEASE SAVE THESE INSTRUCTIONS**

INTRODUCTION

This manual gives technical information on installation and use. Installation, disassembly and reassembly by personnel who are not experts may cause serious damage to property or injury to users and those in the vicinity of the product. If you do not understand an instruction, contact Harken. The user must have appropriate training in order to use this product.

Harken accepts no responsibility for damage or harm caused by not observing the safety requirements and instructions in this manual. See limited warranty, general warnings and instructions at www.harken.com/manuals.



WARNING! Strictly follow all instructions to avoid an accident, damage to your vessel, personal injury or death. Hydraulic components are capable of exerting extremely high loads. Failure to inspect and replace faulty components may result in sudden breakage at high loads. Inspect all related equipment to ensure it is free of defects or obstructions prior to use. Before using, make sure all people and objects are clear of the moving components of the system.

Description

The Harken Compact Panel Kit is designed for use on sailboats and is sized according to boat and function to be controlled. When ordering, always have your choice confirmed by a Harken representative or other sailing professional. Other uses of this product besides normal sailboat applications are not covered by the limited warranty.

Parts sold separately

Hydraulic oil (see page 4 for Harken recommendation)
Cylinder to be connected to panel
High pressure hose (Harken can supply)
Fasteners - 1/4" M6 (FH) and 5/16" M8 (RH)

Included

Panel
Pump handle
Low pressure hose
Reservoir-2L vented cap
Filter-low pressure 40 micron

Tools Required

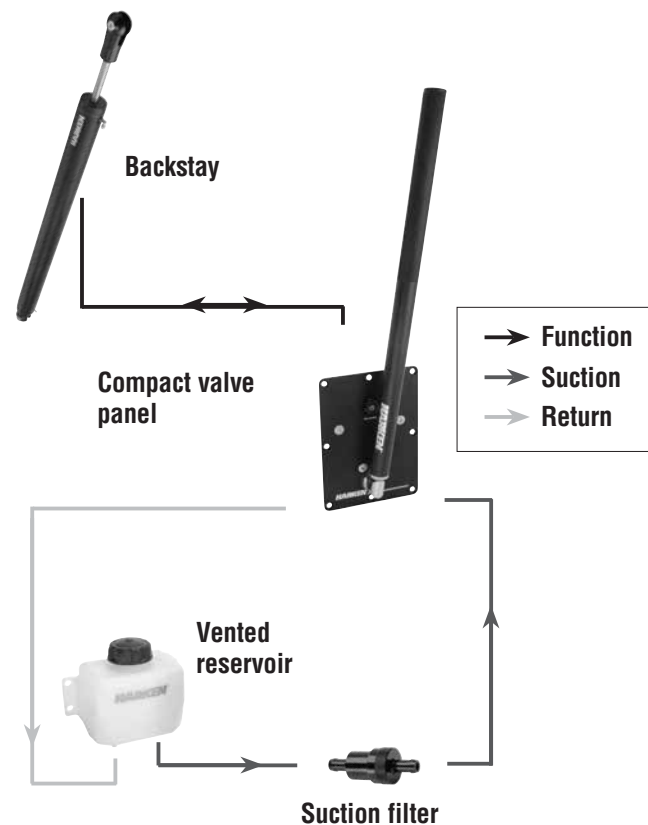
Saw (to cut hole in boat for panel installation)
Various hand tools i.e., screwdriver, wrench, etc.
Drill and bits

Installation Overview

Refer to Overview diagram when planning system installation.

- Use template to determine optimal panel placement.
- Locate reservoir and panel as close to each other as possible.
- Confirm adequate clearance for pump handle movement prior to installation.
- Confirm clearance for reservoir. Allow room above reservoir cap for access when filling.
- Plan high pressure hose run from panel to function (cylinder) and low pressure run to panel.
- 5 ft. (1.52 m) of low pressure hose is included with kit.
- Remember to plan a suitable location for suction filter along suction line between reservoir and pump.

Overview

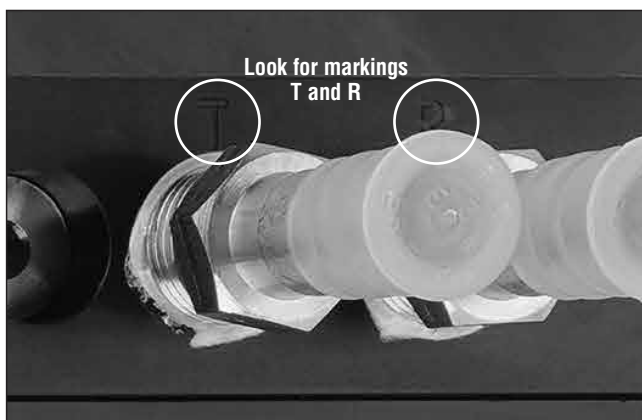


INSTALLATION

Install compact panel

Review all instructions carefully prior to installation of your new Harken compact panel kit.

1. Carefully unpack the kit components and check for visible defects. If any signs of damage are present, contact your dealer at point of purchase or Harken.
2. Mount panel in selected location. See template on page 6. Panel gaskets and bolt holes are fitted with O-rings preventing water from entering the hull while eliminating the need for sealants.
3. Mount reservoir. See template on page 7. If possible, reservoir and panel should be mounted at the same relative height for optimal pump suction. It is best if reservoir can be located slightly higher than panel, but **must be located no lower than 5 ft. (1.5 m) below panel and hose run to panel is not to exceed 10 ft. (3 m)**.
4. If necessary, perform the following steps to adjust pump handle position.
 - 4.1 Move pump handle so one piston is fully extended.
 - 4.2 Remove external retaining ring and shaft retaining washer from back of pump handle shaft.
 - 4.3 Without moving the pistons, rotate splined shaft until desired handle position is attained. **Important:** Shaft is splined in 7° increments to allow for optimal pump handle placement.
 - 4.4 When desired pump handle position is attained, reinstall shaft retaining washer and external retaining ring at back of pump handle shaft.



Connect Kit Components Using Low Pressure Hose

1. Make sure all parts are free of dust and debris. Blow out hose with air compressor to ensure no debris is in them. Always keep area clean of dirt and debris when installing hoses.
2. Select section of low-pressure hose for suction line and connect to 3/8" hose barb on valve manifold marked T (tank). Connect the other end to the larger diameter side hose barb on filter. See diagram on page 2.
3. Select second section of low-pressure hose for suction line and connect to the smaller diameter side hose barb of filter. See diagram on page 2. Connect the other end to one of the reservoir hose bars.
4. Select third section of low-pressure hose for return line and connect from valve manifold 3/8" hose barb marked R (return). Connect the other end to one of the reservoir hose bars.

Note: Filtration is essential to the health and longevity of your hydraulic system. Harken supplies high-quality filters for use with your system as per one supplied in the kit. Replacement filters are available, part # HYFAT40.



INSTALLATION

Connect Panel to Function using High Pressure Hose

When reservoir is connected to panel, it is time to connect system to function.

Remember these important points when measuring the hose run from panel to function:

- Short straight runs between panel and function are best.
- Avoid sharp edges which may chafe the hose.
- Minimize fittings/connections throughout the run to avoid possible leak points.
- Minimize 90° bends which decrease performance.

Note: Hoses from valve to function must be rated to 5000 psi and must be cleaned and flushed prior to installation.

With hose length and path set, connect one end of high pressure hose to 1/4" male JIC fitting high pressure port. Connect other end to function.

Note: Before connecting cylinder, fully extend cylinder, pre-charge with air if required, and detach from rigging.

Add Oil

When panel is installed and function are connected, add filtered oil to the reservoir.

Oil Specifications: A good high-quality mineral based, anti-wear hydraulic oil. Harken recommends an ISO viscosity grade 32 oil. Harken uses Mobile DTE24 in all standard hydraulic products and repairs. Harken also sells this oil as part number HYOIL22QUART. ISO viscosity grades of 15 and 22 are acceptable in products being used mostly in a cold weather environment.

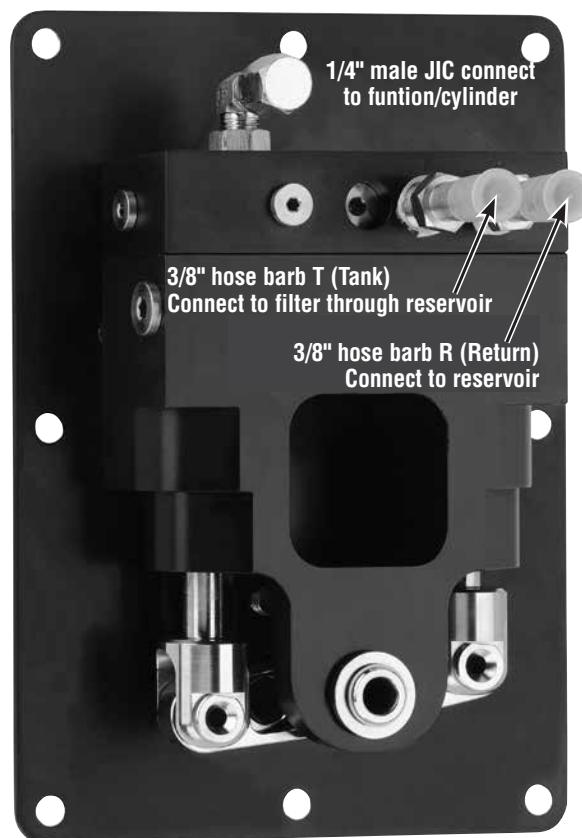
1. Pump filtered hydraulic oil into reservoir until reservoir is 2/3- to 3/4-full.
2. Screw vented cap onto reservoir.

Bleed System

When reservoir is filled, the compact panel system must be bled to remove air.

1. Close release valve.
2. Disconnect hose at function cylinder.
3. Pump oil through hose into suitable container. When oil exiting line is bubble-free and foam-free, reconnect hose to function cylinder.
4. Check oil level in reservoir and refill to at least ½ full, no more than ¾ full.
5. Pump until cylinder fully retracts, then open release valve and allow cylinder to fully extend.
6. Repeat Step 5 two to four times.
7. Dispose of oil properly in compliance with government regulations.

When function has been bled, and all hoses are securely connected, compact panel system is ready for operation.



OPERATION



WARNING! Hydraulic components are capable of exerting extremely high loads. Inspect all related equipment to ensure it is free of defects or obstructions prior to use. Before using, make sure all people and objects are clear of the moving components of the system.

Single-Function System

Increase tension

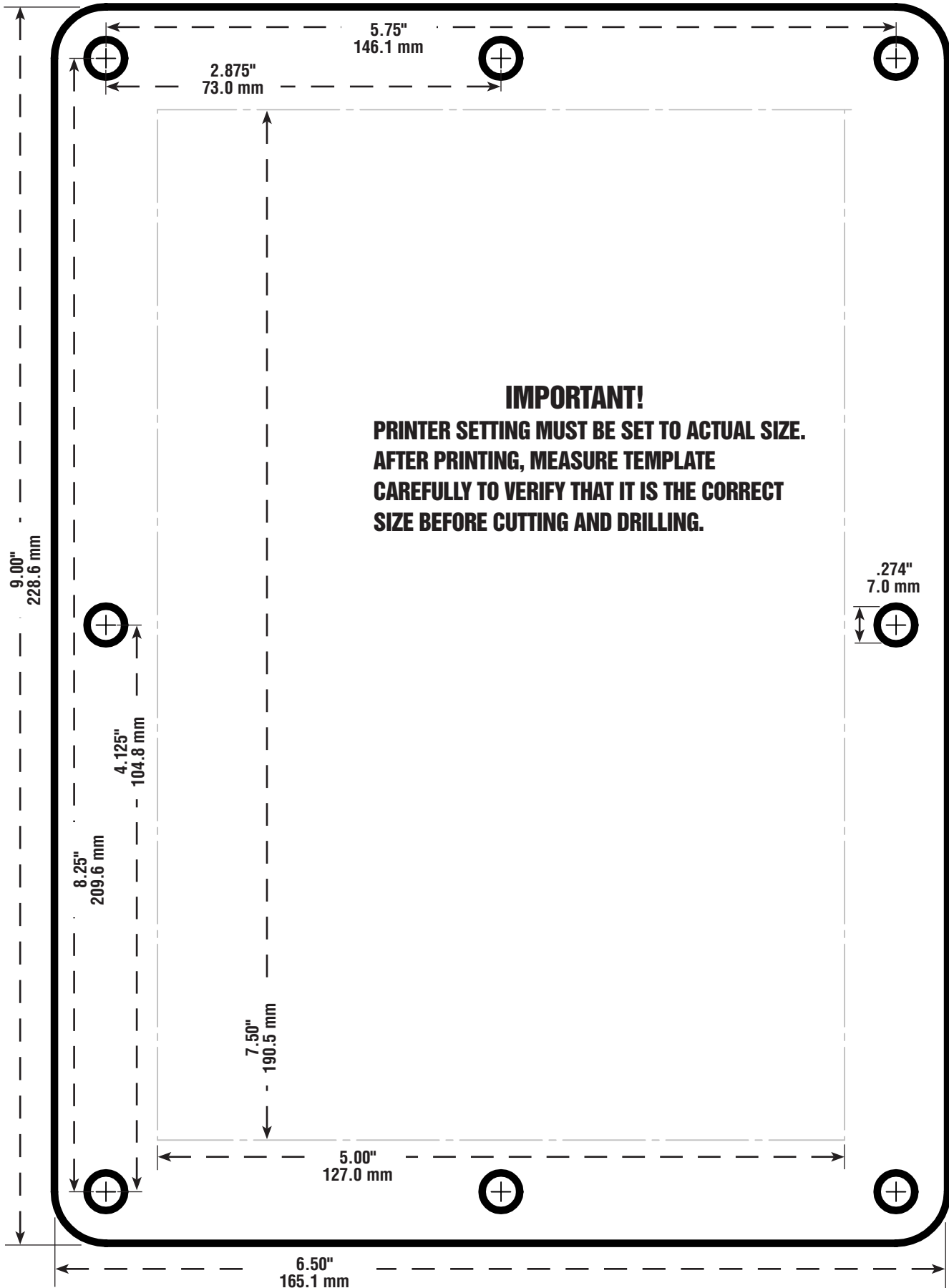
1. Turn pressure release knob clockwise to close. The resting position for the pressure release knob is closed. **Note:** It is impossible to over-tighten the knob or damage the valve by hand.
2. Move pump handle back and forth until desired tension is achieved.

Decrease tension

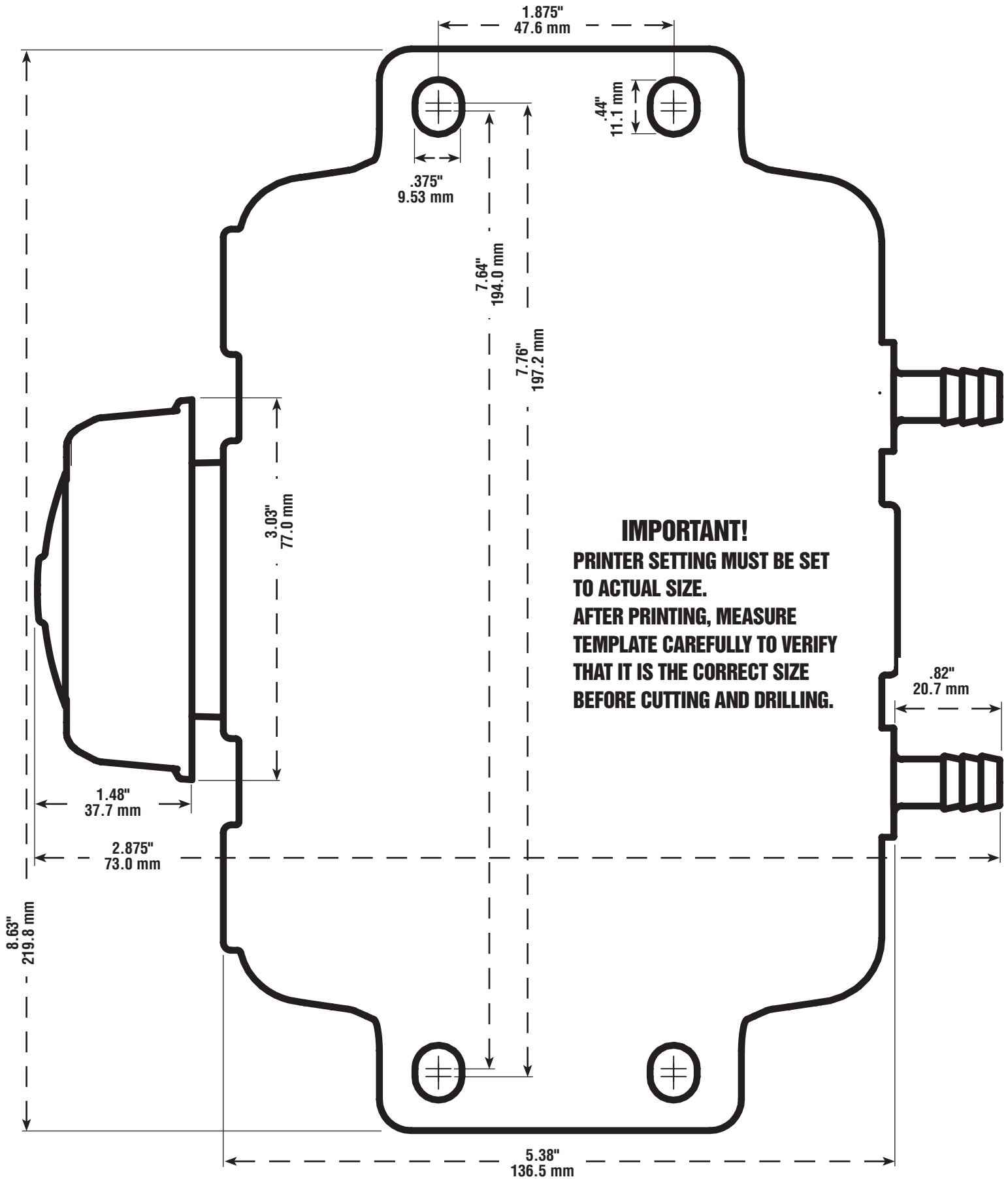
1. Turn pressure release knob counterclockwise to open. Release speed depends on how far the knob is turned.



MOUNTING TEMPLATE - PANEL



MOUNTING TEMPLATE - RESERVOIR



IMPORTANT!
PRINTER SETTING MUST BE SET
TO ACTUAL SIZE.
AFTER PRINTING, MEASURE
TEMPLATE CAREFULLY TO VERIFY
THAT IT IS THE CORRECT SIZE
BEFORE CUTTING AND DRILLING.

Inspection

Perform a visual inspection of the compact panel prior to each use.

Care and Maintenance

Harken products should give years of reliable service. Little regular maintenance is needed if clean oil (filtered) is used, components are properly connected, and system is properly bled. Harken recommends changing the oil and flushing the system every 3 to 5 years. Low pressure filter should be replaced at this time also. If you experience any problems with your Harken compact panel kit, contact your Harken service representative.

Warranty

Harken warrants that each Harken product, when properly used and maintained, will be free from defects in material and workmanship from the date of receipt of the product by the final customer. Harken products are covered by two different kinds of warranties, on the basis of the purchaser and use made of them.

For complete warranty or for information relating to a specific warranty concern, please refer to the following:

Harken Catalog, www.harken.com/manuals
Call or Email the Nearest Harken Distributor or
Harken Corporate Headquarters (Telephone/Email Addresses Below)

HARKEN®

Corporate Headquarters

N15W24983 Bluemound Rd., Pewaukee, WI 53072-4974 USA, Tel: (262) 691-3320, Fax: (262) 701-5780,

Web: www.harken.com, **Online Catalog:** www.harkenstore.com, **Email:** harken@harken.com

Harken Adriatik d.o.o.: Obala 107, 6320, Portoroz, Slovenia, Tel/Fax: (386) 5-6774122, **Web:** www.harken.si, **Email:** info@harken.si

Harken Australia Pty, Ltd.: 1B Green Street, Brookvale, N.S.W. 2100, Australia, Tel: (61) 2-8978-8666, Fax: (61) 2-8978-8667,

Web: www.harken.com.au, **Email:** info@harken.com.au

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